Traffic Impact Study

Lomas Encantadas



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January 9, 2005

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Lomas Encantadas

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NMDOT

and

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Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic
AWDT	Average Weekday Traffic
CF	Coordination Factor
g/C	Green time per signal Cycle length
HCM	Highway Capacity Manual
HTG	Harwick Transportation Group
ITE	Institute of Transportation Engineers
MRCOG	Mid-Region Council of Governments
mph	Miles per Hour
MTP	Metropolitan Transportation Plan (current document for year 2025)
MUTCD	Manual on Uniform Traffic Control Devices
NMDOT	New Mexico Department of Transportation
O-D	Origin-Destination
pcphpl	Passenger cars per hour per lane
PHF	Peak Hour Factor
v/c	Volume to Capacity ratio
vph	Vehicles per Hour

1.0 INTRODUCTION

This traffic impact study has been prepared for the Lomas Encantadas subdivision located south of Enchanted Hills in northeast Rio Rancho (see Appendix A). The property is zoned both residential and commercial, and includes approximately 714 acres. Lomas Encantadas will be developed with approximately 1759 residential dwelling units, 121,000 SF of office development and 40,250 SF of retail space. This development is addressed in this study. There is an additional small parcel, Tract 22, that could develop commercially and is not addressed in this document. The purpose of this study is to assess the traffic operations impacts on the surrounding roadway network, resulting from the development of Lomas Encantadas. The study has been conducted in accordance with the New Mexico Department of Transportation State Access Management Manual, per direction of the City of Rio Rancho and the NMDOT.

A scoping meeting was held on February 6, 2004 to determine if any special studies were required and to define the study area. The meeting included representatives from the City of Rio Rancho, the NMDOT, Huitt-Zollars, Inc. AMREP, and the Harwick Transportation Group. No special studies were defined, however, it was identified that access to NM 528 must be in accordance with the NM 528 access management plan (see Appendix K). The study area was defined as the principal intersections within the area bounded by NM 528/NM 448 (Corrales Rd), Idalia Rd/Iris Rd, US 550/Chayote Rd and US 550/NM 528. In addition, the NMDOT requested that the US 550 corridor be examined between NM 528 and I-25, including a progression analysis, if feasible. The analyses were to be performed for the existing condition, and two 2014 horizon year scenarios - Build and No Build. The horizon year analyses were actually performed for year 2015, based upon data available from the MRCOG travel demand model.

1.1 ROADWAY NETWORK

Lomas Encantadas does not have direct access to any major roadways within northeast Rio Rancho. It is surrounded by US 550, NM 528, Idalia Rd, and Chayote Rd. The new development will have a number of new collector roadways that will be provide access to the primary roadway system (see Appendix A). The direct connections from Lomas Encantadas to the primary network will occur at Enchanted Hills Blvd, Idalia Rd and Chayote Rd. These connections will be made via the new roadways Camino Encantada, Camino Venada, and Lincoln Ave. The remainder of the streets within Lomas Encantadas will be classified as local streets.

1.11 Regional Roadways

The study area contains two regional roadways, US 550 and NM 528. These roadways provide connections to the Town of Bernalillo, Rio Rancho and Albuquerque, as well as access to the I-25 corridor and the principal route to northwest New Mexico. These roads are both principal arterials on the regional roadway system.

NM 528 is a principal arterial with a posted speed limits of 50 and 55 mph within the study area. This highway has a rural section with 2-12' lanes in each direction, 8' to 10' shoulders and raised medians throughout most of the study area. Left-turn lanes are provided at each median break, and where there is existing development, right-turn lanes are installed. Much of the corridor is still undeveloped. Bicycle lanes are striped on the shoulders north of Enchanted

Hills Blvd, and this corridor is identified on the Long Range Bikeway System map (2001) for bike lanes throughout (see appendix A).

US 550 is a principal arterial with posted speeds between 40 and 55 mph within the study limits. This highway connects central with northwest New Mexico. The roadway is urban from I-25 to the Rio Grande with 2-12' lanes in each travel direction with a continuous, two-way left turn lane. US 550 through Bernalillo has curb, gutter and sidewalk installed from east of NM 313 to the Rio Grande. West of the Rio Grande and east of NM 313, US 550 is a rural section with 2-12' lanes, 8' to 10' shoulders, and a mixture of continuous, two-way left-turn lane and raised medians with left-turn lanes. West of NM 528, right-turn deceleration and acceleration lanes are installed to Chayote Rd. US 550 will have a non-motorized trail for bicycle and pedestrian mobility.

Paseo del Volcan is a planned freeway that has environmental clearance and identified right-of-way through Lomas Encantadas. Based upon anticipated interchange spacing, this route will likely not have direct access to Lomas Encantadas. Depending upon the frontage road system developed, frontage road access to Camino Encantada may be possible in the future. The 2025 Metropolitan Transportation Plan (MTP) has identified the construction of two lanes of this roadway between Chayote Rd and US 550 during the 2016 to 2025 time frame. It is not likely therefore, that this corridor will be developed as a freeway by the 2015 horizon analysis year. Paseo del Volcan is identified as a non-motorized corridor and will incorporate a pedestrian/bicycle trail into the design.

1.12 Area Roadways

The area roadway network is made up of arterial and collector roadways that circulate traffic from US 550 and NM 528. Some of these roads exist, and some have yet to be fully planned and constructed. The non-site roads are discussed below.

Enchanted Hills Blvd is an urban minor arterial with two nominal 12' lanes, raised medians with left turn lanes, and curb and gutter. Sidewalk is constructed along each side of the road and a pedestrian/bicycle non-motorized trail is constructed along the north side of the road. This road has a posted speed limit of 40 mph throughout and runs from Chayote Rd to NM 528. There is no residential frontage on Enchanted Hills Blvd and currently no signalized intersections except at NM 528.

Chayote Rd is constructed from Enchanted Hills Blvd to US 550 and is an urban, north-south, minor arterial with a posted speed limit of 40 mph. The street has 2-12' lanes in each direction with curb, gutter and sidewalk, and raised median channelization with left-turn lanes at limited locations. This road will continue south through Idalia Rd and is currently expected to terminate at Iris Rd. Chayote Rd will run just west of Lomas Encantadas, intersecting the development at Franklin Rd. It is anticipated that the portions of Chayote Rd still to be constructed will match the existing roadway. Chayote Rd is identified as a bicycle corridor in the 2001 Long Range Bikeway System.

Idalia Rd is currently a rural minor arterial with a posted speed of 45 mph within the study area. This 2-lane road has a southwest-northeast orientation with nominal 12' lanes and minimal graded shoulders. Currently there are improvements underway at the Idalia Rd/NM 528 intersection. It is anticipated that this roadway will be widened to a 4/5-lane road in the future.

however, for this study, only 2 lanes are assumed. Idalia Rd is identified as a bicycle route on the 2001 Long Range Bikeway System map.

Iris Rd is a 2-lane rural collector with numerous horizontal curves and a posted speed limit of 40 mph. The road has nominal 12' lanes and minimal graded shoulders. It is anticipated that this roadway will be widened to a 4/5-lane road in the future. Iris Rd is identified as a bicycle route in the 2001 Long Range Bikeway System.

1.1.3 Lomas Encantadas Roadways

An internal network will be developed within Lomas Encantadas. The site map in Appendix A shows the primary internal street system. None of the internal roadways has been identified as part of the Long Range Bikeway System.

Camino Encantada will be the principal collector roadway within Lomas Encantadas. It is anticipated that the road will have one 12' travel lane in each direction with a shoulder/bike lane, curb, gutter and sidewalk, and a 16' or wider raised median with left turn lanes for each intersection. The posted speed will be 35 mph. No residential frontage is anticipated along Camino Encantada.

Camino Venada will be a collector street connecting Camino Encantada with Lincoln Ave within Lomas Encantadas. This road should have 2/3 lanes with an urban section and a posted speed of 30 to 35 mph. No residential frontage is anticipated along Camino Venada.

Lincoln Ave will be an urban collector roadway with a 35 mph posted speed. It is anticipated that this road will have 1-12' travel lane in each direction with either raised median or a continuous, two-way left turn lane west of Camino Venada. East of Camino Venada, Lincoln Ave will have 4/5 lanes with 12' lanes and raised medians. No residential frontage is anticipated along Lincoln Ave within Lomas Encantadas.

1.1.4 Programmed Network Improvements

The 2025 Metropolitan Transportation Plan (MTP) is a fiscally constrained transportation plan for the greater Albuquerque area, including Bernalillo and Rio Rancho. The plan was reviewed to identify any programmed roadway improvements within the study area. This plan identifies major roadway improvements, and typically does not identify minor improvements such as intersection improvements or signalization. The plan identified the following projects and anticipated project completion periods within the study area:

1. Chayote Rd - Enchanted Hills Blvd to US 550, 2003-2005, *Complete*;
2. Chayote Rd - Enchanted Hills Blvd to Idalia Rd, 2011-2015; and
3. Paseo del Volcan - Chayote Rd to US 550, 2016-2025.

In addition to the MTP improvements, signalization projects are underway for the US 550/Hill Rd, US 550/Sprint Blvd, NM 528/Idalia Rd, and NM 528/Iris Rd intersections. By 2015, it is anticipated that the US 550/Santa Fe Hills, US 550/Chayote, NM 528/Pasilla, Jager Dr/ Enchanted Hills Blvd, and Idalia Rd/Camino Encantada intersections will also be signalized. In conjunction with the signalization, cross street left-turn lanes will be channelized and right-turn lanes will be added to NM 528 approaches that currently do not have them.

The 2025 MTP roadway network project list may be found in Appendix J.

1.1.5 Access Management Policies

The regional routes within the study area each have access management policies. NM 528 restricts signalized access to half-mile spacing with quarter mile left-in, right-in, right-out unsignalized access. US 550 has access managed west of NM 528, employing the same access management strategy. The future Paseo del Volcan corridor will be a fully access controlled facility with grade-separated interchanges at roadway buildout. A frontage road system may provide access to roadways such as Camino Encantada. Intermediate development of the corridor will include an access managed facility with a limited number at-grade intersections, and likely no driveway access. See Appendix K for excerpts from the access management documents.

2.0 TRAFFIC ANALYSIS METHODOLOGY

The *Highway Capacity Manual* (HCM 2000) defines operational measures of effectiveness for all types of roadways and junctions in terms of qualitative levels of service. This study is concerned with levels of service for both signalized and unsignalized intersections, and the barometer for each intersection type is measured in terms of average vehicle delay. Signalized intersections consider the average control delay for each approaching vehicle. Control delay is the sum of the deceleration, queue, stop, and acceleration delay, computed for each approach movement. The signalized intersection level of service criteria and a brief definition are contained in Table 1.

Table 1
Signalized Intersection Levels of Service

Level of Service	Average Control Delay per Vehicle	Definition
A	≤ 10.0 sec	Very low delay - Free flow
B	10.1 sec to 20.0 sec	Minimal stops, good progression
C	20.1 sec to 35.0 sec	Moderate number of stops
D	35.1 sec to 55.0 sec	Significant stops, some cycle failures
E	55.1 sec to 80.0 sec	High delay, approaching capacity
F	> 80.0 sec	Approach over saturation, excessive delay

The signalized intersection analyses were calculated using Synchro 6.0. This software calculates the level of service for each approach, and may provide optimization for each individual movement. It also provides excellent analyses for signal progression, where required. Synchro 6.0 can produce reports in either Synchro format or *Highway Capacity Manual* (HCM) format. Synchro's standard operational analyses for signalized intersections deviates slightly from the *Highway Capacity Manual* methodology, however, only for very congested intersections do the results diverge. Synchro can calculate both algorithms, therefore, the HCM alternative output format that is fully compatible with the methodology found in the *Highway Capacity Manual* is used. All signalized intersection level of service (LOS) output for this study are produced in the HCM format.

Unsignalized intersections also utilize control delay, however, its definition differs because of the type of traffic control. Stop controlled intersections may be two-way stop controlled, all-way stop controlled, or roundabouts (yield controlled). Most unsignalized intersections considered herein were two-way stop control, meaning that main street through movements are not considered in the analyses because they should experience no intersection related delay. Unsignalized intersection levels of service are a function of the side street approaches and main street turn levels of service. For this reason, an overall intersection level of service is not calculated such as it is for signalized intersections, and the intersection level of service is typically considered that level of service experienced by the poorest approach LOS. Table 2 contains brief definitions of unsignalized intersection LOS and the control delay values.

Table 2
Unsignalized Intersection Levels of Service

Level of Service	Average Control Delay per Vehicle	Definition
A	≤ 10.0 sec	Little or no delay
B	10.1 sec to 15.0 sec	Short traffic delays
C	15.1 sec to 25.0 sec	Average traffic delays
D	25.1 sec to 35.0 sec	Long traffic delays
E	35.1 sec to 50.0 sec	Very long traffic delays, approaching capacity
F	> 50.0 sec	Over capacity, excessive delay

The unsignalized intersection analyses were evaluated using Synchro 6.0. While this program is primarily a signalized intersection tool, it also performs unsignalized intersection analyses that are consistent with the *Highway Capacity Manual* methodology and the output results are identical to those produced by the McTrans Highway Capacity Software.

Urban areas typically assign an overall level of service (LOS) D as the desirable base condition for signalized intersections. LOS E may be acceptable for certain low volume approaches or movements, especially where a higher level of service may significantly degrade a major movement or where the default is LOS E based upon the intersection cycle length or low approach volumes. LOS D is also the desired approach LOS for urban unsignalized intersections, however, lower service levels may be acceptable for very low volume approaches.

Section 5.0 of this report contains the level of service analyses. These analyses were prepared for three scenarios, with and without site trips, and they were:

Scenario 1 - AM and PM Peak Hour Existing Conditions
Scenario 2 - AM and PM Peak Hour Year 2015 No Build
Scenario 3 - AM and PM Peak Hour Year 2015 Build

The analysis worksheets maybe found in Appendices F, G and H. In addition, mitigation analyses were performed to analyze proposed improvements to the roadway network. The mitigation analyses may be found in Appendix I.

A series of assumptions must be made for all level of service analyses. For this study, the following analysis assumptions were made, and they apply to existing and forecast analyses:

- Lane Width - Measured in Field (nominally 12 feet) or estimated for future roadways
- Truck Percentage - Assumed 2% throughout
- Existing Peak Hour Factors - Measured in field, applied by approach average
- Forecast Peak Hour Factors:
  approach volume less than 200 vph - 0.80
  approach volume 200 vph to 500 vph - 0.85
  approach volume 500 vph to 1000 vph - 0.90
  approach volume greater than 1000 vph - 0.95
  (left turn volumes area half shown above)
- Saturation Flow Rate - 1900 pcphpl
- Roadway Grades - All analyses assume flat grades (less than 3%)
- Change Intervals - 5 second total, estimated as 4 seconds amber, 1 second all red

- Cycle Lengths - existing average cycle measured in field, 120 to 150 second cycles for 2015; all splits optimized
- Half cycle may be used for under-utilized signals
- Existing Signalized Operations - Uncoordinated-Actuated, using field verified average actuated cycle lengths
- 2015 Signalized Operations - Coordinated-Actuated, using a fixed cycle length
- Arrival Type - Random on Cross Streets, Type IV if a Coordinated System
- Right-turn-on-Red - Measured in the field and compared with analysis results
- Conflicting Pedestrians - None
- Area Type - Non CBD

3.0 TRAFFIC VOLUMES

3.1 EXISTING TRAFFIC VOLUMES

Turning movement counts were collected by HTG and the Mid-Region Council of Governments (MRCOG) for each of the study intersections during February and March, 2004. The existing AM and PM peak hour turning movement volumes were collected between 6:45 and 8:15 AM and 4:15 and 6:00 PM. The volumes are contained in Tables 3 and 4 below.

Volume adjustments are typically made when large network analyses are performed. The turning movement counts were collected on a number of days, and daily variations of up to 10% are typically found for a particular peak hour approach. A number of approaches demonstrated volume variations that exceeded this amount, and specific approaches were recounted. In each case, the recount fit better with the majority of intersections. A number of other approaches were "smoothed" to better fit with upstream and downstream counts. The adjusted volumes are indicated in the traffic volume summary tables in Appendix B. Turning movement count data sheets may be found in Appendix L.

Table 3
2004 AM Peak Hour Baseline Turning Movement Volumes

Intersection	Eastbound			Westbound			Northbound			Southbound		
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT
US 550/I-25 Northbound Ramp	538	78	-	-	671	29	528	4	82	-	-	-
US 550/Hill Rd	19	1529	51	37	881	47	31	0	39	28	1	23
US 550/NM 313	134	1425	185	111	867	108	173	194	54	129	174	66
US 550/Camino Don Tomas	9	1726	107	54	920	6	80	8	78	3	7	2
US 550/Jemez Dam Rd	42	1938	-	-	969	52	-	-	-	23	-	13
US 550/NM 528	8	800	40	440	271	38	33	37	1100	28	3	2
US 550/Sprint Blvd	-	639	14	81	295	-	5	-	140	-	-	-
US 550/Santa Fe Hills Blvd	-	473	11	34	214	-	9	-	201	-	-	-
US 550/Chayote Rd	-	450	8	17	185	-	6	-	19	-	-	-
NM 528/Enchanted Hills	134	3	239	4	0	9	430	946	14	16	381	103
NM 528/Idalia Rd	139	1	29	16	3	88	43	1223	4	14	471	88
NM 528/Pasilla Rd	17	1	12	48	0	46	9	1112	14	12	540	3
NM 528/Iris Rd	24	1	31	86	5	23	33	1088	21	6	661	10
NM 528/NM 448 (Corrales Rd)	23	8	21	203	16	101	21	1029	59	65	702	11
Enchanted Hills/Jager	54	304	-	-	450	66	-	-	-	29	-	17
Enchanted Hills/Sprint Blvd	83	146	45	28	95	61	23	45	23	16	28	6
Enchanted Hills/Santa Fe Hills	9	55	0	5	68	47	1	9	7	49	3	7
Enchanted Hills/Chayote Rd	6	13	0	1	21	36	0	1	0	4	0	5
Idalia Rd/Iris Rd	18	184	17	1	118	24	31	18	12	29	22	5

Table 4
2004 PM Peak Hour Baseline Turning Movement Volumes

Intersection	Eastbound			Westbound			Northbound			Southbound		
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT
US 550/I-25 Northbound Ramp	128	208	-	-	256	3	1074	5	287	-	-	-
US 550/Hill Rd	9	898	95	64	1613	29	90	0	81	36	3	27
US 550/NM 313	84	787	192	112	1552	82	323	136	96	111	141	83
US 550/Camino Don Tomas	17	1101	93	67	1565	1	172	8	53	16	9	14
US 550/Jemez Dam Rd	120	1250	-	-	1530	123	-	-	-	168	-	100
US 550/NM 528	4	450	45	1051	616	15	50	15	740	46	38	17
US 550/Sprint Blvd	-	407	7	163	710	-	19	-	101	-	-	-
US 550/Santa Fe Hills Blvd	-	238	10	147	427	-	29	-	55	-	-	-
US 550/Chayote Rd	-	243	15	16	348	-	28	-	18	-	-	-
NM 528/Enchanted Hills	251	2	445	38	6	27	345	517	2	10	923	42
NM 528/Idalia Rd	46	4	28	7	0	24	19	646	14	74	1083	104
NM 528/Pasilla Rd	12	1	19	28	2	15	20	729	37	67	1083	17
NM 528/Iris Rd	4	0	30	41	2	6	55	804	70	12	1126	24
NM 528/NM 448 (Corrales Rd)	20	11	24	259	15	83	40	919	153	122	1019	18
Enchanted Hills/Jager	74	420	-	-	392	11	-	-	-	132	-	73
Enchanted Hills/Sprint Blvd	18	204	13	26	286	31	28	12	18	55	38	78
Enchanted Hills/Santa Fe Hills	12	103	3	6	77	113	3	3	7	66	12	11
Enchanted Hills/Chayote Rd	5	15	1	1	11	21	0	2	0	11	0	8
Idalia Rd/Iris Rd	2	66	9	7	126	17	10	10	2	11	15	1

3.2 Forecast Traffic Volumes

The horizon year for this project is 2015. The first step in determining future traffic volumes is to calculate a background traffic growth rate for the study area. A five year history, 1998 through 2002, was obtained from MRCOG average weekday traffic flow maps. Upon examination of the data, US 550 and NM 528 have very different traffic growth patterns. Because of the large residential developments occurring along NM 528, the growth is sporadic, and the correspondingly, the growth rates have spikes. US 550 east of NM 528 has been developed during the past 5 years, and a more stable growth rate was observed. Three locations along US 550 therefore, were used to develop the background growth rate.

A linear regression equation in the form $y = mx+b$ was generated for each road segment based upon the five years of data. In the regression equation, y is the traffic volume, x is the year (1998 = 1), m is the average annual traffic growth, and b is the y-intercept. From the regression equation, the average annual traffic growth (m) was determined and the average growth rate was determined by dividing m by the average of the first and last analysis years. Table 5 contains the data and analysis.

Table 5
Background Traffic Growth Rates

No.	Roadway Segments	1998	1999	2000	2001	2002	m	b	R^2	Annual Rate
1	US 550 East of NM 528	23000	23500	24500	25400	26200	830	22030	0.99	3.4%
2	US 550 West of NM 313	25500	26300	28400	29300	29900	1180	24340	0.96	4.3%
3	US 550 West of I-25	24200	25000	25800	26600	27200	760	23480	1.00	3.0%
	Summary	**72700**	**74800**	**78700**	**81300**	**83300**	**2770**	**69850**	**0.99**	**3.6%**

The goal of this analysis was to determine an overall background growth rate for the study area. Based upon Table 8, a representative background growth value is the annual summary rate of 3.6%. Each existing study intersection will have traffic volumes grown at an annual rate of 3.6% from 2004 to 2015. The baseline growth factored 2015 volumes may be found in Appendix C. All forecast volumes are rounded to the nearest 10 vehicles.

Additional considerations were made in the development of background traffic. A number of Enchanted Hills units are still under development, and trip generation and assignment was made for those areas. This primarily impacts the Chayote Rd and Santa Fe Hills Blvd intersections with US 550. These trips are in addition to the background growth determined above, and they were assigned to the roadway network based upon existing network turning percentages. These trips did not have the annual growth rate applied.

A similar, background trip generation, distribution, and assignment was performed for the internal Enchanted Hill South network. These trips were generated for the undeveloped areas surrounding Lomas Encantadas (to the south and west) to estimate the internal roadway network design requirements. The additional internal trip generation was not included in the internal roadway analyses since it is unlikely that the developments will occur prior to 2015, and if they do, there is no guarantee that they will resemble the preliminary layout. They also do not impact the regional roadway network and what minimal development will occur should be accounted for in the 3.6% annual background growth.

Proposed developments with traffic impact studies were also considered in the background traffic. This includes the Enchanted Hills 10 Acre Parcel and the Hawk site. The Hawk site traffic is based upon the draft traffic impact study that was distributed in December 2004. Using the year 2015 Hawk site assessment, US 550 volumes at NM 528 will increase during the AM peak hour by 270 eastbound and 190 westbound trips. US 550 will increase by 340 eastbound and 380 westbound trips during the PM peak hour. The Enchanted Hills 10 Acre Parcel will impact the Enchanted Hills Blvd intersections with Jager Dr and NM 528, and the assigned site trips have been added to the background traffic. Site specific trips did not have the annual growth rate applied.

Given the size of the table to include all of the data for the 28 intersections assessed for 2015, the data are contained in Appendix C.

4.0 TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

4.1 TRIP GENERATION

Lomas Encantadas will be a series of 20 residential tracts and 3 commercial tracts. The residential tracts will be zoned R-1, R-4 and R-6. The commercial zoning will be C-1, with anticipated uses of office and retail. The Tract 22 retail parcel is still speculative and is not addressed in this traffic impact study. A separate traffic study will be required for that parcel in the future. Trip generation was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition, and the trip generation data are summarized in Table 6.

Table 6
Trip Generation - Proposed Land Use

Tract	Lane Use	ITE LU #	Zoning	DU/SF	Trips				
					Daily	AM Ent	AM Ex	PM Ent	PM Ex
1	Residential - SF	210	R-4	229	2228	43	127	142	84
2	Residential - SF	210	R-4	30	343	8	22	23	13
3	Residential - SF	210	R-4	193	1904	36	109	122	72
4	Residential - SF	210	R-4	87	915	18	52	60	35
5a	Commercial - Retail	820	C-1	40.250	3759	56	35	165	178
5b	Office	710	C-1	81.720	1142	141	19	29	141
6	Residential - MF	230	R-6	55	386	5	27	25	12
7	Residential - SF	210	R-1	56	610	12	37	40	24
8	Residential - MF	230	R-6	78	520	7	35	33	16
9	Residential - SF	210	R-4	27	312	7	21	21	12
10	Residential - SF	210	R-4	103	1068	21	61	69	41
11	Residential - SF	210	R-1	12	148	5	13	10	6
12	Residential - SF	210	R-4	180	1786	34	101	115	67
13	Residential - SF	210	R-4	115	1182	23	67	77	45
14	Residential - SF	210	R-1	118	1211	23	69	78	46
15	Residential - SF	210	R-1	14	170	5	14	11	7
16	Residential - SF	210	R-1	35	396	9	25	26	16
17	Residential - SF	210	R-1	36	406	9	26	27	16
18	Residential - SF	210	R-1	146	1473	28	84	95	56
19	Residential - SF	210	R-1	17	204	5	16	14	8
20	Residential - SF	210	R-1	20	237	6	17	16	9
23	Residential - SF	210	R-4	38	427	9	27	28	17
21	General Office	720	C-1	39000	649	78	11	21	102
	Trip Subtotal				***21476***	***588***	***1015***	***1247***	***1023***
	Retail Pass-By Trips				*1128*	*17*	*10*	*49*	*53*
Total Site Trips Generated					**20348**	**571**	**1005**	**1198**	**970**

Given the land uses in Lomas Encantadas, all trips are characterized as primary trips except for the retail trips to tract 5a. A 30% pass-by reduction was applied to retail trips in Tract 5a. and that is reflected in Table 6.

4.2 TRIP DISTRIBUTION

Two levels of trip distribution were performed for this study. The first level is the distribution of trips internally within Lomas Encantadas. Many of the tracts have only one access to the collector/arterial network, so these access streets received 100% of the trips. For tracts with multiple accesses, the trips were distributed as shown on the Sub-Area Percentages graphic in

Appendix E. The second level of distribution was at the regional level, distributing trips to the overall roadway network.

The regional trip distribution was based upon the Mid-Region Council of Governments (MRCOG) year 2015 travel demand model. The databank is consistent with the 2025 MTP approved model. An origin-destination (O-D) assignment was made between the site data analysis subzones (DASZs), #1071 and #1072, and all other DASZs within the MRCOG modeling area. A series of O-D subareas were developed, to ascertain the attractiveness of origins (O's) and destinations (D's), to and from the Lomas Encantadas DASZs (see drawing in Appendix D). Table 7 contains the subarea descriptions and O-D percentages both [From] and [To] Lomas Encantadas for the year 2015. A map in Appendix D shows the subarea boundaries on a semi-regional map.

Table 7
2015 Trip Distribution Subarea Percentages

No.	Description	From		To	
		O's	D's	O's	D's
1	Areas to the Southwest using Idalia Rd or Paseo del Volcan	-	10	10	-
2	Areas to the West using Progress Blvd	-	7	7	-
3	Areas to the Northwest using US 550	-	2	2	-
4	Enchanted Hills	-	12	12	-
5	Areas accessing NM 528 in Rio Rancho and Northwest Albuquerque	-	34	34	-
6	Areas south of US 550, including most of the Albuquerque metropolitan area.	-	20	20	-
7	Lomas Encantadas	100			100
8	I-25 corridor North of US 550	-	2	2	-
9	Placitas area, NM 165 east of I-25	-	2	2	-
10	Area North of US 550 between Chayote and I-25	-	10	10	-

4.3 TRIP ASSIGNMENT

The trip assignment was based upon the two trip distributions for the Lomas Encantadas site trips. A series of graphics were generated showing the entering and exiting trip assignment percentages, and the AM peak hour, PM peak hour and daily trip assignments. These graphics may be found in Appendix E.

5.0 TRAFFIC ANALYSES

Traffic analyses were performed for the existing conditions and year 2015, both Build and No-Build scenarios. The existing analyses included 19 intersections - 7 signalized and 12 unsignalized. The Build analyses examined 28 intersections - 16 signalized and 12 unsignalized. All level of service analyses were performed using Synchro 6.0. and progression analyses were verified for signalized intersections within the US 550 corridor and NM 528.

5.1 EXISTING CONDITIONS

Traffic analyses were performed for the existing (2004) AM and PM peak hour conditions to establish a baseline existing condition. Table 8 contains the signalized intersection level of service (LOS) results and Table 9 has the unsignalized intersection results. As stated in Section 2, all analyses were conducted using Synchro 6.0 and the results produced using the *Highway Capacity Manual* analysis methodology. Table 8 contains a number of measures of effectiveness (MOEs) including the actuated cycle length [Cycle Len.], intersection average level of service [LOS], average control delay for all approaches [Delay], the percentage of vehicles that stop at the intersection [% Stop], the maximum individual approach delay [Max Delay] and the maximum approach volume to capacity (v/c) ratio [Max v/c].

Table 8
Existing Signalized Intersection Measures of Effectiveness

Intersection	AM Peak						PM Peak					
	Cycle Len.	LOS	Delay	% Stop	Max Delay	Max v/c	Cycle Len.	LOS	Delay	% Stop	Max Delay	Max v/c
US 550 @ I-25 NB Ramp	95	D	36 s	79	41 s	0.87	107	C	22 s	68	45 s	0.72
US 550 @ NM 313	120	D	37 s	72	78 s	0.96	150	E	58 s	73	130 s	1.04
US 550 @ Camino Don Tomas	97	B	18 s	64	42 s	0.91	89	C	22 s	73	34 s	0.91
US 550 @ Jemez Dam Rd	107	A	5 s	32	48 s	0.70	86	B	12 s	56	37 s	0.63
US 550 @ NM 528	124	D	45 s	72	78 s	0.94	118	C	31 s	63	53 s	0.83
NM 528 @ Enchanted Hills Blvd	82	B	12 s	40	38 s	0.62	96	C	31 s	64	49 s	0.86
NM 528 @ Corrales Rd (NM 448)	94	C	25 s	69	30 s	0.83	93	C	27 s	72	31 s	0.82

Note that each of the intersections has an individual cycle length, corresponding to the actuated, uncoordinated operation of each intersection. Currently, each of the intersections along both US 550 and NM 528 operate independently, with no system coordination. The signal timings were field verified and the analysis reflects cycle lengths within 5 seconds of the average cycle length measured in the field. The operation of signals with spacing of less than one mile should generally be coordinated to provide the greatest vehicle throughput within a corridor. The seven signals analyzed have pairs of intersections within the one mile spacing, however, existing conditions would not be greatly enhanced by coordination because of the signal spacing.

The 150 second cycle length during the PM peak at the US 550/NM 313 intersection is a concern because it is an indicator that the intersection is very near capacity. A 150 second cycle is near the upper limit of cycle lengths that provide efficient traffic movements. Field observation of this intersection indicates that cycle failures occur frequently during the PM peak hour and that a poor level of service exists.

Intersection operations are adequate during the AM peak hour. Operations during the PM peak hour are good at each intersection except US 550/NM 313 and US 550/NM 528. The US 550/NM 313 intersection operates with a deficient level of service, LOS E. Review of the capacity worksheet reveals this intersection has three movements at LOS F and one at LOS E. In addition, the approach average is LOS F for one approach and LOS E for two approaches. Review of the volume to capacity (v/c) ratios by movement yields three movements with v/c ratios above the theoretical capacity limit of 0.95 - the westbound through movement with a v/c ratio of 1.03, the northbound left turn, 1.04 and the southbound through, 0.96. These factors indicate that additional capacity is needed at this intersection in 2004.

There is concern about operations at the NM 528/US 550 intersection during the PM peak because the analysis indicates LOS C operations, however, field observation indicates that the actual operations are LOS E/F. The westbound left-turn queue extends almost 3/4 of a mile during the PM peak, through the Jemez Dam Rd intersection, though this is not reflected in the analysis. The queue is a moving queue, meaning that vehicles continue to travel westbound, but at an estimated speed of 10 to 20 mph within a 45 mph speed zone. This indicates that latent demand exceeds intersection capacity, however the volumes are metered by the amount of westbound US 550 left-turn green time. Shock waves propagate from the westbound US 550/NM 528 approach and motorists compensate for the delay by traveling at a slower speed. The actual traffic operation at this intersection should be considered LOS E/F, worse than shown in Table 8.

Table 9
Existing Unsignalized Intersection Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
US 550 @ Hill Rd				
Eastbound Left Turn	B	11 s	C	15 s
Westbound Left Turn	C	18 s	B	11 s
Northbound Left Turn	F	> 60 s	F	> 60 s
Southbound Left Turn	F	> 60 s	F	> 60 s
US 550 @ Sprint Blvd				
Westbound Left Turn	A	10 s	A	9 s
Northbound Left Turn	C	24 s	D	33 s
US 550 @ Santa Fe Hills Blvd				
Westbound Left Turn	A	9 s	A	8 s
Northbound Left Turn	C	16 s	C	20 s
US 550 @ Chayote Rd				
Westbound Left Turn	A	9 s	A	8 s
Northbound Left Turn	B	14 s	B	13 s
Enchanted Hills Blvd @ Jager Rd				
Eastbound Left Turn	A	9 s.	A	9 s.
Southbound Left Turn	D	26 s.	F	> 60 s
Enchanted Hills Blvd @ Sprint Blvd				
Eastbound Left Turn	A	8 s	A	8 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	C	16 s	C	20 s
Southbound Left Turn	C	18 s	C	18 s

LOS F delays are listed as > 60 s. when the calculated value exceeds 60 seconds.

Table 9 (cont.)
Existing Unsignalized Intersection Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Enchanted Hills Blvd @ Santa Fe Hills Blvd				
Eastbound Left Turn	A	8 s	A	8 s
Westbound Left Turn	A	7 s	A	8 s
Northbound Left Turn	A	10 s	B	11 s
Southbound Left Turn	B	10 s	B	13 s
Enchanted Hills Blvd @ Chayote Rd				
Eastbound Left Turn	A	7 s	A	7 s
Westbound Left Turn	A	6 s	A	7 s
Northbound Left Turn	A	7 s	A	7 s
Southbound Left Turn	A	6 s	A	7 s
NM 528 @ Idalia Rd				
Eastbound Left Turn	F	> 60 s	F	> 60 s
Westbound Left Turn	F	> 60 s	F	> 60 s
Northbound Left Turn	A	9 s	B	12 s
Southbound Left Turn	B	13 s	A	9 s
NM 528 @ Pasilla Rd				
Eastbound Left Turn	F	> 60 s	F	> 60 s
Westbound Left Turn	F	> 60 s	F	> 60 s
Northbound Left Turn	A	9 s	B	11 s
Southbound Left Turn	B	12 s	A	10 s
NM 528 @ Iris Rd				
Eastbound Left Turn	F	59 s	D	26 s
Westbound Left Turn	F	> 60 s	F	> 60 s
Northbound Left Turn	A	9 s	B	12 s
Southbound Left Turn	B	12 s	A	10 s
Iris @ Idalia Rd				
Eastbound Left Turn	A	9 s	A	8 s
Westbound Left Turn	A	9 s	A	8 s
Northbound Left Turn	B	11 s	A	8 s
Southbound Left Turn	A	10 s	A	8 s

LOS F delays are listed as > 60 s. when the calculated value exceeds 60 seconds.

The levels of service in Table 9 indicate that each intersection operates well except for side street left turns along US 550 and NM 528. Most of these left turn movements operate at LOS F. The left turn volumes at most of these intersections are relatively small, less than 30 vehicles during the peak hour, which coupled with a moderately wide median, permits safe two-stage left turns. Higher peak hour left turn volumes occur at the Idalia Rd/ NM 528, Iris Rd/NM 528 and US 550/Hill Rd intersections which are a concern. The NMDOT currently has projects that are signalizing each of these intersections. Future signalization is anticipated for each identified unsignalized intersection along the NM 528 and US 550 corridors and these signals should be in place by the horizon year.

The other deficiency identified is Enchanted Hills Blvd at Jager Dr. The southbound left turn during the PM peak operates at LOS F and sustains a substantial queue. The actual duration of the queue was limited to a 5 to 10 minute period corresponding to a shift change at a local business, with less delay during the remainder of the peak hour. This intersection will require signalization as part of the Build scenario, eliminating the existing deficiency.

5.2 Year 2015 No-Build Alternative

Operations analyses were performed for the year 2015 to establish a baseline condition for comparison with the Build scenario. Baseline 2015, No-Build traffic volumes are based upon the growth projections discussed in Section 3.2 and the volume tables may be viewed in Appendix C. This scenario assumes that the roadway network remains in the existing condition except for three sets of changes. First, seven intersections will have been signalized along NM 528 and US 550. In conjunction with the signalization of intersections on NM 528, it is assumed that each cross street will have channelized left-turn lanes and NM 528 will have right-turn deceleration lanes at each intersection. Second, the northbound left turn from NM 528 to westbound US 550 will be restriped to a dual left-turn lane. Third, an eastbound dual left-turn lane will be constructed at the I-25 northbound ramp intersection, utilizing existing shoulder width. This could be constructed as part of the NMDOT I-25 corridor improvement project from Tramway Blvd to Bernalillo. An improvement project alternative would be for the second and third items to be implemented as maintenance operations. The analyses in Tables 10 and 12 establish the year 2015 baseline analyses.

Table 10
2015 No Build Signalized Intersection Measures of Effectiveness

Intersection	AM Peak (150sec. Cycle)					PM Peak (150sec. Cycle)				
	LOS	Delay	% Stop	Max Delay	Max v/c	LOS	Delay	% Stop	Max Delay	Max v/c
US 550 @ I-25 NB Ramp	E	56 s	87	62 s	0.94	C	33 s	69	72 s	0.84
US 550 @ Hill Rd	C	31 s	63	62 s	0.97	D	53 s	74	131 s	1.08
US 550 @ NM 313	F	104 s	74	217 s	1.26	F	179 s	63	338 s	1.58
US 550 @ Camino Don Tomas	D	51 s	65	225 s	1.24	E	74 s	55	176 s	1.19
US 550 @ Jemez Dam Rd	B	17 s	51	71 s	1.02	C	23 s	67	93 s	0.90
US 550 @ NM 528	F	106 s	71	159 s	1.20	D	41 s	68	120 s	1.08
US 550 @ Sprint Blvd	A	9 s	42	34 s	0.62	B	11 s	54	28 s	0.76
US 550 @ Santa Fe Hills Blvd	B	15 s	67	22 s	0.82	A	8 s	40	30 s	0.64
US 550 @ Chayote Rd	B	17 s	68	24 s	0.79	B	15 s	55	24 s	0.76
NM 528 @ Enchanted Hills Blvd	C	24 s	45	97 s	0.79	E	79 s	66	143 s	1.15
NM 528 @ Idalia Rd	C	22 s	42	69 s	0.83	B	15 s	41	65 s	0.70
NM 528 @ Pasilla Rd	B	17 s	41	72 s	0.64	B	12 s	37	73 s	0.62
NM 528 @ Iris Rd	B	19 s	46	67 s	0.71	B	11 s	37	67 s	0.73
NM 528 @ Corrales Rd (NM 448)	C	35 s	69	55 s	0.92	D	44 s	68	103 s	0.96
Enchanted Hills Blvd @ Jager Dr	A	6 s	30	35 s	0.41	B	12 s	48	31 s	0.68

Italicized intersections utilize half cycles (75 second cycles). US 550/NM 528 is the master controller.

The measures of effectiveness identify three patterns. First, the NM 528 corridor should operate well (LOS D or better) at each intersection except Enchanted Hills Blvd. The PM peak is forecast to be deficient and will require mitigation to provide adequate throughput. Second, the US 550 corridor west of NM 528 will operate very well with LOS B or better operations. Third, the US 550 corridor east of NM 550 will be gridlocked.

The US 550 corridor east of NM 528 will operate at LOS F throughout. Table 11 contains the US 550 through movement v/c ratio from NM 528 to I-25.

Table 11
US 550 Corridor No-Build Through Movement v/c Ratios

US 550 Cross Street	AM EB	AM WB	PM EB	PM WB
NM 528	***1.16***	0.36	***1.08***	0.57
Jemez Dam Rd	***1.02***	0.41	0.79	0.88
Camino Don Tomas	***1.10***	0.58	0.91	***1.18***
NM 313	***1.26***	0.89	0.86	***1.54***
Hill Rd	***0.97***	0.60	0.62	***1.08***

The bold, italicized values are over capacity. Table 11 shows that the AM peak hour eastbound will greatly exceed capacity at each intersection within the corridor. This level of congestion will result in gridlock in the eastbound direction during the AM peak, and it is unlikely that the projected traffic levels will be served during the peak hour. Peak spreading will likely occur, whereby the peak hour becomes a peak 1½ to 2 hours with excessive delay. Similar operations will occur during the PM peak hour, though there is concern that the delay experienced at westbound NM 313 will cause shock waves that could propagate as far as northbound I-25. This is a safety concern and further indicates that additional capacity is needed within the US 550 corridor.

Table 12
2015 No-Build Unsignalized Intersection Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Enchanted Hills Blvd @ Sprint Blvd				
Eastbound Left Turn	A	8 s	A	9 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	D	28 s	E	51 s
Southbound Left Turn	D	33 s	E	39 s
Enchanted Hills Blvd @ Santa Fe Hills Blvd				
Eastbound Left Turn	A	8 s	A	8 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	B	11 s	B	12 s
Southbound Left Turn	B	12 s	B	15 s
Enchanted Hills Blvd @ Chayote Rd				
Eastbound Left Turn	A	7 s	A	7 s
Westbound Left Turn	A	7 s	A	7 s
Northbound Left Turn	A	7 s	A	7 s
Southbound Left Turn	A	7 s	A	7 s
Idalia Rd @ Iris Rd				
Eastbound	B	13 s	A	9 s
Westbound	B	11 s	A	10 s
Northbound	B	10 s	A	8 s
Southbound	A	10 s	A	8 s
Idalia Rd @ Chayote Rd				
Eastbound Left Turn	A	8 s	A	9 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	B	14 s	B	13 s
Southbound Left Turn	B	14 s	B	13 s

LOS F delays are listed as > 60 s, when the calculated value exceeds 60 seconds.

Each of the unsignalized intersections will operate with adequate levels of service in 2015. The only approach with an identified deficiency is the Sprint Blvd-Montreal Loop intersection with projected LOS E/F operations during the PM peak hour. Given moderately low forecast

volumes and a median to make two-stage left turns, this movement should operate adequately, though not well. MUTCD Warrant #3 - Peak Hour was checked to see if it would be satisfied during the PM peak hour at Enchanted Hills Blvd/Sprint Blvd, and the volumes do not warrant a signal, therefore slightly longer than desired delay should be acceptable for minor movements.

assumed complete build-out?

5.3 Year 2015 Build Alternative

The operations analyses for the Build alternative are based upon the existing roadway network changes identified in Section 1.1.4, the No-Build modifications discussed in Section 5.2, and construction of the Lomas Encantadas roadway system. No additional existing network changes have been added. A series of assumptions were made for the roadway network within Lomas Encantadas, and the internal network was run to verify if the number of roadway lanes would be adequate. (Please note that additional trips were generated for the surrounding residential area to perform the first roadway design assessment for Lomas Encantadas. These additional trips were subtracted from the site analysis because there is no known time frame for the development. Should the entire area develop residentially, with the density shown on the current parcel map, the internal network will be adequate. The only potential change will be that the Lincoln Ave/Camino Encantada intersection may require signalization when the area is 100% developed.)

Tables 13 and 15 contain the analysis results for the 2015 Build scenario.

Table 13
2015 Build Signalized Intersection Measures of Effectiveness

Intersection	AM Peak (150 sec. Cycle)					PM Peak (150 sec. Cycle)				
	LOS	Delay	% Stop	Max Delay	Max v/c	LOS	Delay	% Stop	Max Delay	Max v/c
US 550 @ I-25 NB Ramp	E	64 s	86	79 s	0.97	D	42 s	73	73 s	0.93
US 550 @ Hill Rd	C	29 s	56	102 s	1.00	E	74 s	71	204 s	1.17
US 550 @ NM 313	F	137 s	72	253 s	1.39	F	221 s	63	423 s	1.77
US 550 @ Camino Don Tomas	F	91 s	61	259 s	1.33	F	137 s	63	218 s	1.38
US 550 @ Jemez Dam Rd	D	55 s	47	81 s	1.16	C	32 s	75	135 s	0.99
US 550 @ NM 528	F	167 s	64	241 s	1.40	E	80 s	69	187 s	1.24
US 550 @ Sprint Blvd	B	12 s	40	30 s	0.68	B	11 s	52	27 s	0.78
US 550 @ Santa Fe Hills Blvd	B	15 s	71	24 s	0.85	A	9 s	52	28 s	0.70
US 550 @ Chayote Rd	B	17 s	69	24 s	0.79	B	16 s	57	24 s	0.76
NM 528 @ Enchanted Hills Blvd	D	49 s	62	108 s	1.08	F	116 s	69	219 s	1.34
NM 528 @ Idalia Rd	C	24 s	58	74 s	0.82	C	25 s	44	98 s	0.96
NM 528 @ Pasilla Rd	B	18 s	44	72 s	0.70	B	11 s	45	73 s	0.71
NM 528 @ Iris Rd	B	11 s	47	67 s	0.75	B	16 s	52	68 s	0.82
NM 528 @ Corrales Rd (NM 448)	D	36 s	67	77 s	0.93	E	58 s	71	160 s	1.11
Enchanted Hills Blvd @ Jager Dr	B	12 s	35	35 s	0.61	C	25 s	73	44 s	0.91
Idalia Rd @ Camino Encantada	B	15 s	61	31 s	0.44	B	14 s	52	33 s	0.40

Italicized intersections utilize half cycles (75 second cycles). US 550/NM 528 is the master controller.

As with the No-Build analyses, the measures of effectiveness identify three corridor patterns. First, the NM 528 corridor should operate well between Corrales Rd and Enchanted Hills Blvd, though the termini intersections will experience greater delay with the site. NM 528/Corrales Rd will operate well during the AM peak, however the PM peak will experience LOS E

operations. Lomas Encantadas traffic will degrade the Enchanted Hills Blvd/NM 528 intersection to LOS E/F during the two peak hours. Intersection improvements will be required.

The US 550 corridor west of NM 528 will be virtually unaffected by Lomas Encantadas, and should operate at LOS B or better. East of NM 528, the US 550 corridor will become even more gridlocked. Table 14 contains the US 550 through movement v/c ratio from NM 528 to I-25. This table indicates extreme over-saturation will be experienced, especially in the peak travel direction. The delay values shown in Table 13 for all intersections east of NM 528 should be considered as estimates only because the delay at most of these intersection would be so severe. Based upon the traffic volumes, a mitigation strategy will be proposed in Section 5.4. It should be noted that with the current right-of-way limitations on US 550 between I-25 and NM 528, the proposed mitigation may be infeasible. Significant improvements will be required within this corridor to relieve the gridlock condition.

Table 14
US 550 Corridor Build Through Movement v/c Ratios

US 550 Cross Street	AM EB	AM WB	PM EB	PM WB
NM 528	*1.30*	0.37	*1.27*	0.58
Jemez Dam Rd	*1.16*	0.45	0.89	*0.99*
Camino Don Tomas	*1.25*	0.63	*1.05*	*1.38*
NM 313	*1.39*	*0.95*	*0.96*	*1.70*
Hill Rd	*1.00*	0.58	0.69	*1.17*

Table 15
2015 Build Unsignalized Intersection Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Enchanted Hills Blvd @ Sprint Blvd				
Eastbound Left Turn	A	8 s	A	9 s
Westbound Left Turn	A	8 s	A	9 s
Northbound Left Turn	D	30 s	F	> 60 s
Southbound Left Turn	E	43 s	F	> 60 s
Enchanted Hills Blvd @ Camino Encantada				
Westbound Left Turn	A	8 s	A	8s
Northbound Left Turn	A	10 s	B	13 s
Enchanted Hills Blvd @ Santa Fe Hills Blvd				
Eastbound Left Turn	A	8 s	A	8 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	B	13 s	C	17 s
Southbound Left Turn	B	15 s	C	25 s
Enchanted Hills Blvd @ Chayote Rd				
Eastbound Left Turn	A	7 s	A	7 s
Westbound Left Turn	A	7 s	A	7 s
Northbound Left Turn	A	7 s	A	7 s
Southbound Left Turn	A	7 s	A	8 s
Idalia Rd @ Iris Rd				
Eastbound	C	20 s	B	12 s
Westbound	C	17 s	B	13 s
Northbound	B	11 s	A	10 s
Southbound	B	11 s	A	10 s

LOS F delays are listed as > 60 s. when the calculated value exceeds 60 seconds.

Table 15 (cont.)
2015 Build Unsignalized Intersection Levels of Service

Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Idalia Rd @ Chayote Rd				
Eastbound Left Turn	A	8 s	A	8 s
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	C	19 s	C	20 s
Southbound Left Turn	C	17 s	C	18 s
Chayote Rd @ Lincoln Ave				
Westbound Left Turn	A	7 s	A	8 s
Southbound Left Turn	A	7 s	A	8 s
Chayote Rd @ Franklin Rd				
Westbound Left Turn	A	7 s	A	7 s
Southbound Left Turn	A	7 s	A	8 s
Camino Encantada @ Lincoln Ave				
Eastbound Left Turn	C	9 s	E	37 s
Westbound Left Turn	C	10 s	D	32 s
Northbound Left Turn	A	8 s	A	8 s
Southbound Left Turn	A	8 s	A	8 s
Camino Encantada @ Franklin Rd				
Eastbound Left Turn	B	14 s	C	17 s
Northbound Left Turn	A	8 s	A	8 s
Camino Encantada @ Camino Venada				
Westbound Left Turn	C	19 s	C	22 s
Southbound Left Turn	A	8 s	A	9 s
Jager Dr @ Lincoln Ave				
Westbound Left Turn	A	8 s	A	8 s
Northbound Left Turn	B	13 s	C	13 s

LOS F delays are listed as > 60 s. when the calculated value exceeds 60 seconds.

Most of the unsignalized intersections will operate with excellent levels of service in 2015. The exception is the Enchanted Hills Blvd/Sprint Blvd intersection. The deficiency at Enchanted Hills Blvd/Sprint Blvd was discussed in Section 5.2. This intersection will receive minimal AM or PM trips from Lomas Encantadas. Current traffic forecasts indicate that the intersection will not meet the peak hour signal warrant. New area development that impacts the intersection will dictate when signal warrants will be met and signalization required.

5.4 Year 2015 Mitigation Analyses

Significant intersection operations failures will occur by the year 2015 at NM 528/Enchanted Hills Blvd and within the US 550 corridor, from NM 528 to I-25. These intersections comprise the primary roadway system serving Lomas Encantadas, and systematic mitigation is proposed. The system deficiencies will occur with or without the development of Lomas Encantadas, though the site development will exacerbate the deficiency. The NM 528/Corrales Rd intersection will also degrade to LOS E by 2015 during the PM peak hour with the build scenario. These deficiencies are addressed in these mitigation analyses. No unsignalized deficiencies are significant enough to warrant mitigation as a result of the Lomas Encantadas development.

The mitigation objectives are to upgrade each intersection average level of service to LOS D or better, with maximum average movement delays of less than 80 seconds and v/c ratios of 0.95 or less on the primary travel movements. Turn lane deficiencies may be acceptable if the movements are low volume (less than 100 vph). A series of intersection improvements were

developed to reach these goals for the 2015 No-Build Alternative. The AM peak signal cycle was reduced to 120 seconds from the unmitigated 150 second cycle and signal optimization and coordination were applied throughout the corridors. The proposed improvements tested are listed below by intersection.

Enchanted Hills Blvd/NM 528

- A dual left-turn from northbound NM 528 to westbound Enchanted Hills Blvd.
- A dual left-turn from eastbound Enchanted Hills Blvd to northbound NM 528.
- A third northbound and southbound lane on NM 528.
- A right-turn overlap provided for the eastbound and southbound right-turn lanes.

US 550/NM 528

- A third eastbound and westbound through lane on US 550.
- Removal of the dual right-turn lane from NM 528 to US 550, replacing it with a single lane free-right turn. This will be a lane addition that should extend through the Jemez Dam Rd intersection.
- No-Build - the eastbound right-turn lane becomes the lane addition on southbound NM 528.
- Build - the eastbound left turn lane remains a yield condition and the westbound left-turn lane becomes a triple left. (One concern for this improvement is that the pedestrian crossing distance will be approximately 112' from right-turn island to right-turn island. Pedestrian actuation of the signal will require approximately 35 seconds to serve pedestrians, 10 seconds more than the actuated through cycle. This may not be significant since no pedestrian movements were observed at the intersection, however, this could be an issue ion the future if pedestrian friendly development occurs near the intersection.)

US 550/Jemez Dam Rd

- A third eastbound through lane on US 550 (in addition to the right turn add lane from NM 528).
- A westbound right-turn lane.

US 550/Camino Don Tomas

- A third eastbound and westbound through lane on US 550.

US 550/NM 313

- A third eastbound and westbound through lane on US 550.
- A dual left-turn lane northbound on NM 313.
- A second through lane southbound on NM 313.

US 550/Hill Rd

- A third eastbound and westbound through lane on US 550. The third lane would terminate at the I-25 southbound ramp.

NM 528/Corrales Rd

- A third northbound and southbound through lane on NM 528 lane.

Table 16 contains the year 2015 No-Build, mitigated traffic analyses. These analyses include the improvements enumerated above. Table 17 follows with the Build, mitigated traffic analyses, utilizing only the baseline improvements. In the tables, [Max v/c] refers to the

highest through movement v/c ratio within the US 550 corridor, or the highest v/c ratio for any movement at the NM 528 intersections. The northbound left-turn from the I-25 ramp is considered a US 550 corridor through movement.

Table 16
2015 No-Build, Mitigated Signalized Intersection Measures of Effectiveness

Intersection	AM Peak			PM Peak		
	LOS	Delay	Max v/c	LOS	Delay	Max v/c
US 550 @ I-25 NB Ramp	D	49 s	0.96	C	28 s	0.84
US 550 @ Hill Rd	C	24 s	0.78	C	26 s	0.91
US 550 @ NM 313	D	37 s	0.97	D	50 s	0.99
US 550 @ Camino Don Tomas	B	14 s	0.86	B	20 s	0.92
US 550 @ Jemez Dam Rd	A	3 s	0.58	B	14 s	0.86
US 550 @ NM 528	B	17 s	0.85	C	26 s	1.00
NM 528 @ Enchanted Hills Blvd	C	20 s	0.79	C	31 s	0.88
NM 528 @ Corrales Rd (NM 448)	C	33 s	0.81	D	40 s	0.86

Table 17
2015 Build, Mitigated Signalized Intersection Measures of Effectiveness

Intersection	AM Peak			PM Peak		
	LOS	Delay	Max v/c	LOS	Delay	Max v/c
US 550 @ I-25 NB Ramp	E	60 s	1.00	D	40 s	0.92
US 550 @ Hill Rd	C	29 s	0.89	C	28 s	0.93
US 550 @ NM 313	D	39 s	1.02	E	65 s	1.10
US 550 @ Camino Don Tomas	C	21 s	1.03	D	40 s	1.05
US 550 @ Jemez Dam Rd	A	5 s	0.66	C	26 s	0.96
US 550 @ NM 528	C	21 s	0.98	C	22 s	0.86
NM 528 @ Enchanted Hills Blvd	C	24 s	0.76	D	36 s	0.89
NM 528 @ Corrales Rd (NM 448)	C	30 s	0.84	C	34 s	0.93

No-Build average levels of service will attain LOS D or better at all intersections during the AM and PM peak hour except at the US 550/NM 313 intersection. The US 550/NM 313 intersection would require additional mitigation to achieve the desired level of service, however, substantial right-of-way and corridor access management would be required to reduce delay at this intersection to LOS D. The other critical corridor measure of effectiveness, the through movement v/c ratio of 0.95 or less, is attainable except for the northbound I-25 off-ramp and at NM 313 during the AM peak hour. During the PM peak hour, v/c ratios will exceed this threshold at both NM 313 and NM 528, indicating the potential for cycle failures and shock waves at high v/c approaches.

The proposed mitigation (slightly different than No-Build) should be adequate for the Build scenario during the AM peak hour. Four intersections will experience higher than desired v/c ratios, with cycle failures likely at NM 313. During the PM peak, the primary concern is that US 550 from NM 313 to NM 528 will have v/c ratios over capacity, yielding poor operation. Additional improvements of a dual left-turn lane eastbound at Jemez Dam Rd and a dual northbound left turn at Camino Don Tomas would improve levels of service and reduce through movement v/c ratios to 0.95 and 0.96 respectively, close to the desired maximums.

Once again, improvements at the US 550/NM 313 are problematic. Addition of a 4th through lane would reduce the NM 313 westbound through lane v/c to 0.98, close to the desired threshold, however, two intersection movements would still operate at LOS F. The improvements tested would require a complete change in the character of the intersection, and these improvements would lead to safety concerns for pedestrians and bicyclists. Because of the US 550/NM 313 intersection and high congestion level within the US 550 corridor, additional mitigation should be explored through a regional planning effort, and that mitigation should include examination of alternative routes from Rio Rancho to I-25.

5.5 Traffic Signal Progression

Signal progression within the NM 528 corridor will be beneficial, but not optimal because of the signal spacing. These signals are spaced from approximately 0.85 to 1.20 miles, and the maximum spacing for progression is typically 1.0 miles. Synchro generates coordination factors (CF) between each intersection, with a value of 50 or greater considered favorable for coordination. The coordination factors for NM 528 during the 2015 AM and PM Peak Build scenarios are as follows:

	AM	PM
US 550 to Enchanted Hills Blvd	62	60
Enchanted Hills Blvd to Idalia Rd	35	30
Idalia Rd to Pasilla Rd	39	39
Pasilla Rd to Iris Rd	38	42
Iris Rd to Corrales Rd (NM 448)	32	33

These values indicate that coordination would not be very effective, primarily because intersection spacing will likely result in significant platoon dispersion, reducing coordination effectiveness. While not as effective as desired, coordinated timing offsets within the corridor are recommended to maximize efficiency to the extent possible.

The US 550 corridor would benefit greatly from signal coordination. The coordination factors for the 2015 Build AM and PM scenarios are:

	AM	PM
NM 528 to Jemez Dam Rd	107	97
Jemez Dam Rd to Camino Don Tomas	49	34
Camino Don Tomas to NM 313	87	98
NM 313 to Hill Rd	70	77
Hill Rd to I-25 NB Ramp	94	109

The coordination factors indicate that these signals will benefit from signal progression. The link with the least benefit will be between Camino Don Tomas and Jemez Dam Rd, primarily because the intersection spacing exceeds one mile. Coordinated timing plans within the corridor are recommended to maximize efficiency.

Two signalized intersections within the study area are not on the main corridors. The Jager Dr/Enchanted Hills Blvd intersection is approximately 1000' west of NM 528, and would benefit from coordination with an average CF of 97. Similarly, the Camino Encantada/Idalia Rd intersection yields a CF of 88, indicating it is a good candidate for coordination with the Idalia Rd/NM 528 intersection. Each of these minor intersections were optimized using cycle lengths half as long as the US 550 and NM 528 corridors.

5.6 VEHICLE QUEUING ANALYSIS

Level of service analyses assess the traffic operations at an intersection in terms of vehicle delay, however, they do not adequately assess the impacts associated with the physical dimensions of turn lanes and the blocking of accesses or upstream intersections by queued vehicles. Queuing analyses were performed for selected exclusive turn lanes at signalized intersections, and where appropriate for the through lane. Queue lengths were determined for both the 50th and 95th percentile value, as appropriate. The queue analyses utilize the Poisson negative exponential random arrival distribution, summed to the 50% and 95% levels. Table 18 contains the results of the queue analyses, for the 2015 No-Build and Build conditions. The mitigation proposed in Section 5.4 has been included in the analysis.

Left-turn lanes are the primary queue concern because they typically have the shortest green time at intersections. The storage length design value for all left-turn lanes is the 95th percentile queue. For these analyses, where a left turn movement operates with less than 15% of the signal cycle's green time (represented by the g/C ratio), the analysis assumes that all vehicles arrive at that left-turn approach with a red indication. In reality, there is frequently a percentage of vehicles that arrive on the green indication and proceed through the left turn without stop delay. If the left turn being analyzed has greater than 15% of the signal cycle green time, the potential for arrival on green increases, and an adjustment for half of that green time is provided in the analysis, reducing the design queue length. This queue adjustment is calculated following generation of the 95th percentile queue length, Q_{95}, utilizing the equation

$$Q_{LT} = Q_{95} * [1.00-(g/C)/2]$$

Where Q_{LT} is the left-turn design queue length,
Q_{95} is the base 95th percentile queue length, and
g/C is the green time percentage per cycle for the movement greater than/equal to 0.15.

Right-turn lanes have less restrictive green times than left-turn lanes because of right-turns-on-red, allowing vehicles to turn during numerous cycle phases. Where right-turn-on-red is prohibited, right-turn queues should be analyzed like left-turn queues. Standard right-turn queues are calculated to determine the average queue length, Q_{50}, for designing a right turn lane length. The right-turn queues are analyzed for the 50th percentile value, and are always adjusted similarly to left turns using the equation

$$Q_{RT} = Q_{50} * [1.00-(g/C)/2]$$

Where Q_{RT} is the right-turn design queue length,
Q_{50} is the base 50th percentile queue length, and
g/C is the green time percentage per cycle for the movement.

Through movement queues are calculated where there is concern that the through movement may block either a left- or right-turn lane, or an upstream access or side street. The average queue at the stop bar is calculated, with an adjustment for arrival on red, using the following equation

$$Q_{Th} = Q_{50} * [1.00-(g/C)]$$

Where Q_{Th} is the through movement design queue length,
Q_{50} is the base 50th percentile queue length, and
g/C is the green time percentage per cycle for the movement.

Queue analyses were performed for signalized intersections in close proximity to the development, impacted by site traffic. Unsignalized intersections were not evaluated, however, standard lengths were prepared for the recommendations. The mitigated analyses were used to generate the design queue lengths. Table 18 contains those results.

Table 18
AM and PM Peak Hour Queue Summary - Year 2015 No-Build and Build Conditions

Intersection Approach	Volume		g/C Ratio		50th Percentile		95th Percentile		Design	Design
	No Bld	Build	No Bld	Build	No Bld	Build	No Bld	Build	No Bld	Build
*AM Peak Hour (120 second Cycle, * 60 second Half-cycle)*										
Enchanted Hills Blvd @ NM 528										
Eastbound Left Turn	200	540	.11	.27	4	9	6	11		
Eastbound Right Turn	350	370	.47	.59	10	9				
Northbound Left Turn	670	700	.26	.28	11	12	14	14		
Northbound Through	1460	1460	.71	.62	8	10			200'	250'
Southbound Right Turn	150	330	.59	.58	4	8			100'	
Southbound Through	630	630	.46	.34	6	7				
****Enchanted Hills Blvd @ Jager Dr***										
Eastbound Left Turn	80	80	.80	.61	1	1	2	3		
Westbound Left Turn	60	210	.66	.80	1	3	3	5		
Northbound Left Turn	10	20	.14	.14	0	0	1	1		
Northbound Right Turn	-	380	-	.37	-	5				125'
Southbound Left Turn	40	40	.14	.14	0	0	2	2		
****Idalia Rd @ Camino Encantada***										
Eastbound Left Turn	-	50	-	.32	-	1	-	3		
Westbound Right Turn	-	170	-	.86	-	2				
Southbound Left Turn	-	380	-	.55	-	6	-	8		
Idalia Rd @ NM 528										
Eastbound Left Turn	210	210	.18	.17	4	4	6	6	150'	150'
Northbound Left Turn	60	190	.71	.74	2	6	4	7	100'	
*PM Peak Hour (150 second Cycle, * 75 second Half-cycle)*										
Enchanted Hills Blvd @ NM 528										
Eastbound Left Turn	370	660	.14	.23	8	14	11	16	275'	400'
Eastbound Right Turn	660	700	.50	.59	21	21			525'	525'
Northbound Left Turn	570	600	.22	.22	12	13	15	16	375'	375'
Northbound Through	1020	1020	.66	.57	8	10			200'	250'
Southbound Right Turn	70	440	.61	.59	3	13				325'
Southbound Through	1470	1470	.45	.36	17	20			425'	500'
****Enchanted Hills Blvd @ Jager Dr***										
Eastbound Left Turn	110	110	.62	.42	2	2	4	4	100'	100'
Westbound Left Turn	120	520	.61	.68	2	11	4	11	100'	275'
Northbound Left Turn	160	160	.24	.21	3	3	7	7	175'	175'
Northbound Right Turn	0	290	-	.55	-	5				125'
Southbound Left Turn	200	200	.24	.21	4	4	8	8	200'	200'
****Idalia Rd @ Camino Encantada***										
Eastbound Left Turn	-	130	-	.41	-	3	-	5		125'
Westbound Right Turn	-	490	-	.76	-	7				175'
Southbound Left Turn	-	310	-	.47	-	6	-	9		225'
Idalia Rd @ NM 528										
Eastbound Left Turn	70	70	.11	.13	2	2	3	3		
Northbound Left Turn	30	390	.79	.83	1	16	2	14		350'

Table 18 shows the design queue lengths that would be desired for both the No-Build and Build mitigated conditions. The design lengths are indicated in either the AM or PM peak hour, dependant upon which period controls the design.

The Idalia Rd/Camino Encantada intersection has yet to be designed, therefore the queue design values in Table 18 should be used as the minimum design values for the intersection turn lanes. If feasible, an additional 25% should be added to each design length to accommodate traffic growth from future area development.

The Idalia Rd/NM 528 intersection currently has adequate storage for the design queue lengths. A dual left-turn lane was recently constructed on Idalia Rd, accommodating future growth. It should be noted that the 350' for the northbound NM 528 left-turn lane could be shortened to 200' if a dual left-turn lane is constructed. This should be considered when NM 528 is widened to six lanes given the left turn projection of 390 vph. This turning movement is also likely to grow as more development occurs west of NM 528. Turning movements in excess of 250 vph typically benefit from dual turn lanes. Through movements also improve because less turning movement phase time provides more green time for the primary movements.

Enchanted Hills Blvd at Jager Rd left-turns are adequate in the eastbound (125') and southbound (trap lane) directions. Consideration should be given to the southbound left-turn lane when the intersection is reconstructed to add the south leg. Either the roadway should be widened approaching the intersection to stripe a left-turn lane or a right-turn lane should be added. If a right turn lane is added it should be at least 150' in length. The existing westbound left-turn lane (125') is inadequate and should be extended to at least 275', based upon using a half-cycle of the NM 528 corridor. A longer left-turn lane, 425', will be required if a full-cycle is used at the intersection. The northbound left-turn will require 175' of storage and the design northbound right-turn is 125'. It should be noted that adding non-site trips to the intersection indicates that a 200' right-turn lane should be constructed (using the half-cycle), therefore, it is recommended to minimally design that length.

The Enchanted Hills Blvd/NM 528 intersection is the principal queuing concern. Extensive queues are expected on five movements. The longest queue is expected on the eastbound right-turn where a 525' lane is desired. The minimum distance for this lane should be 500'. The eastbound left-turn lane will require an extension of 150' beyond the current 250' lane, as 400' will be required for the dual turn lane. This will impact the current median opening in Enchanted Hills Blvd for the Walgreen's pharmacy. A dual left-turn lane northbound on NM 528 will be required with 375' of storage, and the northbound through lane should not block the left-turn lanes. Southbound on NM 528, the through lanes should queue to 500', blocking access to the southbound right-turn lane. It may be prudent to extend the right-turn lane to 550' to ensure that queue blocking does not occur. Note that these lengths do not assume that additional through lanes would be added to NM 528.

Queues on the remainder of the NM 528 and US 550 corridors were not calculated because of minimal turning movements (less than 30 per peak hour) during either peak hour. Almost all Lomas Encantadas turns that were assigned within the study area were right turns, with no impact to queuing analyses.

6.0 FINDINGS AND RECOMMENDATIONS

6.1 FINDINGS AND CONSIDERATIONS

The development of Lomas Encantadas will have impacts upon the roadway network. These impacts may be grouped into two categories - mitigable and non-mitigable. Mitigation is identified where it is feasible in terms of existing right-of-way and cost, and can provide improvements to LOS D with v/c ratios of less than 0.95 for all primary through movements.. The US 550 corridor does not meet these criteria, and is therefore considered non-mitigable within its exiting right-of-way.

The US 550 corridor cannot be mitigated for two reasons - capacity and right-of-way. Corridor capacity for US 550 is not attainable by applying reasonable mitigation strategies. The addition of one travel lane in each direction, plus the addition of side street improvements will not yield v/c ratios below capacity for the corridor's peak direction through movements in 2015. The No-Build mitigation analyses yield two AM and two PM intersections where the v/c ratio will equal or exceed 0.95, theoretical capacity. This indicates that at least 4 through lanes would be required in each direction, and even that number of lanes will not fully mitigate the condition at the US 550/NM 313 intersection. (The remainder of the corridor should operate well with four through lanes in each direction.)

The second corridor concern is right-of-way. US 550 between Hill Rd and NM 528 has restrictive right-of-way widths. Significant right-of-way would be required to perform any roadway widening, including significant reconstruction of the bridge across the Rio Grande. Through Bernalillo, US 550 is a retail, full-access corridor, and widening could result in economic loss to the community. Widening to a roadway section that could accommodate the future traffic could also require access management, possibly necessitating frontage roads and median access elimination, impacting economic development within the corridor. Before this corridor may be reasonably mitigated, a policy level decision may be required to alter the corridor's land use and access character. Alternative roadway solutions might best mitigate the deficiencies within the US 550 corridor. These types of decisions will require regional support and funding.

Impacts to area roadways near Lomas Encantadas and to NM 528 can be mitigated with respect to Lomas Encantadas traffic. Tables 16 and 17 indicate the significant improvements that are possible, and the site trip mitigation is detailed below. It should be noted that the mitigation may be staged, contingent upon the progress of the development. Internal roadways will be constructed as required for access and circulation. Off-site mitigation may be staged based upon development levels and access connections. Mitigation timing is estimated within the recommendation below for off-site improvements.

A roadway network consideration that is not directly a result of the site development, but should be discussed herein, is the driveway access from Walgreen's Pharmacy to Enchanted Hills Blvd. As eastbound traffic on Enchanted Hills Blvd grows, it will require that the left-turn lane be extended and widened to two lanes. This will require the removal of the left-in and left-out movements at the driveway. These movements will have to be reassigned to the network, and they will most frequently result in additional movements at the Jager Dr/Enchanted Hills Blvd intersection.

The reassignment of the Walgreen's driveway left-turns entering the site will have minimal impact because the volume should run no more than 25 to 30 trips during the PM peak hour. The primary concern is the additional southbound trips on Jager Dr. It is anticipated that most motorists will desire to use the closest driveway access on the south side of the Raley's grocery store. By 2015, the left-turns from the existing driveway are projected to approach 230 vph, and if this number of left turns are added to the southbound Jager Dr left-turn, it will result in approximately 420 southbound left turns at Enchanted Hills Blvd. Minimally, this would require additional storage of 150', for a total left turn storage length of 325' for southbound Jager Dr. Given the left-turn volume in excess of 250 vph, a dual left-turn may be required to provide adequate operations, with a turn lane length of at least 200'.

Under either a single or dual southbound Jager Dr left-turn scenario, the first access on Jager Dr north of Enchanted Hills Blvd may have to be designated as right-in, right-out because left-turn ingress or egress would pass through the southbound left-turn lane to Enchanted Hills Blvd. By 2015, the best operations will result at the Jager Dr/Enchanted Hills Blvd intersection if the southbound approach includes a dual left-turn lane with at least 200' of storage, a through lane and minimally a 150' right-turn lane. This will require widening the existing 2-lane approach to 4-lanes, likely requiring additional right-of-way along the west side of Jager Dr.

6.2 Internal Roadway Design Considerations

Lomas Encantadas will construct the roadway network as shown schematically on the site drawing in Appendix A. All designs should be consistent with City of Rio Rancho and ADA standards. All lanes are as identified as 12' lanes, however, these are nominal widths and local standards should used. The specific requirements of the roadways and intersections are described below.

Camino Encantada will be the principal collector roadway within Lomas Encantadas with a posted speed of 35 mph. At a minimum, it is anticipated that the road will have 1-12' travel lane in each direction with a shoulder/bike lane, curb, gutter and sidewalk, and a 16' or wider raised median. The roadway section from Lincoln Ave to Idalia Rd should be adequate as a 2-lane road, however, it would be prudent to provide right-of-way for up to 5-lanes to accommodate future development. Numerous residential development units will gain access from Camino Encantada, and each cross streets should have a left-turn lane in the median. These left-turn lanes should provide a minimum of 100' of vehicle storage. The northbound left-turn lane to Enchanted Hills Blvd, the southbound left-turn to Camino Venada, and the northbound left turn to Franklin Rd should provide for a minimum of 150' of storage. Each approach at Lincoln Ave should have a minimum 150' long left-turn lane. Camino Encantada will extend to Idalia Rd, where a southbound left-turn lane will require 225' of storage. If the Camino Encantada/ Idalia Rd is anticipated to be a 4-leg intersection, the design should include a southbound right-turn lane.

Lincoln Ave will be a principal, east-west collector roadway within Lomas Encantadas. It should have 1-12' travel lane in each direction from the west end of the roadway to Camino Venada, and 2-12' travel lanes in each direction from Camino Venada to Enchanted Hills Blvd. The road will have an urban section with curb, gutter and sidewalk, and raised medians with a posted speed of 35 mph. Left-turn lanes with a minimum of 100' of storage should be provided at each cross street and the left-turn lanes at Camino Encantada should be at least 150' long. Commercial access east of Camino Venada should be consolidated to the extent possible, with

site access from cross streets rather than Lincoln Ave wherever possible. It is feasible that this road could functionally be classified as a minor arterial in the future, and as such, right-of-way should be commensurate with that designation.

Camino Venada will be an urban collector roadway with a 30 to 35 mph posted speed. It is anticipated that this road will have 1-12' travel lane in each direction with curb, gutter, and sidewalk, and a median with left-turn lanes at cross streets. Left-turn lanes to residential areas should provide at least 100' of storage.

Franklin Rd will be an urban local street with an anticipated posted speed of 25 mph. A left-turn lane at least 100' long should be provided at Camino Encantada. Internal intersections should not require turn lanes based upon low roadway volumes.

6.3 RECOMMENDATIONS

6.3.1 Internal Recommendations

The internal and off-site recommendations have been prepared separately. The internal roadway recommendations are as follows:

1. Construct Camino Encantada from Enchanted Hills Blvd to Idalia Rd. This road should have at least one travel lane in each direction with median separation of the travel lanes. Left turn lanes should be constructed for each cross street along the corridor. See Section 6.2 for intersection details.
2. Construct Lincoln Ave from the limits of Lomas Encantadas to Enchanted Hills Blvd per the guidelines described in section 6.2. An exclusive northbound right-turn lane to Enchanted Hills Blvd should be constructed, providing storage for at least 8 vehicles, or 200'. Consideration should also be given to the Jager Dr north of Enchanted Hills Blvd where a right-turn lane or roadway widening will be required in the future. The Lincoln Ave/Camino Encantada intersection should be designed to accommodate future signalization, with adequate right-of-way in the intersection returns. Installation of underground signal infrastructure should be considered. Signalization is not anticipated as of 2015 based upon expected area development.
3. Construct Camino Venada between Camino Encantadas and Lincoln Ave, per the guidelines described in Section 6.2.
4. Construct Franklin Rd from Chayote Rd to Camino Encantada per Section 6.2.
5. Construct each residential unit entry road per the City of Rio Rancho standards. Side street left-turn lanes should be considered for each residential access road to the collector roadway system with more than 100 residential units. In all cases, vehicle storage of 100' should be adequate for side street left-turn lanes.

6.3.2 External Recommendations

The off-site impact mitigation recommendations are discussed below. One assumption that was included in the 2015 programmed improvements listed in Section 1.1.4 is that each intersection along NM 528 will have a cross street left-turn lane and all NM 528 approaches will have right-turn lanes. Those improvements have not been addressed as mitigation requirements. The following improvements are required to achieve the measures of effectiveness summarized in Table 17.

1. The Enchanted Hill Blvd/Lincoln Ave-Jager Dr intersection will require signalization as a result of this project. Since this will act as the initial site access, it should be considered as an initial site improvement to help during construction and to serve the new developments. Consideration should be given to improvements on the north side of Enchanted Hills Blvd, resulting from access restrictions on Enchanted Hills Blvd.
2. Improvements will be required to the Enchanted Hills Blvd/NM 528 intersection. These improvements are addressed by time frame.
    a. Near term
        i. Add a right-turn lane for eastbound Enchanted Hills Blvd. This lane should extend at least 500' to provide storage for the existing and anticipated right-turn demand. In addition, a right-turn overlap with the northbound left-turn phase should be added, primarily to serve school buses and other non-exempt vehicles which are prohibited from making right-turns-on-red.
        ii. Create a dual left-turn lane eastbound on Enchanted Hills Blvd. Restripe the inside lane to a left-turn trap lane and have the current curb lane become the through lane to Montoya Rd. The existing left-turn storage length should be adequate until the development is 75% complete, at which time the existing left-turn lane may require an extension to 400'. When the entire length is required, the existing median opening on Enchanted Hills Blvd will require closure. This will impact Jager Dr, adding trips currently using the open median.
        iii. Reconstruct the northbound left-turn lane on NM 528 to provide a dual left-turn lane. This will require a dual left-turn lane with at least 375' of storage in each lane. This approach should be signed for no U-turns because of conflicts with right-turning vehicles utilizing the overlap, and the additional delay associated with U-turning vehicles.
    b. Medium term
        i. Provide a right-turn overlap for the southbound NM 528 right turn.
3. A third through lane should be added to NM 528. Similar to US 550, the analyses indicate that intersection through movements may have acceptable levels of service, however, they will have high v/c ratios. [For example, southbound at Enchanted Hills Blvd is projected to operate at LOS C with a v/c ratio of 1.02. Over-saturated approaches such as this frequently fail because the approach is not able to accommodate the demand.] Review of the 2025 MTP indicates that the only NM 528 improvements identified are for widening the 4-lane roadway to a 6-lane roadway from Southern Blvd to Northern Blvd. This terminates the widening more than a mile south of the study area limits. Traffic growth by 2015 indicates that the two-through lanes each direction on NM 528 will no longer be sufficient at some of the signalized intersections. Those that will be deficient within the study area include Enchanted Hills Blvd and Corrales Rd. It is recommended that the pubic agencies investigate the need to widen NM 528 from Northern Blvd to US 550.

4. A number of improvements should be considered at the US 550/NM528 intersection. It should be noted that with these improvements, there will still be intersection deficiencies associated with the lack of capacity within the US 550 corridor. No recommendations have been prepared for the US 550 corridor as it cannot be mitigated with the existing rights-of-way. These intersection improvements are estimated as medium/long term mitigation, primarily contingent upon developments west of Chayote Rd.
    a. Add a third through lane to US 550.
    b. Add a third left-turn lane to westbound US 550. (It should be noted that these lane additions would create an unfriendly pedestrian environment, and pedestrian-friendly development should be discouraged near this intersection.)
    c. Reconstruct the northbound right-turn from a dual right-turn to a single, free right-turn. This movement will be the heaviest intersection movement and will only be accommodated with a free movement as the volumes from eastbound US 550 increase. The free right turn lane should be constructed for at least one-half mile along US 550, through the Jemez Dam Rd intersection, to provide adequate merge distance.
    d. Remove the chevron striping from the second left-turn lane northbound and restripe it as a dual left-turn lane. The north-south signal phasing should be modified from split phasing to concurrent north-south phasing, providing additional green time for the east-west US 550 phases.
5. The US 550/NM 528 at-grade intersection should be considered for an urban interchange upgrade to accommodate future growth in northeast Rio Rancho. An interchange would improve both capacity and safety.

Appendices

Appendix A	Vicinity Map and Site Drawing
Appendix B	Existing Traffic Volume Summary Sheets
Appendix C	2015 No-Build and Build Traffic Volume Summary Sheets
Appendix D	Trip Distributions
Appendix E	Trip Assignments
Appendix F	Existing Level of Service Analyses
Appendix G	2015 No-Build Level of Service Analyses
Appendix H	2015 Build Level of Service Analyses
Appendix I	2015 Mitigation Level of Service Analyses
Appendix J	Roadway Network Improvements (MTP)
Appendix K	Roadway Access Policies
Appendix L	Turning Movement Count Data Sheets

Appendix A

Vicinity Map and Site Drawings

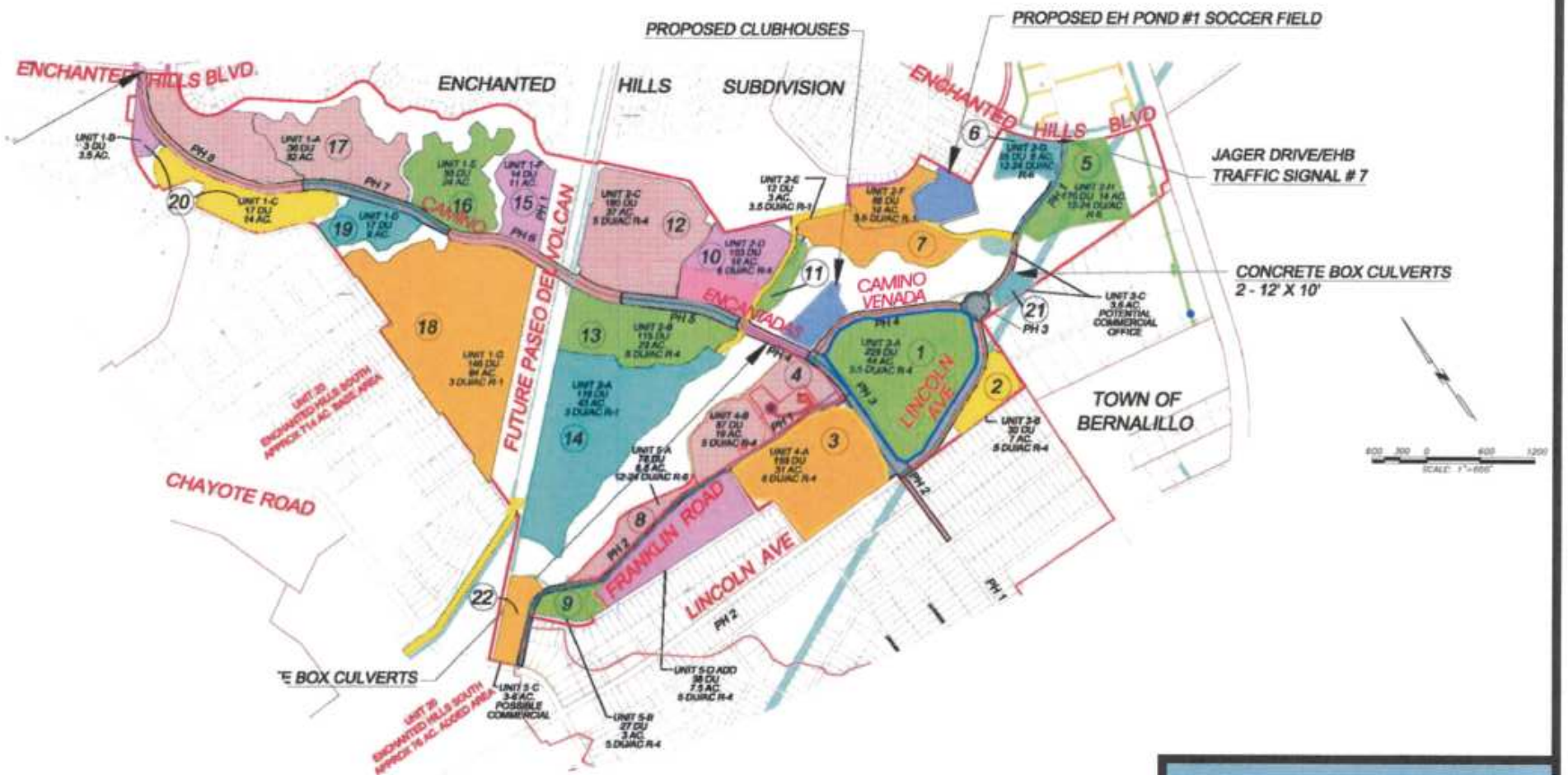
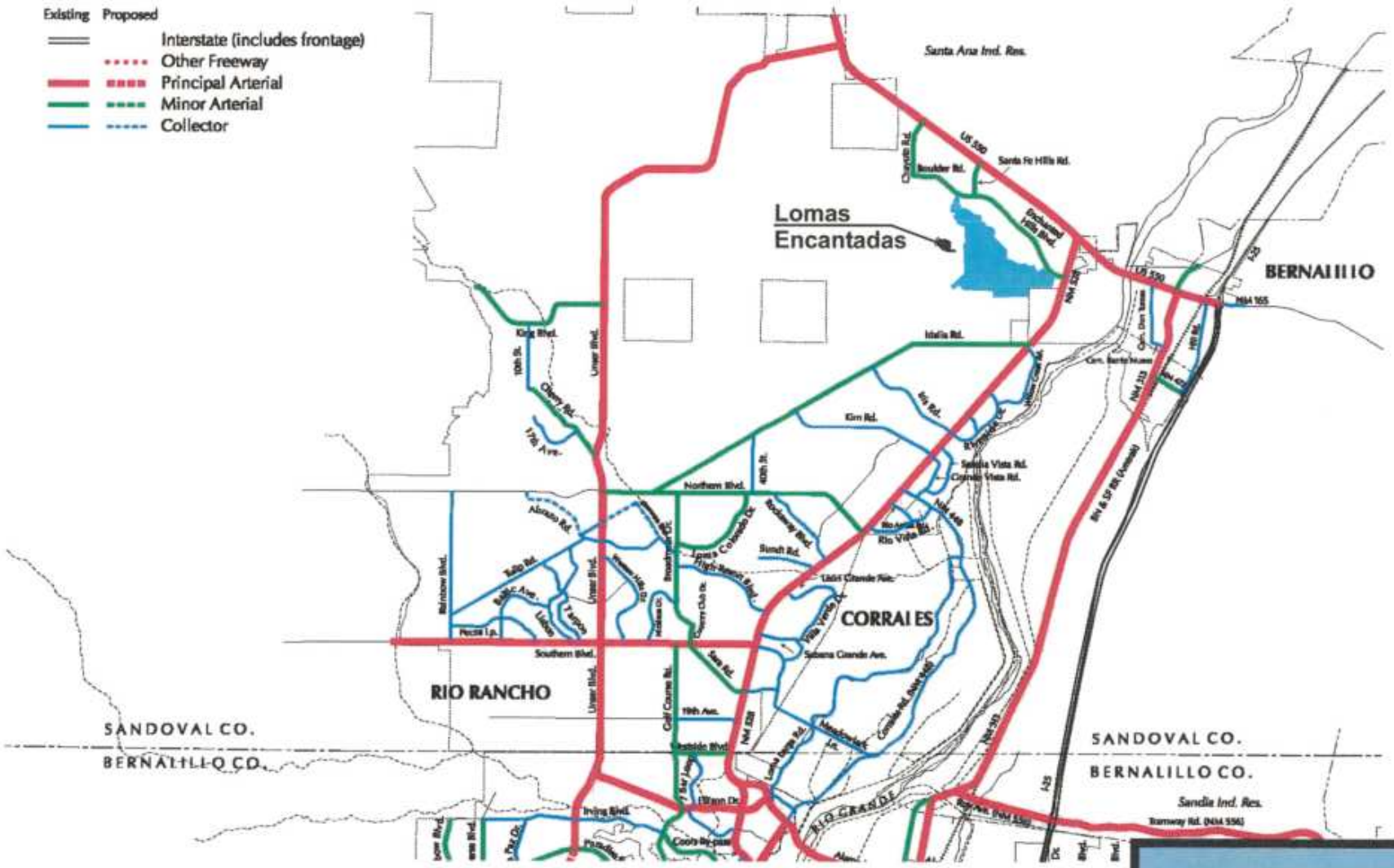


Figure A-1

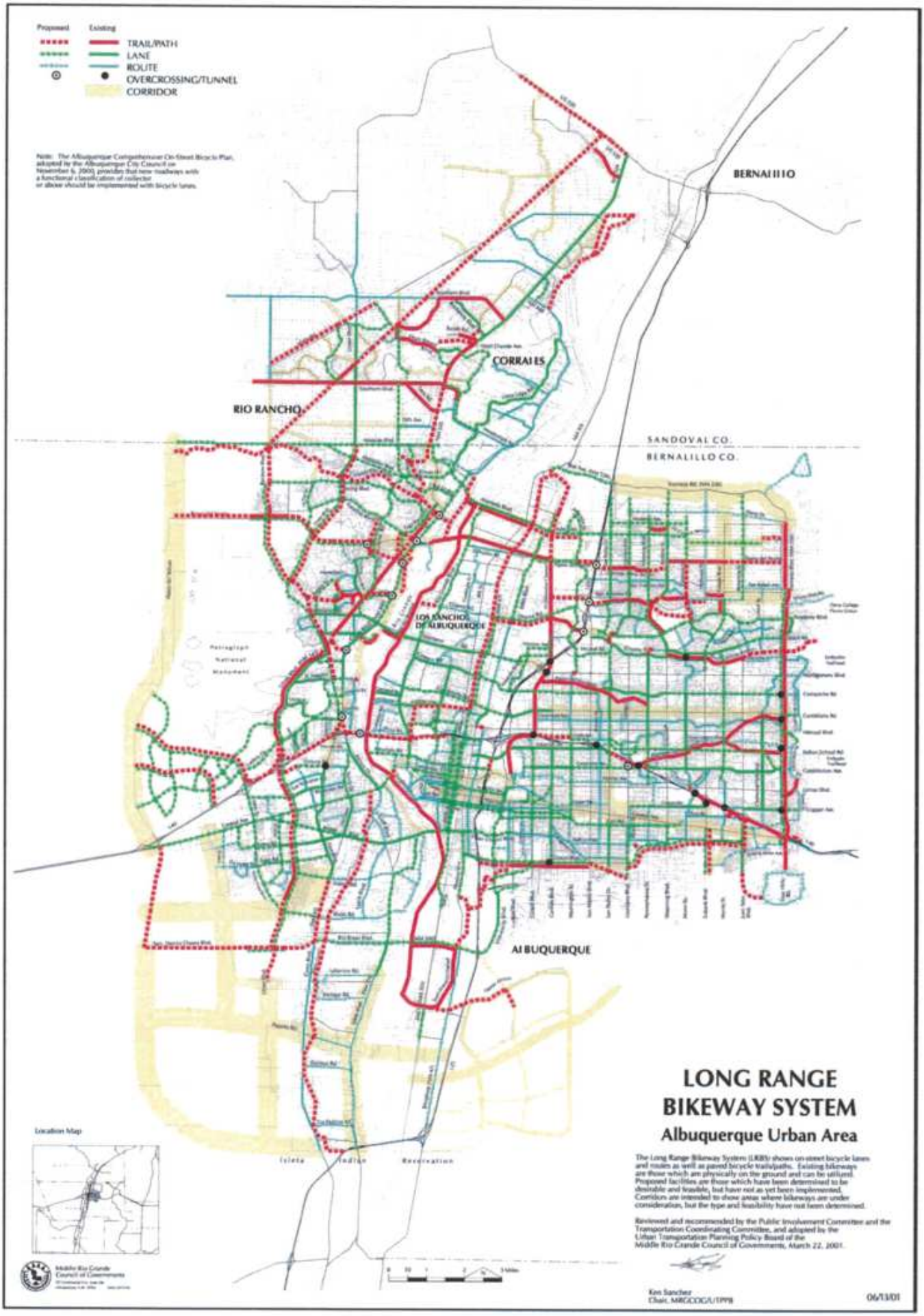
Site Plan



This map was excerpted from the MRCOG Current Roadway Functional Classification System map dated 7/23/2003.

Figure A-2

Roadway Functional Classifications


Proposed
Existing
TRAIL/PATH
LANE
ROUTE
OVERCROSSING/TUNNEL
CORRIDOR
Note: The Albuquerque Comprehensive On-Street Bicycle Plan, adopted by the Albuquerque City Council on November 6, 2000, provides that new roadways with a functional classification of collector or above should be implemented with bicycle lanes.
BERNALILLO
CORRALES
RIO RANCHO
SANDOVAL CO.
BERNALILLO CO.
LOS RANCHOS DE ALBUQUERQUE
ALBUQUERQUE
Petroglyph National Monument
Isleta Indian Reservation
Location Map
Middle Rio Grande Council of Governments
LONG RANGE BIKEWAY SYSTEM
Albuquerque Urban Area
The Long Range Bikeway System (LRBS) shows on-street bicycle lanes and routes as well as paved bicycle trails/paths. Existing bikeways are those which are physically on the ground and can be utilized. Proposed facilities are those which have been determined to be desirable and feasible, but have not as yet been implemented. Corridors are intended to show areas where bikeways are under consideration, but the type and feasibility have not been determined.
Reviewed and recommended by the Public Involvement Committee and the Transportation Coordinating Committee, and adopted by the Urban Transportation Planning Policy Board of the Middle Rio Grande Council of Governments, March 22, 2001.
Ken Sanchez
Chair, MRGCOG/U/TPPB
06/13/01

Appendix B

Existing Traffic Volume Summary Sheets

EX AM - 2004 Baseline

External Intersections		Eastbound					Westbound					Northbound					Southbound				
		LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@ Chayote Rd	0	450	8		458	17	185	0		202	6	0	19		25					0
						0.91					0.92					0.78					
US 550	@ Santa Fe Hills Blvd	0	473	11		484	34	214	0		248	9	0	201		210	0	0	0		0
						0.92					0.82					0.91					
US 550	@ Sprint Blvd	0	639	14		653	81	295	0		376	5	0	140		145	0	0	0		0
						0.81					0.83					0.79					
US 550	@ NM 528	8	***800***	11	29	848	440	271	8	30	749	33	37	1100	0	1170	28	3	0	2	33
						0.84					0.64					0.892					0.75
US 550	@ Jemez Dam Rd	*42*	*1938*	0		1980	0	969	52		1021	0	0	0		0	*23*	*0*	*13*		36
						0.92					0.75										0.68
US 550	@ Camino Don Tomas	*9*	*1726*	*106*	*1*	1842	54	920	6		980	*80*	*8*	*78*		166	3	7	2		12
						0.87					0.84					0.67					0.43
US 550	@ NM 313	134	***1425***	185		1744	111	867	108		1086	173	194	54		421	129	174	66		369
						0.8					0.89					0.73					0.83
US 550	@ Hill Rd	19	1529	51		1599	37	881	47		965	31	0	39		70	28	1	23		52
						0.84					0.81					0.85					0.77
US 550	@ I-25 NB Ramp	538	78	0		616	0	671	29		700	526	4	82		614	0	0	0		0
						0.93					0.83					0.93					
NM 528	@ Enchanted Hills Blvd/Mont	134	3	***101***	138	376	4	0	9	0	13	***430***	946	14	0	1473	16	381	***70***	33	520
						0.78					0.54					0.93					0.77
NM 528	@ Idalia Rd/Willow Creek Rd	139	1	29	0	169	16	3	88	0	107	43	1223	4	0	1270	14	471	88	0	573
						0.86					0.76					0.87					0.82
NM 528	@ Pasilla Rd/Riveride Dr	17	1	12	0	30	48	0	46	0	94	9	1112	14	0	1135	12	540	3	0	555
						0.63					0.84					0.86					0.90
NM 528	@ Iris Rd/Riverside Dr	24	1	31	0	56	86	5	23	0	114	33	1088	21	0	1142	6	661	10	0	677
						0.78					0.77					0.84					0.94
NM 528	@ Corrales Rd/Obregon Rd	23	8	7	14	52	203	16	37	64	320	21	1029	45	14	1109	65	702	9	2	778
						0.65					0.78					0.89					0.95

Internal Intersections		LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
Enchanted Hills Blvd	@ Chayote Rd	6	13	0	0	19	1	21	36	0	58	0	1	0	0	1	4	0	5	0	9
						0.79					0.76					0.25					0.75
Enchanted Hills Blvd	@ Nativitas Rd		64					76													
Enchanted Hills Blvd	@ Santa Fe Hills Blvd	9	55	0	0	64	5	68	47	0	120	1	9	7	0	17	49	3	7	0	59
						0.89					0.79					0.61					0.70
Enchanted Hills Blvd	@ Sprint Blvd	83	146	45		274	28	95	61		184	23	45	23		91	16	28	6		50
						0.95					0.74					0.59					0.83
Enchanted Hills Blvd	@ Jager Dr	54	304	0	0	358	0	***450***	66	0	460	0	0	0	0	0	29	0	17	0	46
						0.79					0.61										0.77
Enchanted Hills Blvd	@ Walgreens Driveway	0	333	0	0	334	0	***516***	17	0	412	0	0	0	0	0	43	0	2	0	45
						0.79					0.79										0.80
Nativitas Rd	@ Idalia Rd		169					134													
Nativitas Rd	@ Lincoln Ave																				
Nativitas Rd	@ Jager Dr																				
Nativitas Rd	@ Franklin Rd																				
Nativitas Rd	@ Progress Ext																				
Idalia Rd	@ Chayote Rd		197					139													
Idalia Rd	@ Iris Rd	18	184	17	0	219	1	118	24	0	143	31	18	12	0	61	29	22	5	0	56
						0.64					0.69					0.73					0.64
Chayote Rd	@ Franklin Rd																				
Chayote Rd	@ Lincoln Ave																				
Jager Rd	@ Lincoln Ave																				

Italics- Recount Bold-Italics - Smoothing Adjustment

EX PM - 2004 Baseline

External Intersections		Eastbound					Westbound					Northbound					Southbound				
		LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@ Chayote Rd	0	243	15		258	16	348	0		364	28	0	18		46	0	0	0		0
						0.84					0.88					0.64					
US 550	@ Santa Fe Hills Blvd	0	238	10		248	147	427	0		574	29	0	55		84	0	0	0		0
						0.91					0.95					0.72					
US 550	@ Sprint Blvd		407	7		414	163	710			873	19		101		120					0
						0.92					0.92					0.75					
US 550	@ NM 528	4	***450***	27	18	499	1051	616	7	8	1682	***50***	***15***	***740***	***0***	805	46	38	6	11	101
						0.88					0.95					0.82					0.79
US 550	@ Jemez Dam Rd	*120*	*1250*	*0*		1370	0	1530	123		1653	0	0	0		0	*168*	*0*	*81*	*19*	268
						0.81					0.9										0.78
US 550	@ Camino Don Tomas	17	1101	93		1211	67	1565	1		1633	172	8	53		233	16	9	14		39
						0.87					0.87					0.81					0.65
US 550	@ NM 313	84	787	192		1063	112	1552	82		1746	323	136	96		555	111	141	83		335
						0.76					0.85					0.75					0.86
US 550	@ Hill Rd	9	898	95		1002	64	1613	29		1706	90	0	81		171	36	3	27		66
						0.94					0.95					0.71					0.79
US 550	@ I-25 NB Ramp	128	208	0		336	0	256	3		259	1074	5	287		1366	0	0	0		0
						0.79					0.97					0.91					
NM 528	@ Enchanted Hills Blvd/Monti	251	2	220	225	698	38	6	27	0	71	***345***	517	2	0	857	10	923	37	5	975
						0.71					0.68					0.91					0.94
NM 528	@ Idalia Rd/Willow Creek Rd	46	4	28	0	78	7	0	24	0	31	19	646	14	0	679	74	1083	104	0	1261
						0.85					0.86					0.96					0.94
NM 528	@ Pasilla Rd/Riveride Dr	12	1	19	0	32	28	2	15	0	45	20	729	37	0	786	67	1083	17	0	1167
						0.73					0.54					0.97					0.94
NM 528	@ Iris Rd/Riverside Dr	4	0	30	0	34	41	2	6	0	49	55	804	70	0	929	12	1126	24	0	1162
						0.77					0.77					0.96					0.95
NM 528	@ Corrales Rd/Obregon Rd	20	11	10	14	55	259	15	28	55	357	40	919	108	45	1112	122	1019	14	4	1159
						0.76					0.88					0.97					0.92
Internal Intersections		LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
Enchanted Hills Blvd	@ Chayote Rd	5	15	1	0	21	1	11	21	0	33	0	2	0	0	2	11	0	8	0	19
						0.75					0.69					0.50					0.68
Enchanted Hills Blvd	@ Nativitas Rd		118					91													
Enchanted Hills Blvd	@ Santa Fe Hills Blvd	12	103	3	0	118	6	77	113	0	196	3	3	7	0	13	66	12	11	0	89
						0.52					0.77					0.65					0.67
Enchanted Hills Blvd	@ Sprint Blvd	18	204	13		235	26	286	31		343	28	12	18		58	55	38	78		171
						0.76					0.91					0.81					0.86
Enchanted Hills Blvd	@ Jager Dr	74	***420***	0	0	429	0	392	11	0	403	0	0	0	0	0	132	0	73	0	205
						0.64					0.84										0.71
Enchanted Hills Blvd	@ Walgreens Driveway	23	***533***	0	0	510	0	***350***	43	0	404	0	0	0	0	0	165	0	21	0	186
						0.64					0.83										0.89
Nativitas Rd	@ Idalia Rd		78					123													
Nativitas Rd	@ Lincoln Ave																				
Nativitas Rd	@ Jager Dr																				
Nativitas Rd	@ Franklin Rd																				
Nativitas Rd	@ Progress Ext																				
Idalia Rd	@ Chayote Rd		79					137													
Idalia Rd	@ Iris Rd	2	66	9	0	77	7	126	17	0	150	10	10	2	0	22	11	15	1	0	27
						0.80					0.83					0.79					0.84
Chayote Rd	@ Franklin Rd																				
Chayote Rd	@ Lincoln Ave																				
Jager Rd	@ Lincoln Ave																				

Italics- Recount, Bold-Italics - Smoothing Adjustment

Appendix C

2015 No-Build and Build Traffic Volume Summary Sheets

2015 AM Base R - 2015 Baseline

External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd	0	1020	110	0	1130	90	540	0	0	630	110	0	310	0	420	0	0	0	0	0
US 550	@	Santa Fe Hills Blvd	0	1000	80	0	1080	70	600	0	0	670	60	0	370	0	430	0	0	0	0	0
US 550	@	Sprint Blvd	0	1210	50	0	1260	120	710	0	0	830	40	0	210	0	250	0	0	0	0	0
US 550	@	NM 528	10	1380	90	40	1520	650	610	10	40	1310	110	60	1620	0	1790	40	0	0	0	40
US 550	@	Jemez Dam Rd	60	3060	0	0	3120	0	1640	80	0	1720	0	0	0	0	0	30	0	20	0	50
US 550	@	Camino Don Tomas	10	2740	170	0	2920	80	1560	10	0	1650	130	10	120	0	260	0	10	0	0	10
US 550	@	NM 313	210	2260	290	0	2760	160	1460	160	0	1780	270	290	80	0	640	190	260	100	0	550
US 550	@	Hill Rd	30	2400	100	0	2530	60	1480	70	0	1610	50	0	60	0	110	40	0	30	0	70
US 550	@	I-25 NB Ramp	790	120	0	0	910	0	1070	40	0	1110	870	10	120	0	1000	0	0	0	0	0
NM 528	@	Enchanted Hills Blvd/Monte	200	10	150	200	560	10	10	10	0	30	670	1460	20	0	2150	20	630	100	50	800
NM 528	@	Idalia Rd/Willow Creek Rd	210	0	40	0	250	20	0	140	0	160	60	1860	10	0	1930	20	760	140	0	920
NM 528	@	Pasilla Rd/Riveride Dr	30	0	20	0	50	70	0	70	0	140	10	1690	20	0	1720	20	860	0	0	880
NM 528	@	Iris Rd/Riverside Dr	40	0	50	0	90	130	10	30	0	170	50	1660	30	0	1740	10	1040	20	0	1070
NM 528	@	Corrales Rd/Obregon Rd	30	10	10	20	70	300	20	70	90	480	30	1560	70	20	1680	110	1090	10	0	1210
Internal Intersections			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
Enchanted Hills Blvd	@	Chayote Rd	10	20	0	0	30	0	30	50	0	80	0	0	0	0	0	10	0	10	0	20
Enchanted Hills Blvd	@	Camino Encantadas	0	90	0	0	90	0	110	0	0	110	0	0	0	0	0	0	0	0	0	0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	10	80	0	0	90	10	100	70	0	180	0	10	10	0	20	70	0	10	0	80
Enchanted Hills Blvd	@	Sprint Blvd	120	220	70	0	410	40	140	90	0	270	30	70	30	0	130	20	40	10	0	70
Enchanted Hills Blvd	@	Lincoln Ave	80	490	0	0	570	40	660	100	0	800	10	0	0	0	10	40	0	30	0	70
Enchanted Hills Blvd	@	Walgreens Driveway	0	490	0	0	490	0	760	30	0	790	0	0	0	0	0	60	0	0	0	60
Camino Encantadas	@	Idalia Rd	0	250	0	0	250	0	200	0	0	200	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Camino Venada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Franklin Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Progress Ext	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idalia Rd	@	Chayote Rd	0	290	0	0	290	0	210	0	0	210	0	0	0	0	0	0	0	0	0	0
Idalia Rd	@	Iris Rd	30	270	30	0	330	0	170	40	0	210	50	30	20	0	100	40	30	10	0	80
Chayote Rd	@	Franklin Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chayote Rd	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Venada	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2015 PM Base R - 2015 Baseline

External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd	0	850	200	0	1050	220	1040	0	0	1260	210	0	230	0	440	0	0	0	0	0
US 550	@	Santa Fe Hills Blvd	0	740	120	0	860	320	1260	0	0	1580	140	0	150	0	290	0	0	0	0	0
US 550	@	Sprint Blvd	0	940	60	0	1000	240	1730	0	0	1970	80	0	150	0	230	0	0	0	0	0
US 550	@	NM 528	30	870	150	30	1080	1550	1330	10	10	2900	330	20	1090	0	1440	70	60	10	20	160
US 550	@	Jemez Dam Rd	180	2050	0	0	2230	0	2680	180	0	2860	0	0	0	0	0	250	0	120	30	400
US 550	@	Camino Don Tomas	30	1830	150	0	2010	100	2720	0	0	2820	260	10	80	0	350	20	10	20	0	50
US 550	@	NM 313	120	1330	300	0	1750	170	2690	120	0	2980	490	200	140	0	830	160	210	130	0	500
US 550	@	Hill Rd	10	1500	140	0	1650	90	2750	40	0	2880	160	0	120	0	280	50	0	40	0	90
US 550	@	I-25 NB Ramp	190	390	0	0	580	0	440	0	0	440	1870	10	420	0	2300	0	0	0	0	0
NM 528	@	Enchanted Hills Blvd/Monto	370	30	330	330	1060	60	30	40	0	130	570	1020	0	0	1590	20	1470	60	10	1560
NM 528	@	Idalia Rd/Willow Creek Rd	70	10	40	0	120	10	0	50	0	60	30	1260	20	0	1310	110	1700	160	0	1970
NM 528	@	Pasilla Rd/Riveride Dr	20	0	30	0	50	40	0	20	0	60	30	1390	60	0	1480	100	1700	30	0	1830
NM 528	@	Iris Rd/Riverside Dr	10	0	40	0	50	60	0	10	0	70	80	1500	100	0	1680	20	1760	40	0	1820
NM 528	@	Corrales Rd/Obregon Rd	30	20	20	20	90	380	20	70	80	550	60	1640	160	70	1930	190	1590	20	10	1810
Internal Intersections			**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**
Enchanted Hills Blvd	@	Chayote Rd	10	20	0	0	30	0	20	30	0	50	0	0	0	0	0	20	0	10	0	30
Enchanted Hills Blvd	@	Camino Encantadas	0	170	0	0	170	0	130	0	0	130	0	0	0	0	0	0	0	0	0	0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	20	150	0	0	170	10	110	170	0	290	0	0	10	0	10	100	20	20	0	140
Enchanted Hills Blvd	@	Sprint Blvd	30	300	20	0	350	40	420	50	0	510	40	20	30	0	90	80	60	120	0	260
Enchanted Hills Blvd	@	Lincoln Ave	110	720	0	0	830	90	580	20	0	690	110	0	0	0	110	200	0	110	0	310
Enchanted Hills Blvd	@	Walgreens Driveway	30	790	0	0	820	0	520	60	0	580	0	0	0	0	0	240	0	30	0	270
Camino Encantadas	@	Idalia Rd	0	120	0	0	120	0	180	0	0	180	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Camino Venada	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Franklin Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Encantadas	@	Progress Ext	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idalia Rd	@	Chayote Rd	0	120	0	0	120	0	200	0	0	200	0	0	0	0	0	0	0	0	0	0
Idalia Rd	@	Iris Rd	0	100	10	0	110	10	190	30	0	230	20	20	0	0	40	20	20	0	0	40
Chayote Rd	@	Franklin Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chayote Rd	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camino Venada	@	Lincoln Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2015 AM Build R - With Site

External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd	0	1020	110	0	1140	90	540	0	0	630	110	0	310	0	420	0	0	0	0	0
US 550	@	Santa Fe Hills Blvd	0	1000	80	0	1070	70	600	0	0	670	60	0	420	0	480	0	0	0	0	0
US 550	@	Sprint Blvd	0	1260	50	0	1310	120	710	0	0	830	40	0	210	0	240	0	0	0	0	0
US 550	@	NM 528	10	1430	90	40	1570	820	610	10	40	1490	110	60	1960	0	2130	40	0	0	0	50
US 550	@	Jemez Dam Rd	60	3450	0	0	3510	0	1800	80	0	1880	0	0	0	0	0	30	0	30	0	60
US 550	@	Camino Don Tomas	10	3110	190	0	3310	80	1710	10	0	1800	140	10	120	0	270	0	10	0	0	20
US 550	@	NM 313	210	2590	330	0	3130	160	1590	160	0	1910	290	290	80	0	660	190	260	110	0	550
US 550	@	Hill Rd	30	2710	120	0	2850	60	1600	70	0	1720	60	0	60	0	110	40	0	30	0	80
US 550	@	I-25 NB Ramp	890	130	0	0	1020	0	1100	40	0	1140	940	10	120	0	1070	0	0	0	0	0
NM 528	@	Enchanted Hills Blvd/Monte	540	10	170	200	930	10	20	10	0	40	700	1460	20	0	2170	20	630	200	130	980
NM 528	@	Idalia Rd/Willow Creek Rd	210	0	310	0	520	20	0	140	0	170	190	1890	10	0	2090	20	780	140	0	940
NM 528	@	Pasilla Rd/Riveride Dr	30	0	20	0	50	70	0	70	0	140	10	1840	20	0	1880	20	1130	0	0	1150
NM 528	@	Iris Rd/Riverside Dr	40	0	50	0	90	130	10	40	0	170	50	1800	30	0	1880	10	1310	20	0	1330
NM 528	@	Corrales Rd/Obregon Rd	30	10	10	20	80	300	20	80	90	490	30	1690	70	20	1810	130	1330	10	0	1480
Internal Intersections			**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**
Enchanted Hills Blvd	@	Chayote Rd	10	20	0	0	30	0	30	60	0	90	0	0	0	0	0	10	0	10	0	20
Enchanted Hills Blvd	@	Camino Encantadas	0	100	0	0	100	20	120	0	0	130	10	0	50	0	60	0	0	0	0	0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	60	90	0	0	150	10	110	80	0	190	0	10	10	0	30	80	0	20	0	110
Enchanted Hills Blvd	@	Sprint Blvd	120	240	70	0	420	40	160	100	0	300	30	70	40	0	140	30	40	10	0	80
Enchanted Hills Blvd	@	Lincoln Ave	80	510	80	0	680	250	670	100	0	1020	40	10	340	0	390	40	10	30	0	80
Enchanted Hills Blvd	@	Walgreens Driveway	0	890	0	0	890	0	920	30	0	950	0	0	0	0	0	60	0	0	0	70
Camino Encantadas	@	Idalia Rd	40	250	0	0	290	0	200	130	0	330	0	0	0	0	0	270	0	80	Q	350
Camino Encantadas	@	Lincoln Ave	20	80	40	0	140	40	40	0	0	80	10	120	40	0	170	10	350	50	0	400
Camino Encantadas	@	Camino Venada	0	0	0	0	0	50	0	50	0	100	0	100	80	0	170	140	290	0	0	420
Camino Encantadas	@	Franklin Rd	60	0	60	0	120	0	0	0	0	0	20	110	0	0	130	0	290	20	0	310
Camino Encantadas	@	Progress Ext	0	0	90	0	90	30	0	0	0	30	30	100	10	0	140	0	300	0	0	300
Idalia Rd	@	Chayote Rd	30	330	0	0	360	0	290	0	0	290	0	0	0	0	0	0	0	60	0	60
Idalia Rd	@	Iris Rd	30	340	30	0	390	0	310	40	0	350	50	30	20	0	90	40	30	10	0	80
Chayote Rd	@	Franklin Rd	0	0	0	0	0	20	0	20	0	40	0	0	10	0	10	10	20	0	0	20
Chayote Rd	@	Lincoln Ave	0	10	0	0	10	50	0	30	0	80	0	10	30	0	30	30	20	0	0	50
Camino Venada	@	Lincoln Ave	10	0	150	0	160	0	50	80	0	130	0	0	0	0	0	230	0	10	0	240

2015 PM Build R - With Site

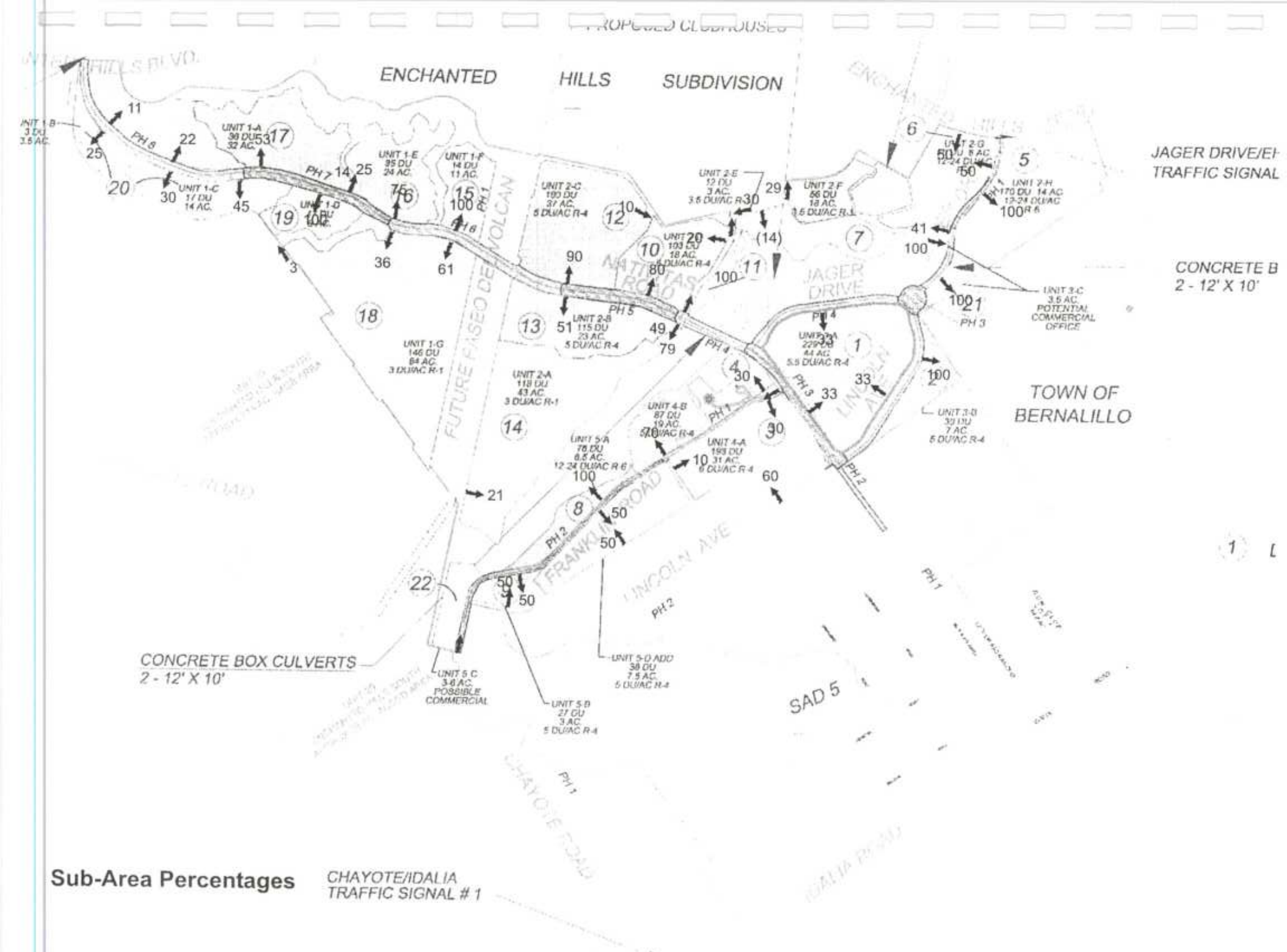
External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd	0	650	200	0	1050	220	1040	0	0	1260	210	0	230	0	440	0	0	0	0	0
US 550	@	Santa Fe Hills Blvd	0	740	120	0	860	360	1260	0	0	1620	140	0	200	0	340	0	0	0	0	0
US 550	@	Sprint Blvd	0	990	60	0	1050	240	1770	0	0	2010	80	0	150	0	230	0	0	0	0	0
US 550	@	NM 528	30	920	150	30	1130	1950	1370	10	10	3340	330	20	1380	0	1730	70	60	10	20	160
US 550	@	Jemez Dam Rd	180	2380	0	0	2560	0	3090	180	0	3270	0	0	0	0	0	250	0	120	30	400
US 550	@	Camino Don Tomas	30	2120	180	0	2330	100	3080	0	0	3180	310	10	80	0	400	20	10	20	0	50
US 550	@	NM 313	130	1550	370	0	2050	170	2980	120	0	3270	550	200	140	0	890	160	210	140	0	510
US 550	@	Hill Rd	10	1680	170	0	1860	100	3020	40	0	3160	180	0	120	0	300	50	0	40	0	90
US 550	@	I-25 NB Ramp	210	430	0	0	640	0	520	0	0	520	2010	10	420	0	2440	0	0	0	0	0
NM 528	@	Enchanted Hills Blvd/Monte	660	50	370	330	1410	60	40	40	0	140	600	1020	0	0	1620	20	1470	330	110	1930
NM 528	@	Idalia Rd/Willow Creek Rd	80	10	270	0	360	10	0	50	0	60	380	1300	20	0	1700	110	1740	180	0	2030
NM 528	@	Pasilla Rd/Riveride Dr	30	0	30	0	60	40	0	30	0	70	30	1760	60	0	1850	110	1950	40	0	2100
NM 528	@	Iris Rd/Riverside Dr	20	0	40	0	60	60	0	20	0	80	80	1850	100	0	2030	20	2000	40	0	2060
NM 528	@	Corrales Rd/Obregon Rd	30	20	20	20	90	380	20	110	80	590	60	1950	160	70	2240	220	1810	20	10	2060
Internal Intersections			**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**
Enchanted Hills Blvd	@	Chayote Rd	10	30	0	0	40	10	30	40	0	80	0	0	0	0	0	30	0	10	0	40
Enchanted Hills Blvd	@	Camino Encantadas	0	200	10	0	210	50	160	0	0	210	10	0	50	0	60	0	0	0	0	0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	70	180	0	0	250	20	150	200	0	370	0	0	20	0	20	120	20	60	0	200
Enchanted Hills Blvd	@	Sprint Blvd	30	370	20	0	420	50	490	80	0	620	40	20	30	0	90	110	60	120	0	290
Enchanted Hills Blvd	@	Lincoln Ave	110	740	70	0	920	490	600	20	0	1110	220	10	360	0	590	200	10	110	0	320
Enchanted Hills Blvd	@	Walgreens Driveway	30	1090	0	0	1120	0	950	60	0	1010	0	0	0	0	0	240	0	30	0	270
Camino Encantadas	@	Idalia Rd	110	120	0	0	230	0	180	350	0	530	0	0	0	0	0	230	0	70	0	300
Camino Encantadas	@	Lincoln Ave	50	50	30	0	130	60	100	10	0	170	40	380	50	0	470	0	220	30	0	250
Camino Encantadas	@	Camino Venada	0	0	0	0	0	100	0	160	0	260	0	320	80	0	400	90	170	0	0	260
Camino Encantadas	@	Franklin Rd	40	0	30	0	70	0	0	0	0	0	60	350	0	0	410	0	160	70	0	230
Camino Encantadas	@	Progress Ext	0	0	60	0	60	20	0	0	0	20	100	330	30	0	460	0	200	0	0	200
Idalia Rd	@	Chayote Rd	90	230	0	0	320	0	270	0	0	270	0	0	0	0	0	0	0	50	0	50
Idalia Rd	@	Iris Rd	0	290	10	0	300	10	310	30	0	350	20	20	0	0	40	20	20	0	0	40
Chayote Rd	@	Franklin Rd	0	0	0	0	0	10	0	10	0	20	0	30	30	0	60	30	40	0	0	70
Chayote Rd	@	Lincoln Ave	0	0	0	0	0	40	10	40	0	90	0	30	50	0	80	50	10	0	0	60
Camino Venada	@	Lincoln Ave	10	0	100	0	110	0	180	260	0	440	0	0	0	0	0	150	0	10	0	160

Appendix D

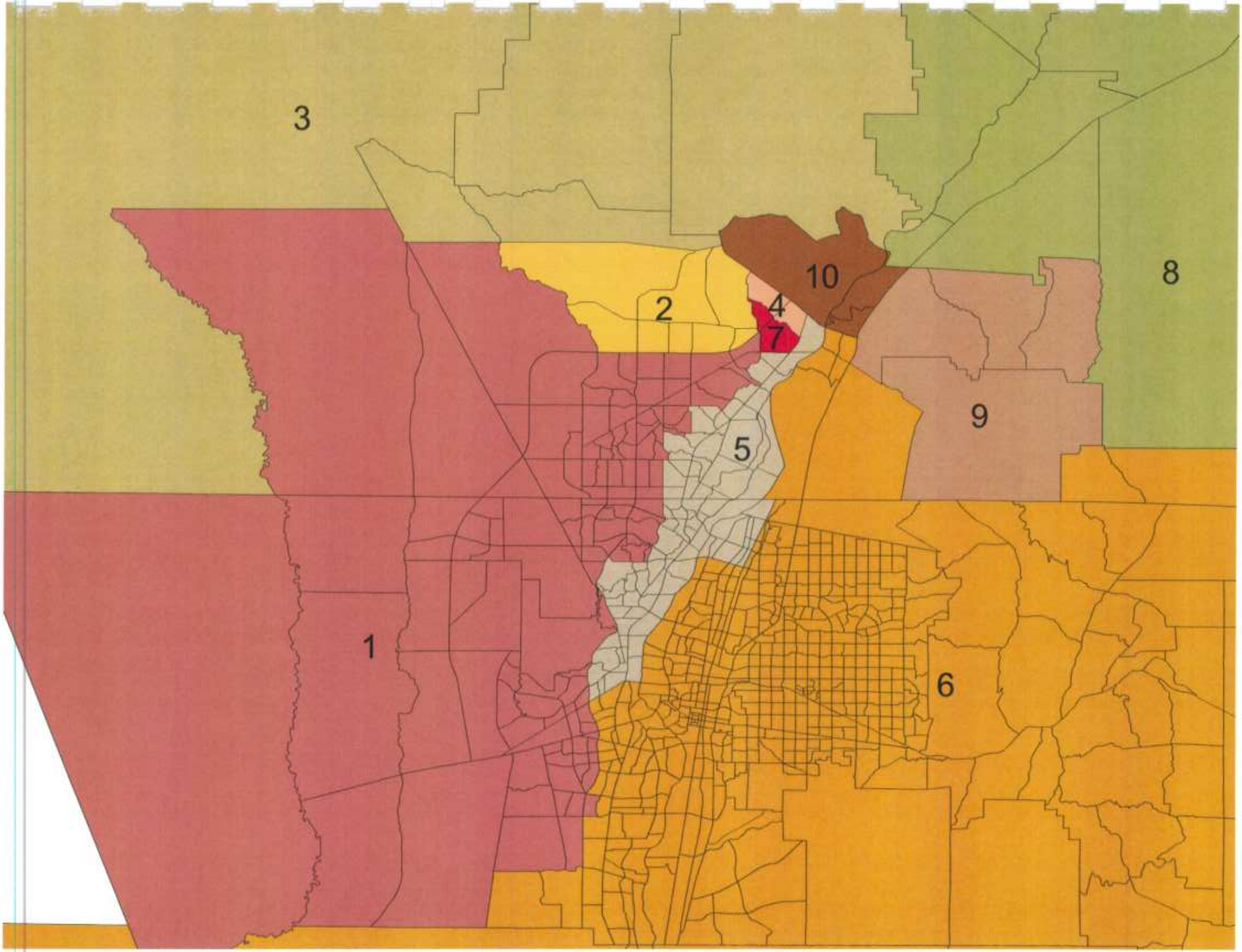
Trip Distributions

Trip Generation

	Land Use	Land Use	LU	DU/SF	Daily	Daily Ent	Daily Exit	AM Ent	AM Ex	PM Ent	PM Ex
1	Residential	210	R-4	229	2228	1114	1114	43	127	142	84
2	Residential	210	R-4	30	343	172	172	8	22	23	13
3	Residential	210	R-4	193	1904	952	952	36	109	122	72
4	Residential	210	R-4	87	915	458	458	18	52	60	35
5a	Retail	820	C-1	40250	3759	1880	1880	56	35	165	178
5b	Office	710	C-1	81720	1142	571	571	141	19	29	141
6	Residential	230	R-6	55	386	193	193	5	27	25	12
7	Residential	210	R-1	56	610	305	305	12	37	40	24
8	Residential	230	R-6	78	520	260	260	7	35	33	16
9	Residential	210	R-4	27	312	156	156	7	21	21	12
10	Residential	210	R-4	103	1068	534	534	21	61	69	41
11	Residential	210	R-1	12	148	74	74	5	13	10	6
12	Residential	210	R-4	180	1786	893	893	34	101	115	67
13	Residential	210	R-4	115	1182	591	591	23	67	77	45
14	Residential	210	R-1	118	1211	606	606	23	69	78	46
15	Residential	210	R-1	14	170	85	85	5	14	11	7
16	Residential	210	R-1	35	396	198	198	9	25	26	16
17	Residential	210	R-1	36	406	203	203	9	26	27	16
18	Residential	210	R-1	146	1473	737	737	28	84	95	56
19	Residential	210	R-1	17	204	102	102	5	16	14	8
20	Residential	210	R-1	20	237	119	119	6	17	16	9
23	Residential	210	R-4	38	427	214	214	9	27	28	17
21	General Office	710	C-1	39000	649	325	325	78	11	21	102
	Summary				**21476**	**10738**	**10738**	**588**	**1015**	**1247**	**1023**
	Housing Units			1589	15926	7963	7963	313	950	1032	602
	R-1 Units			454	4855	2428	2428	102	301	317	188
	R-4 Units			1002	10165	5083	5083	199	587	657	386
	R-6 Units			133	906	453	453	12	62	58	28
	General Office			120720	1791	895.5	895.5	219	30	50	243
	Shopping Center			40250	3759	1880	1880	56	35	165	178
	Pass-By Adjusted Shopping				***2631***	***1316***	***1316***	***39***	***25***	***116***	***125***



Sub-Area Percentages

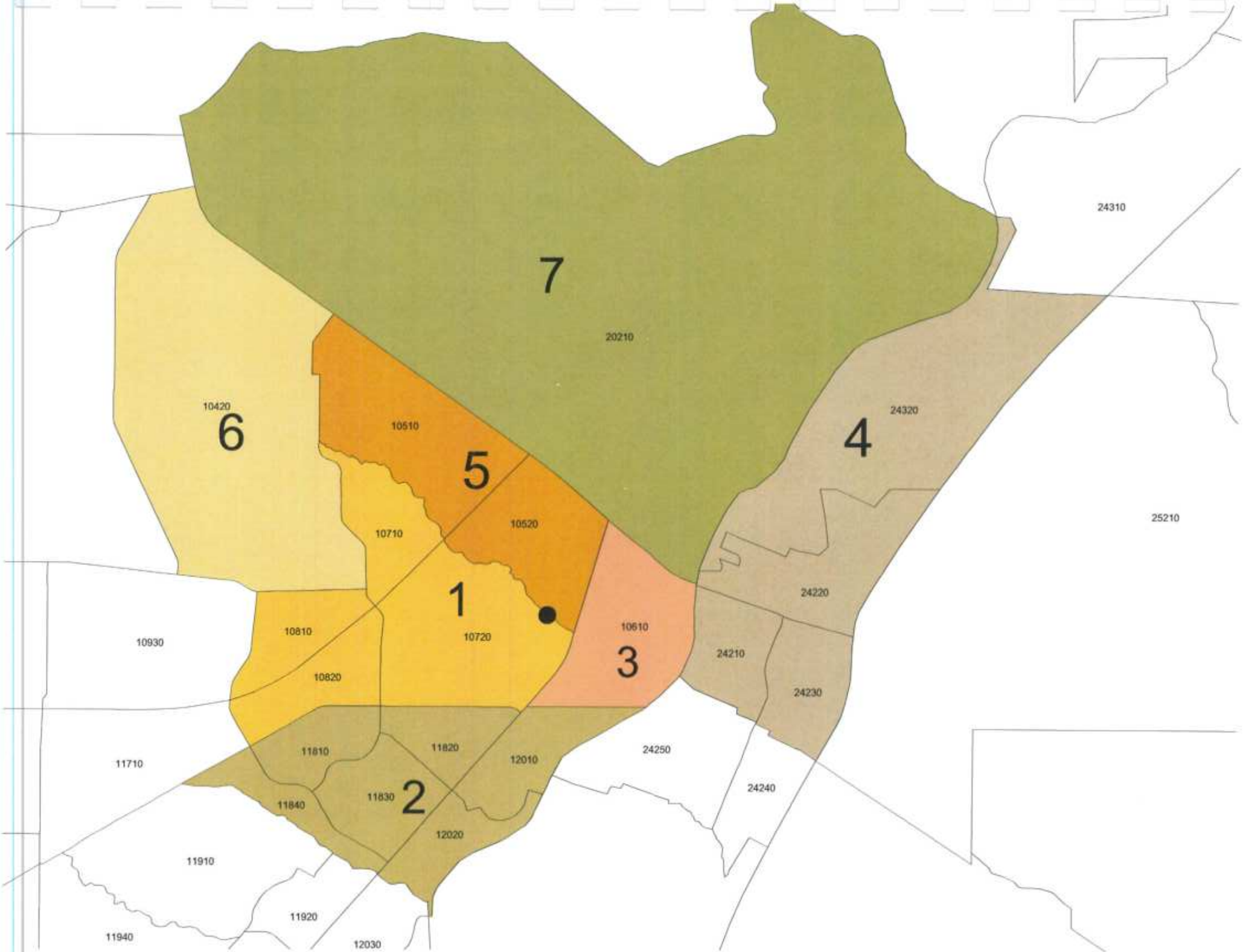

3
10
8
2
4
7
9
5
1
6

Subarea Summaries

	1	2	3	4	5	6	7	8	9	10	SUM
Population	126169	19643	16497	10236	111518	640779	3075	10456	6891	2212	**947476**
Employment	23094	2611	3424	3400	45179	410298	563	2230	743	4456	**495998**
From:											
AM Pk O's	0	0	0	0	0	0	1367	0	0	0	**1367**
Off Pk O's	0	0	0	0	0	0	2730	0	0	0	**2730**
PM Pk O's	0	0	0	0	0	0	1133	0	0	0	**1133**
Daily O's	0	0	0	0	0	0	5230	0	0	0	**5230**
%'s	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
AM Pk D's	107	62	15	182	411	349	0	26	15	177	**1345**
Off Pk D's	284	211	52	312	969	503	1	60	48	240	**2681**
PM Pk D's	128	104	25	138	392	190	0	25	24	87	**1113**
Daily D's	519	378	92	632	1772	1041	1	111	88	503	**5139**
%'s	10%	7%	2%	12%	34%	20%	0%	2%	2%	10%	
To:											
AM Pk O's	86	76	19	92	216	94	0	14	18	46	**661**
Off Pk O's	290	210	51	334	1011	587	1	64	49	300	**2896**
PM Pk O's	143	92	22	206	545	360	0	32	22	158	**1582**
Daily O's	519	378	92	632	1773	1041	1	111	88	503	**5139**
%'s	10%	7%	2%	12%	34%	20%	0%	2%	2%	10%	
AM Pk D's	0	0	0	0	0	0	672	0	0	0	**672**
Off Pk D's	0	0	0	0	0	0	2954	0	0	0	**2954**
PM Pk D's	0	0	0	0	0	0	1603	0	0	0	**1603**
Daily D's	0	0	0	0	0	0	5229	0	0	0	**5229**
%'s	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	

Subareas:

1	Southwest - Using Idalia or Paseo del Volcan
2	West - Using Progress Blvd
3	Northwest - Using US 550
4	Enchanted Hills
5	NM 528 Corridor Access
6	All Areas East of the Rio Grande, south of US 550 - Using US 550 for Access
7	Enchanted Hills South
8	North I-25 corridor
9	Placitas area, East of I-25
10	North of US 550, b/w Chayote and I-25


7
20210
24310
6
10420
5
10510
4
24320
10520
10710
25210
1
24220
10810
10720
10610
10930
3
24210
10820
24230
11810
11820
12010
24250
11710
2
11830
24240
11840
12020
11910
11920
11940
12030

Subarea Summaries

	1	2	3	4	5	6	7	8	9	10	SUM
Population	5124	4157	2353	5901	10992	5327	29	0	0	0	**33883**
Employment	584	309	722	2486	3400	1131	2951	0	0	0	**11583**
Pop %	15.1%	12.3%	6.9%	17.4%	32.4%	15.7%	0.1%	0.0%	0.0%	0.0%	

Subareas:

1	EHS and west	
2	South of Idalia	
3	DASZ 1061	
4	Bernalillo	
5	Enchanted Hills	
6	West of Chayote	
7	North of US 550	not used

Population based upon 2025 MRCOG MTP model - 2015 not populated in areas 1 and 6.

Population basis of subarea trip distribution.

Appendix E

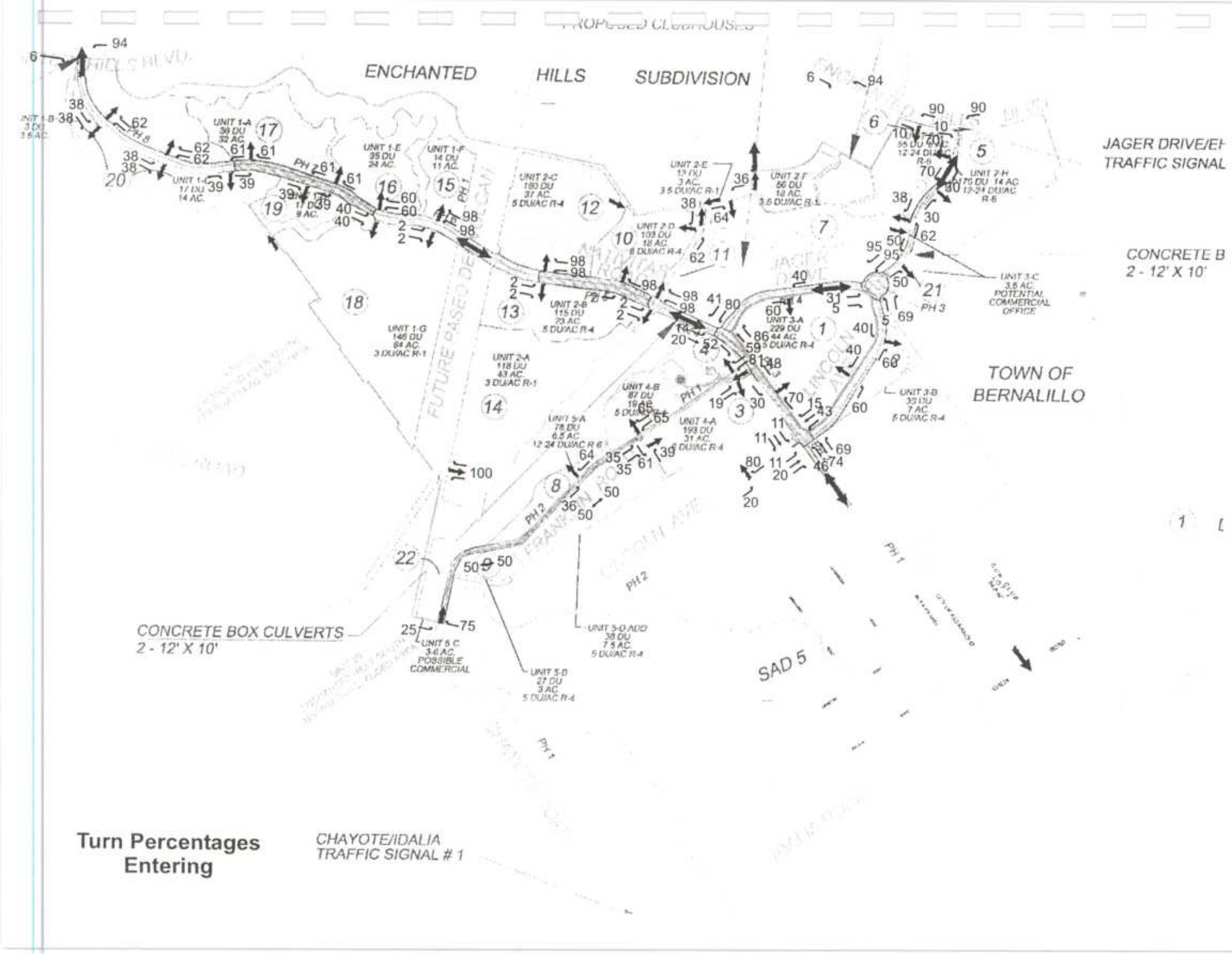
Trip Assignments

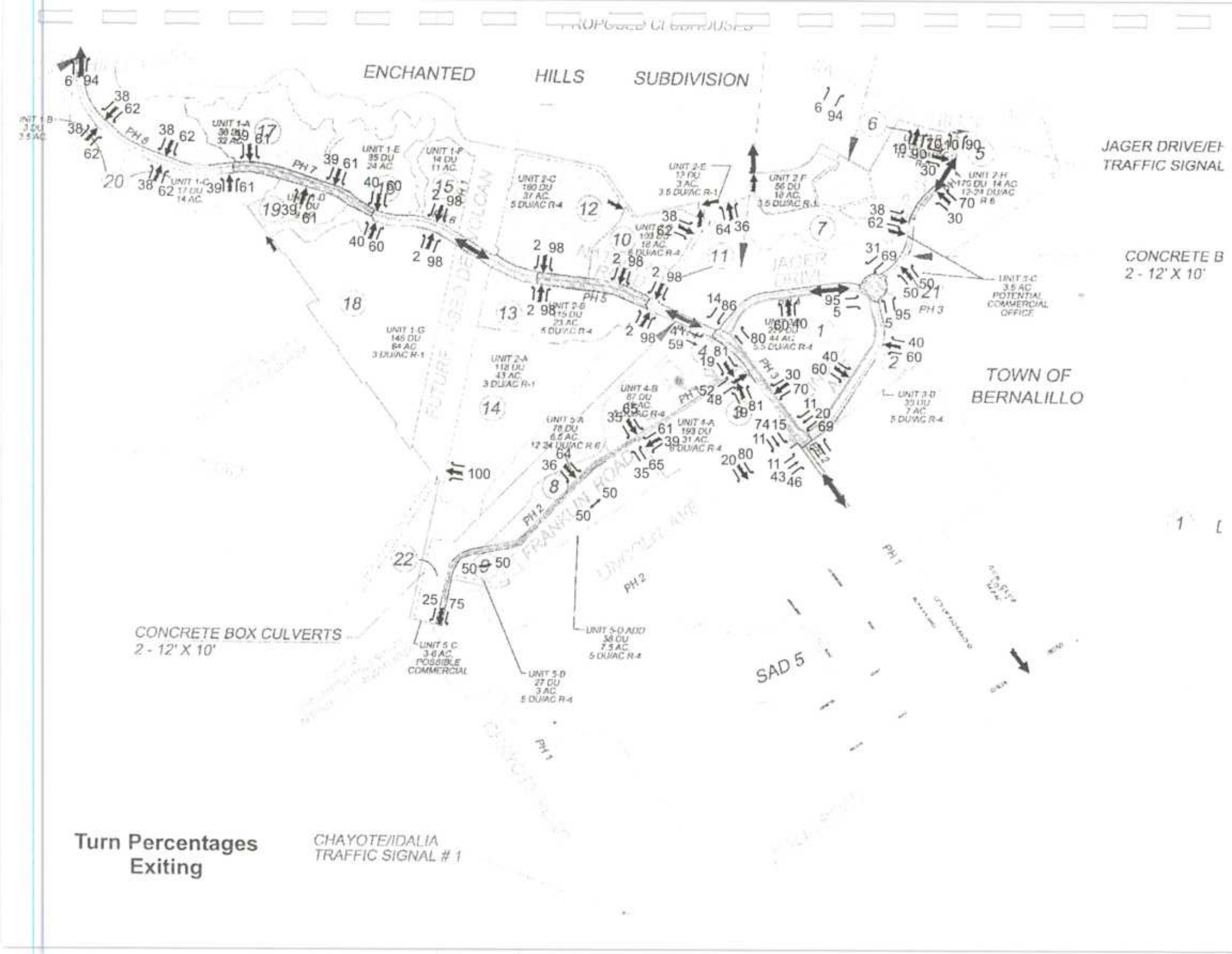
AM Site Trips

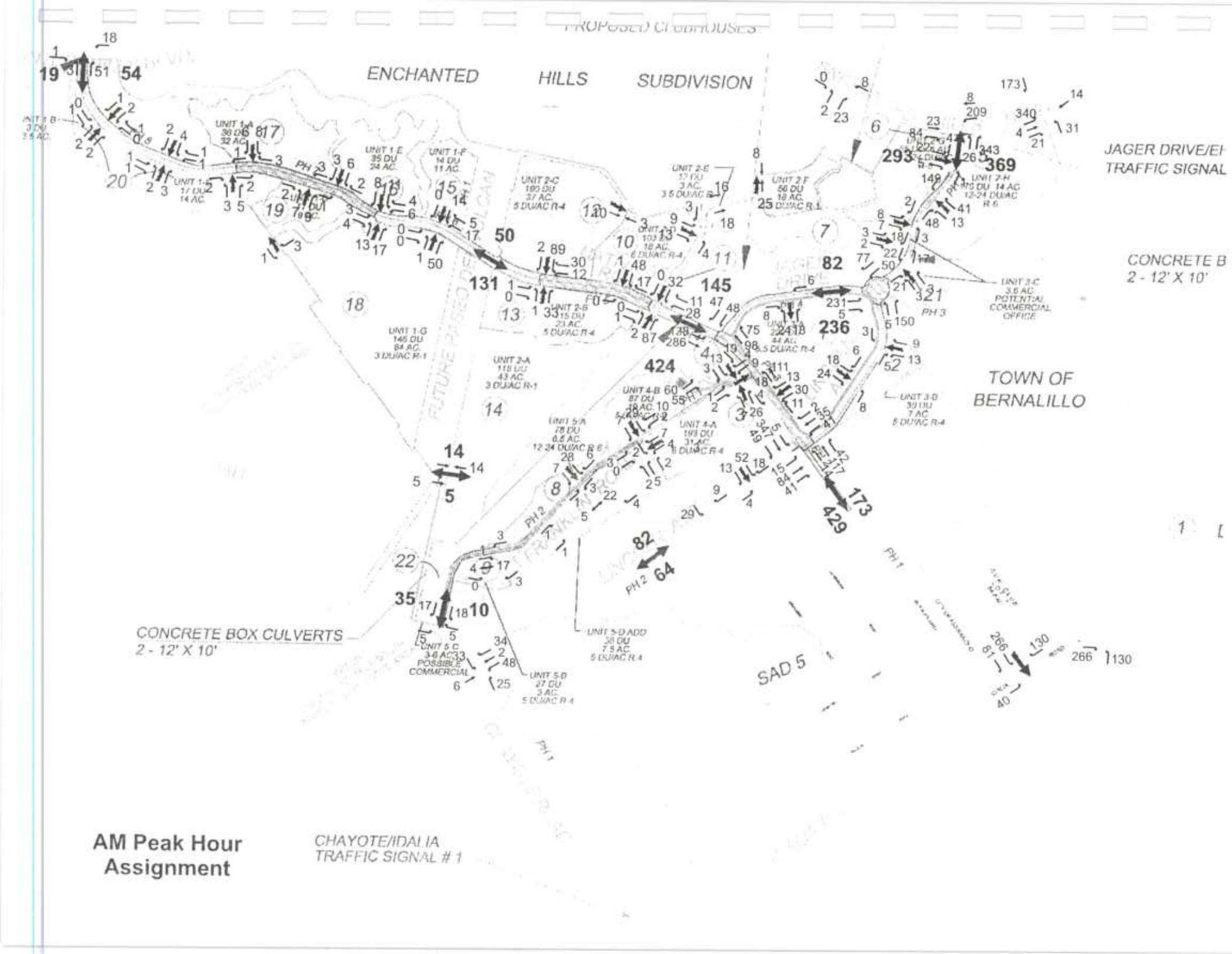
External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd					0					0					0					0
US 550	@	Santa Fe Hills Blvd					0	5				5			50		50					0
US 550	@	Sprint Blvd		50			50					0					0					0
US 550	@	NM 528		50			50	170				170			340		340					0
US 550	@	Jemez Dam Rd		390			390		160			160					0			10		10
US 550	@	Camino Don Tomas		370	20		390		150			150	10				10					0
US 550	@	NM 313		330	35		365		130			130	20				20			10		10
US 550	@	Hill Rd		310	20		330		120			120	10				10					0
US 550	@	I-25 NB Ramp	100	15			115		30			30	70				70					0
NM 528	@	Enchanted Hills Blvd/Montoya	340	4	21		365		14			14	31				31			93	80	173
NM 528	@	Idalia Rd/Willow Creek Rd	5		266		271					0	130	30			160		20			20
NM 528	@	Pasilla Rd/Riveride Dr	5				5			5		5		150			150		270			270
NM 528	@	Iris Rd/Riverside Dr	5				5			5		5		140			140		270			270
NM 528	@	Corrales Rd/Obregon Rd					0			10		10		130			130	25	245			270
Internal Intersections			**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**
Enchanted Hills Blvd	@	Chayote Rd	0	3	0		3	1	2	4		7	0	0	2		2	3	0	0		3
Enchanted Hills Blvd	@	Camino Encantadas	0	7	1		8	18	4	0		22	6	0	51		57	0	0	0		0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	51	7	0		58	2	8	6		16	0	0	4		4	11	0	13		24
Enchanted Hills Blvd	@	Sprint Blvd		21			21	3	19	6		28			4		4	10				10
Enchanted Hills Blvd	@	Lincoln Ave	0	23	84		107	209	8	0		217	26	10	343		379	0	10	0		10
Enchanted Hills Blvd	@	Walgreens Driveway	0	400	0		400	0	160	0		160	0	0	0		0	0	0	0		0
Camino Encantadas	@	Idalia Rd	40	0	0		40	0	0	130		130	0	0	0		0	266	0	81		347
Camino Encantadas	@	Lincoln Ave	15	84	41		140	41	35	2		78	14	117	42		173	5	347	49		401
Camino Encantadas	@	Camino Venada	0	0	0		0	48	0	47		95	0	98	75		173	138	286	0		424
Camino Encantadas	@	Franklin Rd	61	0	55		116	0	0	0		0	18	111	0		129	0	288	20		308
Camino Encantadas	@	Progress Ext	2	0	87		89	32	0	0		32	28	103	11		142	0	301	1		302
Idalia Rd	@	Chayote Rd	31	39	0		70	0	81	0		81	0	0	0		0	0	0	56		56
Idalia Rd	@	Iris Rd	0	70	0		70	0	137	0		137	0	0	0		0	0	0	0		0
Chayote Rd	@	Franklin Rd	0	0	0		0	18	0	17		35	0	0	5		5	5	17	0		22
Chayote Rd	@	Lincoln Ave	0	6	0		6	48	2	34		84	0	5	25		30	33	18	0		51
Camino Venada	@	Lincoln Ave	5	0	150		155	0	50	77		127	0	0	0		0	231	0	5		236

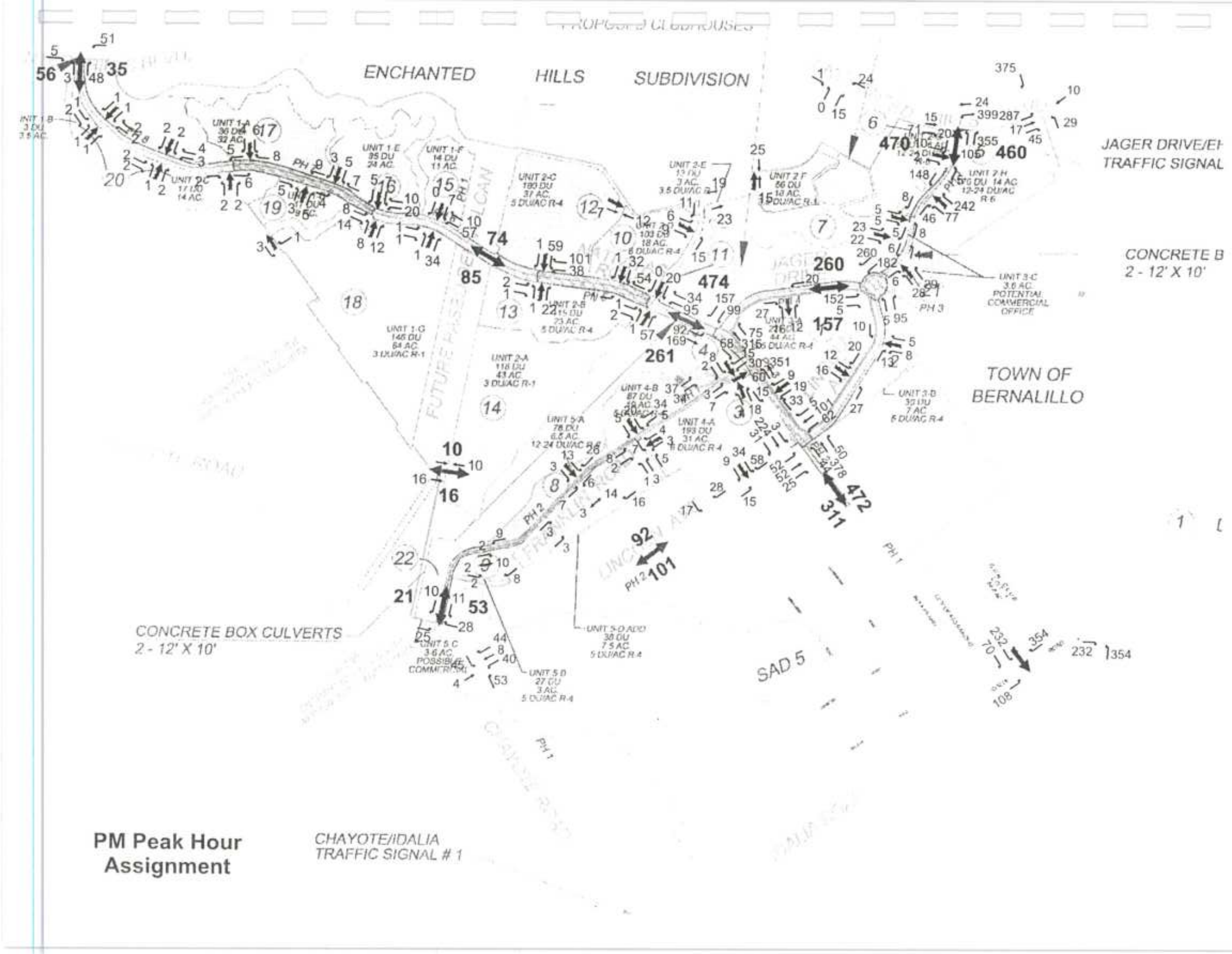
PM Site Trips

External Intersections			Eastbound					Westbound					Northbound					Southbound				
			LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum	LT	Th	RT	RR	Sum
US 550	@	Chayote Rd					0					0					0					0
US 550	@	Santa Fe Hills Blvd					0	40				40			48		48					0
US 550	@	Sprint Blvd		48			48		40			40					0					0
US 550	@	NM 528		45			45	400	40			440			287		287					0
US 550	@	Jemez Dam Rd		330			330		410			410					0					0
US 550	@	Camino Don Tomas	5	280	30		325		360			360	50				50					0
US 550	@	NM 313	10	215	70		295		290			290	60				60			10		10
US 550	@	Hill Rd		185	25		210	5	270			275	15				15					0
US 550	@	I-25 NB Ramp	25	40			65		80			80	145				145					0
NM 528	@	Enchanted Hills Blvd/Montoya	287	17	45		349		10			10	29				29			275	100	375
NM 528	@	Idalia Rd/Willow Creek Rd	11		232		243					0	354	34			388		40	12		52
NM 528	@	Pasilla Rd/Riveride Dr	10				10			10		10		370			370	10	250	10		270
NM 528	@	Iris Rd/Riverside Dr	10				10			10		10		350			350	5	240	5		250
NM 528	@	Corrales Rd/Obregon Rd					0			35		35		315			315	30	215			245
Internal Intersections			**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**	**LT**	**Th**	**RT**	**RR**	**Sum**
Enchanted Hills Blvd	@	Chayote Rd	0	11	0		11	4	13	8		25	0	0	4		4	12	0	0		12
Enchanted Hills Blvd	@	Camino Encantadas	0	22	5		27	51	24	0		75	6	0	48		54	0	0	0		0
Enchanted Hills Blvd	@	Santa Fe Hills Blvd	48	29	0		77	8	31	28		67	0	0	7		7	24	0	41		65
Enchanted Hills Blvd	@	Sprint Blvd		67			67	7	72	32		111			7		7	28				28
Enchanted Hills Blvd	@	Lincoln Ave	0	15	71		86	399	24	0		423	105	10	355		470	0	10	0		10
Enchanted Hills Blvd	@	Walgreens Driveway	0	308	0		308	0	429	0		429	0	0	0		0	0	0	0		0
Camino Encantadas	@	Idalia Rd	108	0	0		108	0	0	354		354	0	0	0		0	232	0	70		302
Camino Encantadas	@	Lincoln Ave	52	52	25		129	62	101	5		168	44	378	50		472	3	224	31		258
Camino Encantadas	@	Camino Venada	0	0	0		0	99	0	157		256	0	315	75		390	92	169	0		261
Camino Encantadas	@	Franklin Rd	37	0	34		71	0	0	0		0	60	351	0		411	0	159	68		227
Camino Encantadas	@	Progress Ext	1	0	57		58	20	0	0		20	95	330	34		459	1	195	2		198
Idalia Rd	@	Chayote Rd	88	109	0		197	0	70	0		70	0	0	0		0	0	0	53		53
Idalia Rd	@	Iris Rd	0	197	0		197	0	123	0		123	0	0	0		0	0	0	0		0
Chayote Rd	@	Franklin Rd	0	0	0		0	11	0	10		21	0	26	28		54	25	38	0		63
Chayote Rd	@	Lincoln Ave	0	4	0		4	40	8	44		92	0	28	53		81	45	11	0		56
Camino Venada	@	Lincoln Ave	5	0	95		100	0	182	260		442	5	0	95		100	152	0	5		157


ENCHANTED HILLS SUBDIVISION
TOWN OF BERNALILLO
SAD 5
JAGER DRIVE/EH
TRAFFIC SIGNAL
CONCRETE B
2 - 12' X 10'
CONCRETE BOX CULVERTS
2 - 12' X 10'
CHAYOTE/IDALIA
TRAFFIC SIGNAL # 1
Turn Percentages
Entering


ENCHANTED HILLS SUBDIVISION
JAGER DRIVE/EH
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Turn Percentages
Exiting


ENCHANTED HILLS SUBDIVISION
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2 - 12' X 10'
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BERNALILLO
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SAD 5
CHAYOTE/IDALIA
TRAFFIC SIGNAL # 1
AM Peak Hour
Assignment


ENCHANTED HILLS SUBDIVISION
JAGER DRIVE/EI
TRAFFIC SIGNAL
CONCRETE B
2 - 12' X 10'
TOWN OF BERNALILLO
CONCRETE BOX CULVERTS
2 - 12' X 10'
SAD 5
CHAYOTE/IDALIA
TRAFFIC SIGNAL # 1
PM Peak Hour Assignment

Appendix F

Existing Level of Service Analyses

Level of Service Analysis	Pages
AM Existing Condition - Signalized	7
PM Existing Condition - Signalized	7
AM Existing Condition - Unsignalized	12
PM Existing Condition - Unsignalized	12

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3517		1681	1686	1583			
Flt Permitted	0.13	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	246	3539			3517		1681	1686	1583			
Volume (vph)	538	78	0	0	671	29	528	4	82	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.90	0.90	0.90
Adj. Flow (vph)	578	84	0	0	808	35	568	4	88	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	66	0	0	0
Lane Group Flow (vph)	578	84	0	0	840	0	284	288	22	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	62.1	62.1			25.3		23.2	23.2	23.2			
Effective Green, g (s)	63.1	63.1			26.3		24.2	24.2	24.2			
Actuated g/C Ratio	0.66	0.66			0.28		0.25	0.25	0.25			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	687	2343			971		427	428	402			
v/s Ratio Prot	c0.29	0.02			0.24							
v/s Ratio Perm	c0.27						0.17	0.17	0.06			
v/c Ratio	0.84	0.04			0.87		0.67	0.67	0.06			
Uniform Delay, d1	21.9	5.6			32.8		31.9	32.0	26.9			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	9.2	0.0			8.1		8.0	8.2	0.3			
Delay (s)	31.0	5.6			41.0		39.9	40.2	27.2			
Level of Service	C	A			D		D	D	C			
Approach Delay (s)		27.8			41.0			38.3			0.0	
Approach LOS		C			D			D			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	95.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.0%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.96	
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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1786	
Flt Permitted	0.17	1.00	1.00	0.07	1.00	1.00	0.18	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	321	3539	1583	132	3539	1583	340	1863	1583	891	1786	
Volume (vph)	134	1425	185	111	867	108	173	194	54	129	174	66
Peak-hour factor, PHF	0.80	0.80	0.80	0.89	0.89	0.89	0.73	0.73	0.73	0.83	0.83	0.83
Adj. Flow (vph)	168	1781	231	125	974	121	237	266	74	155	210	80
RTOR Reduction (vph)	0	0	0	0	0	64	0	0	55	0	11	0
Lane Group Flow (vph)	168	1781	231	125	974	57	237	266	19	155	279	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	70.5	61.5	119.5	59.6	55.6	55.6	39.0	29.0	29.0	27.0	22.0	
Effective Green, g (s)	71.5	62.5	119.5	61.6	56.6	56.6	40.0	30.0	30.0	29.0	23.0	
Actuated g/C Ratio	0.60	0.52	1.00	0.52	0.47	0.47	0.33	0.25	0.25	0.24	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	324	1851	1583	137	1676	750	269	468	397	260	344	
v/s Ratio Prot	0.05	c0.50		c0.04	0.28		c0.10	0.14		0.03	0.16	
v/s Ratio Perm	0.26		0.15	0.43		0.08	c0.20		0.05	0.11		
v/c Ratio	0.52	0.96	0.15	0.91	0.58	0.08	0.88	0.57	0.05	0.60	0.81	
Uniform Delay, d1	14.4	27.4	0.0	27.4	22.8	17.2	32.4	39.1	33.9	39.1	46.2	
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	1.4	13.1	0.2	51.0	0.5	0.0	26.7	4.9	0.2	3.6	18.4	
Delay (s)	15.8	40.5	0.2	78.4	23.4	17.2	59.1	44.0	34.1	42.8	64.5	
Level of Service	B	D	A	E	C	B	E	D	C	D	E	
Approach Delay (s)		34.3			28.4			48.9			57.0	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1770	3508		1770	3536			1782	1583		1795	
Flt Permitted	0.22	1.00		0.06	1.00			0.73	1.00		0.93	
Satd. Flow (perm)	412	3508		116	3536			1351	1583		1699	
Volume (vph)	9	1726	107	54	920	6	80	8	78	3	7	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.67	0.67	0.67	0.43	0.43	0.43
Adj. Flow (vph)	10	1939	120	64	1095	7	119	12	116	7	16	5
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	66	0	4	0
Lane Group Flow (vph)	10	2054	0	64	1102	0	0	131	50	0	24	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	61.7	61.0		66.3	63.3			17.5	17.5		17.5	
Effective Green, g (s)	63.7	62.0		68.3	64.3			18.5	18.5		18.5	
Actuated g/C Ratio	0.66	0.64		0.71	0.67			0.19	0.19		0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	296	2254		151	2356			259	303		326	
v/s Ratio Prot	0.00	c0.59		c0.02	0.31							
v/s Ratio Perm	0.02			0.28				c0.10	0.07		0.02	
v/c Ratio	0.03	0.91		0.42	0.47			0.51	0.16		0.07	
Uniform Delay, d1	6.0	14.9		19.3	7.8			34.9	32.5		32.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	6.1		1.9	0.1			6.9	1.2		0.4	
Delay (s)	6.1	21.0		21.2	8.0			41.8	33.7		32.4	
Level of Service	A	C		C	A			D	C		C	
Approach Delay (s)		20.9			8.7			38.0			32.4	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	16.0
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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.90	
Flt Protected	0.95	1.00			1.00					0.95	0.98	
Satd. Flow (prot)	1770	3539			5047					1681	1569	
Flt Permitted	0.17	1.00			1.00					0.76	0.89	
Satd. Flow (perm)	313	3539			5047					1340	1423	
Volume (vph)	42	1938	0	0	969	52	0	0	0	23	0	13
Peak-hour factor, PHF	0.91	0.91	0.91	0.75	0.75	0.75	0.90	0.90	0.90	0.68	0.68	0.68
Adj. Flow (vph)	46	2130	0	0	1292	69	0	0	0	34	0	19
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	18	0
Lane Group Flow (vph)	46	2130	0	0	1357	0	0	0	0	24	11	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	90.2	90.2			81.8					6.6	6.6	
Effective Green, g (s)	91.2	91.2			82.8					7.6	7.6	
Actuated g/C Ratio	0.85	0.85			0.78					0.07	0.07	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	327	3022			3913					95	101	
v/s Ratio Prot	0.01	c0.60			0.27							
v/s Ratio Perm	0.11									0.02	c0.02	
v/c Ratio	0.14	0.70			0.35					0.25	0.11	
Uniform Delay, d1	1.6	2.9			3.7					46.9	46.4	
Progression Factor	1.00	1.00			1.00					1.00	1.00	
Incremental Delay, d2	0.2	1.4			0.2					1.4	0.5	
Delay (s)	1.8	4.3			3.9					48.3	46.9	
Level of Service	A	A			A					D	D	
Approach Delay (s)		4.2			3.9			0.0			47.6	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	106.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
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)	1770	3539	1583	3433	3539	1583	1770	3539	2787	1770	3312	
Flt Permitted	0.56	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1036	3539	1583	3433	3539	1583	1770	3539	2787	1770	3312	
Volume (vph)	8	800	40	440	271	38	33	37	1100	28	3	2
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.89	0.89	0.89	0.75	0.75	0.75
Adj. Flow (vph)	10	952	48	524	323	45	37	42	1236	37	4	3
RTOR Reduction (vph)	0	0	33	0	0	24	0	0	264	0	3	0
Lane Group Flow (vph)	10	952	15	524	323	21	37	42	972	37	4	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	7	4		3	8		2	2	2 3	6	6	
Permitted Phases	4		4			8						
Actuated Green, G (s)	38.3	37.5	37.5	19.0	55.7	55.7	31.0	31.0	50.0	16.0	16.0	
Effective Green, g (s)	40.3	38.5	38.5	20.0	56.7	56.7	32.0	32.0	52.0	17.0	17.0	
Actuated g/C Ratio	0.33	0.31	0.31	0.16	0.46	0.46	0.26	0.26	0.42	0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	1103	493	556	1625	727	459	917	1173	244	456	
v/s Ratio Prot	0.00	c0.27		0.15	0.09		0.02	0.01	c0.44	c0.02	0.00	
v/s Ratio Perm	0.01		0.03			0.03						
v/c Ratio	0.03	0.86	0.03	0.94	0.20	0.03	0.08	0.05	0.83	0.15	0.01	
Uniform Delay, d1	28.2	40.0	29.5	51.2	19.9	18.3	34.6	34.3	31.8	46.9	46.0	
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	0.0	7.2	0.0	26.3	0.1	0.0	0.3	0.1	6.8	1.3	0.0	
Delay (s)	28.2	47.2	29.6	77.5	19.9	18.3	35.0	34.4	38.6	48.2	46.0	
Level of Service	C	D	C	E	B	B	C	C	D	D	D	
Approach Delay (s)		46.1			53.7			38.4			47.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	123.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.9%	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												
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	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1659		1770	3531		1770	3539	1583
Flt Permitted	0.66	1.00	1.00		0.90		0.43	1.00		0.27	1.00	1.00
Satd. Flow (perm)	1228	1863	1583		1518		795	3531		499	3539	1583
Volume (vph)	134	3	239	4	0	9	430	946	14	16	381	103
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)	149	3	266	4	0	10	478	1051	16	18	423	114
RTOR Reduction (vph)	0	0	213	0	10	0	0	1	0	0	0	63
Lane Group Flow (vph)	149	3	53	0	4	0	478	1066	0	18	423	51
Turn Type	pm+pt		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	14.5	14.5	14.5		2.4		53.7	47.8		35.1	34.2	34.2
Effective Green, g (s)	15.5	15.5	15.5		3.4		54.7	48.8		37.1	35.2	35.2
Actuated g/C Ratio	0.20	0.20	0.20		0.04		0.70	0.62		0.47	0.45	0.45
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	300	369	314		66		749	2203		268	1593	713
v/s Ratio Prot	0.05	0.00					c0.13	0.30		0.00	0.12	
v/s Ratio Perm	0.05		0.17		0.01		c0.32			0.03		0.07
v/c Ratio	0.50	0.01	0.17		0.07		0.64	0.48		0.07	0.27	0.07
Uniform Delay, d1	27.6	25.2	26.0		35.9		5.3	7.9		10.9	13.4	12.2
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	0.0	0.3		0.4		1.8	0.8		0.1	0.4	0.2
Delay (s)	28.9	25.2	26.3		36.3		7.1	8.7		11.0	13.8	12.4
Level of Service	C	C	C		D		A	A		B	B	B
Approach Delay (s)		27.2			36.3			8.2			13.5	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	8.0
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												
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	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.89		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1660		1770	1622		1770	3539	1583	1770	3531	
Flt Permitted	0.66	1.00		0.62	1.00		0.28	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	1232	1660		1150	1622		523	3539	1583	187	3531	
Volume (vph)	23	8	21	203	16	101	21	1029	59	65	702	11
Peak-hour factor, PHF	0.65	0.65	0.65	0.78	0.78	0.78	0.89	0.89	0.89	0.95	0.95	0.95
Adj. Flow (vph)	35	12	32	260	21	129	24	1156	66	68	739	12
RTOR Reduction (vph)	0	24	0	0	85	0	0	0	40	0	1	0
Lane Group Flow (vph)	35	20	0	260	65	0	24	1156	26	68	750	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		
Actuated Green, G (s)	23.9	21.2		38.7	31.0		38.1	36.3	36.3	43.3	38.9	
Effective Green, g (s)	25.9	22.2		39.7	32.0		40.1	37.3	37.3	45.3	39.9	
Actuated g/C Ratio	0.27	0.24		0.42	0.34		0.42	0.40	0.40	0.48	0.42	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	359	390		572	550		259	1398	625	180	1492	
v/s Ratio Prot	0.00	0.03		c0.06	0.09		0.00	c0.33		c0.02	0.21	
v/s Ratio Perm	0.02			c0.13			0.04		0.04	0.16		
v/c Ratio	0.10	0.05		0.45	0.12		0.09	0.83	0.04	0.38	0.50	
Uniform Delay, d1	25.4	27.9		18.7	21.5		16.3	25.6	17.6	17.9	20.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.6	0.4		0.2	4.2	0.0	1.3	0.3	
Delay (s)	25.5	28.2		19.3	21.9		16.4	29.8	17.6	19.2	20.2	
Level of Service	C	C		B	C		B	C	B	B	C	
Approach Delay (s)		27.0			20.2			28.9			20.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.4	Sum of lost time (s)	16.0
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												
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				
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95				
Frt	1.00	1.00			1.00		1.00	0.93				
Flt Protected	0.95	1.00			1.00		0.95	0.97				
Satd. Flow (prot)	1770	3539			3533		1681	1609				
Flt Permitted	0.33	1.00			1.00		0.95	0.97				
Satd. Flow (perm)	617	3539			3533		1681	1609				
Volume (vph)	128	208	0	0	256	3	1074	5	287	0	0	0
Peak-hour factor, PHF	0.79	0.79	0.79	0.97	0.97	0.97	0.91	0.91	0.91	0.90	0.90	0.90
Adj. Flow (vph)	162	263	0	0	264	3	1180	5	315	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	24	0	0	0	0
Lane Group Flow (vph)	162	263	0	0	266	0	781	695	0	0	0	0
Turn Type	pm+pt						Perm					
Protected Phases	7	4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)	28.6	28.6			13.0		68.1	68.1				
Effective Green, g (s)	29.6	29.6			14.0		69.1	69.1				
Actuated g/C Ratio	0.28	0.28			0.13		0.65	0.65				
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0				
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Lane Grp Cap (vph)	297	982			464		1089	1042				
v/s Ratio Prot	c0.06	0.07			0.08							
v/s Ratio Perm	c0.09						0.46	0.45				
v/c Ratio	0.55	0.27			0.57		0.72	0.67				
Uniform Delay, d1	31.0	30.1			43.5		12.4	11.7				
Progression Factor	1.00	1.00			1.00		1.00	1.00				
Incremental Delay, d2	2.0	0.1			1.7		4.1	3.4				
Delay (s)	33.0	30.2			45.3		16.4	15.0				
Level of Service	C	C			D		B	B				
Approach Delay (s)		31.3			45.3			15.8			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1759	
Flt Permitted	0.06	1.00	1.00	0.15	1.00	1.00	0.15	1.00	1.00	0.64	1.00	
Satd. Flow (perm)	106	3539	1583	277	3539	1583	287	1863	1583	1198	1759	
Volume (vph)	84	787	192	112	1552	82	323	136	96	111	141	83
Peak-hour factor, PHF	0.76	0.76	0.76	0.85	0.85	0.85	0.75	0.75	0.75	0.86	0.86	0.86
Adj. Flow (vph)	111	1036	253	132	1826	96	431	181	128	129	164	97
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	90	0	15	0
Lane Group Flow (vph)	111	1036	253	132	1826	63	431	181	38	129	246	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	74.6	69.6	150.0	83.4	74.0	74.0	56.0	43.0	43.0	29.0	21.0	
Effective Green, g (s)	76.6	70.6	150.0	85.0	75.0	75.0	57.0	44.0	44.0	31.0	22.0	
Actuated g/C Ratio	0.51	0.47	1.00	0.57	0.50	0.50	0.38	0.29	0.29	0.21	0.15	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	121	1666	1583	260	1770	792	416	546	464	282	258	
v/s Ratio Prot	c0.04	0.29		0.04	c0.52		c0.21	0.10		0.03	0.15	
v/s Ratio Perm	0.43		0.16	0.25		0.06	c0.18		0.08	0.07		
v/c Ratio	0.92	0.62	0.16	0.51	1.03	0.08	1.04	0.33	0.08	0.46	0.96	
Uniform Delay, d1	73.7	29.7	0.0	20.6	37.5	19.5	46.3	41.5	38.4	50.9	63.5	
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	56.3	0.7	0.2	1.6	30.0	0.0	53.8	1.6	0.3	1.2	45.6	
Delay (s)	130.0	30.4	0.2	22.1	67.5	19.6	100.1	43.1	38.7	52.1	109.2	
Level of Service	F	C	A	C	E	B	F	D	D	D	F	
Approach Delay (s)		32.9			62.3			75.5			90.3	
Approach LOS		C			E			E			F	

Intersection Summary			
HCM Average Control Delay	57.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.3%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	3498		1770	3539			1778	1583		1736	
Flt Permitted	0.08	1.00		0.09	1.00			0.74	1.00		0.85	
Satd. Flow (perm)	158	3498		174	3539			1371	1583		1503	
Volume (vph)	17	1101	93	67	1565	1	172	8	53	16	9	14
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.81	0.81	0.81	0.65	0.65	0.65
Adj. Flow (vph)	20	1266	107	77	1799	1	212	10	65	25	14	22
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	47	0	16	0
Lane Group Flow (vph)	20	1366	0	77	1800	0	0	222	18	0	45	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	47.7	46.3		52.5	48.7			23.5	23.5		23.5	
Effective Green, g (s)	49.7	47.3		54.5	49.7			24.5	24.5		24.5	
Actuated g/C Ratio	0.56	0.53		0.62	0.56			0.28	0.28		0.28	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	132	1867		193	1985			379	438		416	
v/s Ratio Prot	0.00	0.39		c0.02	c0.51							
v/s Ratio Perm	0.08			0.22				c0.16	0.04		0.04	
v/c Ratio	0.15	0.73		0.40	0.91			0.59	0.04		0.11	
Uniform Delay, d1	16.5	15.8		11.7	17.4			27.7	23.5		23.9	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.5	1.5		1.4	6.4			6.5	0.2		0.5	
Delay (s)	17.0	17.3		13.1	23.8			34.2	23.6		24.4	
Level of Service	B	B		B	C			C	C		C	
Approach Delay (s)		17.3			23.4			31.8			24.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.2%	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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.91	
Flt Protected	0.95	1.00			1.00					0.95	0.98	
Satd. Flow (prot)	1770	3539			5028					1681	1582	
Flt Permitted	0.07	1.00			1.00					0.76	0.86	
Satd. Flow (perm)	140	3539			5028					1340	1396	
Volume (vph)	120	1250	0	0	1530	123	0	0	0	168	0	81
Peak-hour factor, PHF	0.81	0.81	0.81	0.90	0.90	0.90	0.90	0.90	0.90	0.78	0.78	0.78
Adj. Flow (vph)	148	1543	0	0	1700	137	0	0	0	215	0	104
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	0	0	54	0
Lane Group Flow (vph)	148	1543	0	0	1829	0	0	0	0	140	125	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	62.2	62.2			48.4					14.0	14.0	
Effective Green, g (s)	63.2	63.2			49.4					15.0	15.0	
Actuated g/C Ratio	0.73	0.73			0.57					0.17	0.17	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	288	2595			2881					233	243	
v/s Ratio Prot	0.06	c0.44			c0.37							
v/s Ratio Perm	0.32									0.10	c0.13	
v/c Ratio	0.51	0.59			0.63					0.60	0.52	
Uniform Delay, d1	11.6	5.4			12.3					32.8	32.3	
Progression Factor	1.00	1.00			1.00					1.00	1.00	
Incremental Delay, d2	1.5	1.0			1.1					4.3	1.8	
Delay (s)	13.2	6.5			13.4					37.2	34.1	
Level of Service	B	A			B					D	C	
Approach Delay (s)		7.0			13.4			0.0			35.5	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	86.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.1%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	0.88	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	3539	1583	3433	3539	1583	1770	3539	2787	1770	3372	
Flt Permitted	0.41	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	756	3539	1583	3433	3539	1583	1770	3539	2787	1770	3372	
Volume (vph)	4	450	45	1051	616	15	50	15	740	46	38	17
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.82	0.82	0.82	0.79	0.79	0.79
Adj. Flow (vph)	5	511	51	1106	648	16	61	18	902	58	48	22
RTOR Reduction (vph)	0	0	42	0	0	6	0	0	234	0	19	0
Lane Group Flow (vph)	5	511	9	1106	648	10	61	18	668	58	51	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	7	4		3	8		2	2	2 3	6	6	
Permitted Phases	4		4			8						
Actuated Green, G (s)	20.4	20.4	20.4	45.0	70.4	70.4	17.0	17.0	62.0	16.0	16.0	
Effective Green, g (s)	21.4	21.4	21.4	46.0	71.4	71.4	18.0	18.0	64.0	17.0	17.0	
Actuated g/C Ratio	0.18	0.18	0.18	0.39	0.60	0.60	0.15	0.15	0.54	0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	640	286	1334	2134	955	269	538	1506	254	484	
v/s Ratio Prot		c0.14		c0.32	0.18		0.03	0.01	c0.32	c0.03	0.02	
v/s Ratio Perm	0.01		0.03			0.01						
v/c Ratio	0.04	0.80	0.03	0.83	0.30	0.01	0.23	0.03	0.44	0.23	0.11	
Uniform Delay, d1	40.0	46.4	40.0	32.7	11.4	9.4	44.1	42.8	16.4	44.9	44.1	
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	0.1	6.9	0.0	6.1	0.1	0.0	2.0	0.1	0.9	2.1	0.4	
Delay (s)	40.1	53.3	40.0	38.7	11.5	9.4	46.0	42.9	17.4	47.0	44.5	
Level of Service	D	D	D	D	B	A	D	D	B	D	D	
Approach Delay (s)		52.0			28.5			19.6			45.6	
Approach LOS		D			C			B			D	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	118.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.9%	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												
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	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1721		1770	3537		1770	3539	1583
Flt Permitted	0.60	1.00	1.00		0.83		0.13	1.00		0.44	1.00	1.00
Satd. Flow (perm)	1109	1863	1583		1470		236	3537		815	3539	1583
Volume (vph)	251	2	445	38	6	27	345	517	2	10	923	42
Peak-hour factor, PHF	0.71	0.71	0.71	0.68	0.68	0.68	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	354	3	627	56	9	40	379	568	2	11	982	45
RTOR Reduction (vph)	0	0	272	0	24	0	0	0	0	0	0	27
Lane Group Flow (vph)	354	3	355	0	81	0	379	570	0	11	982	18
Turn Type	pm+pt		Perm	Perm			pm+pt			pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	26.6	26.6	26.6		9.4		59.1	53.4		37.2	36.5	36.5
Effective Green, g (s)	27.6	27.6	27.6		10.4		60.1	54.4		39.2	37.5	37.5
Actuated g/C Ratio	0.29	0.29	0.29		0.11		0.63	0.57		0.41	0.39	0.39
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	411	537	457		160		446	2011		351	1387	620
v/s Ratio Prot	0.12	0.00					c0.17	0.16		0.00	0.28	
v/s Ratio Perm	0.13		0.40		0.07		c0.37			0.01		0.03
v/c Ratio	0.86	0.01	0.78		0.51		0.85	0.28		0.03	0.71	0.03
Uniform Delay, d1	32.4	24.3	31.2		40.2		22.7	10.6		16.8	24.5	17.9
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.7	0.0	8.1		2.5		14.1	0.4		0.0	3.1	0.1
Delay (s)	49.0	24.3	39.3		42.7		36.8	11.0		16.8	27.6	18.0
Level of Service	D	C	D		D		D	B		B	C	B
Approach Delay (s)		42.8			42.7			21.3			27.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	95.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.2%	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												
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	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1668		1770	1626		1770	3539	1583	1770	3530	
Flt Permitted	0.69	1.00		0.62	1.00		0.13	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1277	1668		1148	1626		235	3539	1583	209	3530	
Volume (vph)	20	11	24	259	15	83	40	919	153	122	1019	18
Peak-hour factor, PHF	0.76	0.76	0.76	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	26	14	32	294	17	94	41	947	158	133	1108	20
RTOR Reduction (vph)	0	24	0	0	59	0	0	0	104	0	1	0
Lane Group Flow (vph)	26	22	0	294	52	0	41	947	54	133	1127	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		
Actuated Green, G (s)	23.0	21.2		40.0	33.2		33.4	30.7	30.7	41.8	34.9	
Effective Green, g (s)	25.0	22.2		41.0	34.2		35.4	31.7	31.7	43.6	35.9	
Actuated g/C Ratio	0.27	0.24		0.44	0.37		0.38	0.34	0.34	0.47	0.39	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	360	400		608	601		151	1212	542	232	1369	
v/s Ratio Prot	0.00	0.03		c0.08	0.07		0.01	0.27		c0.05	c0.32	
v/s Ratio Perm	0.02			c0.14			0.09		0.10	0.22		
v/c Ratio	0.07	0.05		0.48	0.09		0.27	0.78	0.10	0.57	0.82	
Uniform Delay, d1	25.0	27.1		17.4	19.0		20.3	27.3	20.7	17.8	25.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.3		0.6	0.3		1.0	3.3	0.1	3.4	4.1	
Delay (s)	25.1	27.4		18.0	19.3		21.3	30.7	20.8	21.2	29.6	
Level of Service	C	C		B	B		C	C	C	C	C	
Approach Delay (s)		26.6			18.3			29.0			28.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	639	14	81	295	5	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	710	16	90	328	6	156
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			726		1054	355
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			726		1054	355
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		97	76
cM capacity (veh/h)			873		198	641

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	355	355	16	90	164	164	6	156
Volume Left	0	0	0	90	0	0	6	0
Volume Right	0	0	16	0	0	0	0	156
cSH	1700	1700	1700	873	1700	1700	198	641
Volume to Capacity	0.21	0.21	0.01	0.10	0.10	0.10	0.03	0.24
Queue Length 95th (ft)	0	0	0	9	0	0	2	24
Control Delay (s)	0.0	0.0	0.0	9.6	0.0	0.0	23.7	12.4
Lane LOS				A			C	B
Approach Delay (s)	0.0			2.1			12.8	
Approach LOS							B	

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	473	11	34	214	9	201
Peak Hour Factor	0.92	0.92	0.82	0.82	0.91	0.91
Hourly flow rate (vph)	514	12	41	261	10	221
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			526		728	257
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			526		728	257
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		97	70
cM capacity (veh/h)			1037		344	742

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	257	257	12	41	130	130	10	221
Volume Left	0	0	0	41	0	0	10	0
Volume Right	0	0	12	0	0	0	0	221
cSH	1700	1700	1700	1037	1700	1700	344	742
Volume to Capacity	0.15	0.15	0.01	0.04	0.08	0.08	0.03	0.30
Queue Length 95th (ft)	0	0	0	3	0	0	2	31
Control Delay (s)	0.0	0.0	0.0	8.6	0.0	0.0	15.8	11.9
Lane LOS				A			C	B
Approach Delay (s)	0.0			1.2			12.1	
Approach LOS							B	

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	450	8	17	185	6	19
Peak Hour Factor	0.91	0.91	0.92	0.92	0.78	0.78
Hourly flow rate (vph)	495	9	18	201	8	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			503		632	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			503		632	247
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	97
cM capacity (veh/h)			1057		405	753

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	247	247	9	18	101	101	8	24
Volume Left	0	0	0	18	0	0	8	0
Volume Right	0	0	9	0	0	0	0	24
cSH	1700	1700	1700	1057	1700	1700	405	753
Volume to Capacity	0.15	0.15	0.01	0.02	0.06	0.06	0.02	0.03
Queue Length 95th (ft)	0	0	0	1	0	0	1	3
Control Delay (s)	0.0	0.0	0.0	8.5	0.0	0.0	14.1	9.9
Lane LOS				A			B	A
Approach Delay (s)	0.0			0.7			10.9	
Approach LOS							B	

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	6	13	0	1	21	36	0	1	0	4	0	5
Peak Hour Factor	0.79	0.79	0.79	0.76	0.76	0.76	0.25	0.25	0.25	0.75	0.75	0.75
Hourly flow rate (vph)	8	16	0	1	28	47	0	4	0	5	0	7

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	8	16	1	75	0	4	5	7
Volume Left (vph)	8	0	1	0	0	0	5	0
Volume Right (vph)	0	0	0	47	0	0	0	7
Hadj (s)	0.53	0.03	0.53	-0.41	0.00	0.03	0.53	-0.67
Departure Headway (s)	5.1	4.6	5.1	4.1	4.7	4.8	5.3	4.1
Degree Utilization, x	0.01	0.02	0.00	0.09	0.00	0.01	0.01	0.01
Capacity (veh/h)	696	765	702	853	756	731	661	857
Control Delay (s)	7.0	6.5	6.9	6.3	6.5	6.6	7.1	5.9
Approach Delay (s)	6.7		6.3		6.6		6.4	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.4		
HCM Level of Service	A		
Intersection Capacity Utilization	15.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	55	0	5	68	47	1	9	7	49	3	7
Peak Hour Factor	0.89	0.89	0.89	0.79	0.79	0.79	0.61	0.61	0.61	0.70	0.70	0.70
Hourly flow rate (vph)	10	62	0	6	86	59	2	15	11	70	4	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	146			62			150	240	31	198	211	73
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	146			62			150	240	31	198	211	73
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	98	99	90	99	99
cM capacity (veh/h)	1434			1539			785	653	1036	716	678	974

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	10	41	21	6	57	88	2	26	70	4	10
Volume Left	10	0	0	6	0	0	2	0	70	0	0
Volume Right	0	0	0	0	0	59	0	11	0	0	10
cSH	1434	1700	1700	1539	1700	1700	785	779	716	678	974
Volume to Capacity	0.01	0.02	0.01	0.00	0.03	0.05	0.00	0.03	0.10	0.01	0.01
Queue Length 95th (ft)	1	0	0	0	0	0	0	3	8	0	1
Control Delay (s)	7.5	0.0	0.0	7.3	0.0	0.0	9.6	9.8	10.6	10.3	8.7
Lane LOS	A			A			A	A	B	B	A
Approach Delay (s)	1.1			0.3			9.8		10.3		
Approach LOS							A		B		

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	83	146	45	28	95	61	23	45	23	16	28	6
Peak Hour Factor	0.95	0.95	0.95	0.74	0.74	0.74	0.59	0.59	0.59	0.83	0.83	0.83
Hourly flow rate (vph)	87	154	47	38	128	82	39	76	39	19	34	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	211			201			516	639	101	574	621	105
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	211			201			516	639	101	574	621	105
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			97			90	79	96	94	91	99
cM capacity (veh/h)	1357			1368			380	357	935	300	366	929

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	87	102	99	38	86	125	39	115	19	41
Volume Left	87	0	0	38	0	0	39	0	19	0
Volume Right	0	0	47	0	0	82	0	39	0	7
cSH	1357	1700	1700	1368	1700	1700	380	452	300	409
Volume to Capacity	0.06	0.06	0.06	0.03	0.05	0.07	0.10	0.26	0.06	0.10
Queue Length 95th (ft)	5	0	0	2	0	0	9	25	5	8
Control Delay (s)	7.8	0.0	0.0	7.7	0.0	0.0	15.6	15.7	17.8	14.8
Lane LOS	A			A			C	C	C	B
Approach Delay (s)	2.4			1.2			15.7		15.7	
Approach LOS							C		C	

Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	27.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	304	0	0	450	66	0	0	0	29	0	17
Peak Hour Factor	0.79	0.79	0.79	0.81	0.81	0.81	0.90	0.90	0.90	0.77	0.77	0.77
Hourly flow rate (vph)	68	385	0	0	556	81	0	0	0	38	0	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1059							
pX, platoon unblocked												
vC, conflicting volume	637			385			821	1159	192	925	1118	319
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	637			385			821	1159	192	925	1118	319
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	100	82	100	97
cM capacity (veh/h)	943			1170			243	180	817	211	191	677

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	257	128	0	370	267	0	0	0	38	0	22
Volume Left	68	0	0	0	0	0	0	0	0	38	0	0
Volume Right	0	0	0	0	0	81	0	0	0	0	0	22
cSH	943	1700	1700	1700	1700	1700	1700	1700	1700	211	1700	677
Volume to Capacity	0.07	0.15	0.08	0.00	0.22	0.16	0.00	0.00	0.00	0.18	0.00	0.03
Queue Length 95th (ft)	6	0	0	0	0	0	0	0	0	16	0	3
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.7	0.0	10.5
Lane LOS	A						A	A	A	D	A	B
Approach Delay (s)	1.4			0.0			0.0			20.1		
Approach LOS							A			C		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	139	1	29	16	3	88	43	1223	4	14	471	88
Peak Hour Factor	0.86	0.86	0.86	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Hourly flow rate (vph)	162	1	34	21	4	116	49	1406	5	17	574	107
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1582	2171	341	1860	2220	703	682			1410		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1582	2171	341	1860	2220	703	682			1410		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	97	95	46	90	70	95			96		
cM capacity (veh/h)	44	42	655	39	39	380	907			480		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	162	35	21	120	49	703	703	5	17	383	299
Volume Left	162	0	21	0	49	0	0	0	17	0	0
Volume Right	0	34	0	116	0	0	0	5	0	0	107
cSH	44	441	39	295	907	1700	1700	1700	480	1700	1700
Volume to Capacity	3.69	0.08	0.54	0.41	0.05	0.41	0.41	0.00	0.04	0.23	0.18
Queue Length 95th (ft)	Err	6	48	47	4	0	0	0	3	0	0
Control Delay (s)	Err	13.9	175.3	25.3	9.2	0.0	0.0	0.0	12.8	0.0	0.0
Lane LOS	F	B	F	D	A				B		
Approach Delay (s)	8226.5		47.7		0.3				0.3		
Approach LOS	F		E								

Intersection Summary			
Average Delay	650.7		
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	17	1	12	48	0	46	9	1112	14	12	540	3
Peak Hour Factor	0.63	0.63	0.63	0.84	0.84	0.84	0.86	0.86	0.86	0.90	0.90	0.90
Hourly flow rate (vph)	27	2	19	57	0	55	10	1293	16	13	600	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1351	1959	302	1660	1944	647	603			1309		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1351	1959	302	1660	1944	647	603			1309		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	71	97	97	3	100	87	99			97		
cM capacity (veh/h)	92	61	694	59	62	414	970			524		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	27	21	57	55	10	647	647	16	13	400	203
Volume Left	27	0	57	0	10	0	0	0	13	0	0
Volume Right	0	19	0	55	0	0	0	16	0	0	3
cSH	92	385	59	414	970	1700	1700	1700	524	1700	1700
Volume to Capacity	0.29	0.05	0.97	0.13	0.01	0.38	0.38	0.01	0.03	0.24	0.12
Queue Length 95th (ft)	27	4	113	11	1	0	0	0	2	0	0
Control Delay (s)	59.7	14.9	220.7	15.0	8.8	0.0	0.0	0.0	12.0	0.0	0.0
Lane LOS	F	B	F	C	A				B		
Approach Delay (s)	40.3		120.0		0.1				0.3		
Approach LOS	E		F								

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	1	31	86	5	23	33	1088	21	6	661	10
Peak Hour Factor	0.78	0.78	0.78	0.77	0.77	0.77	0.84	0.84	0.84	0.94	0.94	0.94
Hourly flow rate (vph)	31	1	40	112	6	30	39	1295	25	6	703	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1481	2120	357	1779	2100	648	714			1320		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1481	2120	357	1779	2100	648	714			1320		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	56	97	94	0	87	93	96			99		
cM capacity (veh/h)	69	47	640	46	48	413	882			519		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	72	112	36	39	648	648	25	6	469	245
Volume Left	31	112	0	39	0	0	0	6	0	0
Volume Right	40	0	30	0	0	0	25	0	0	11
cSH	135	46	176	882	1700	1700	1700	519	1700	1700
Volume to Capacity	0.53	2.44	0.21	0.04	0.38	0.38	0.01	0.01	0.28	0.14
Queue Length 95th (ft)	64	295	19	3	0	0	0	1	0	0
Control Delay (s)	58.7	846.3	30.7	9.3	0.0	0.0	0.0	12.0	0.0	0.0
Lane LOS	F	F	D	A				B		
Approach Delay (s)	58.7	646.0		0.3				0.1		
Approach LOS	F	F								

Intersection Summary			
Average Delay	43.6		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	18	184	17	1	118	24	31	18	12	29	22	5
Peak Hour Factor	0.64	0.64	0.64	0.69	0.69	0.69	0.73	0.73	0.73	0.64	0.64	0.64
Hourly flow rate (vph)	28	288	27	1	171	35	42	25	16	45	34	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	342	207	84	88
Volume Left (vph)	28	1	42	45
Volume Right (vph)	27	35	16	8
Hadj (s)	0.00	-0.07	0.02	0.08
Departure Headway (s)	4.6	4.7	5.4	5.4
Degree Utilization, x	0.44	0.27	0.12	0.13
Capacity (veh/h)	740	719	588	590
Control Delay (s)	11.2	9.5	9.1	9.3
Approach Delay (s)	11.2	9.5	9.1	9.3
Approach LOS	B	A	A	A

Intersection Summary			
Delay	10.3		
HCM Level of Service	B		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	19	1529	51	37	881	47	31	0	39	28	1	23
Peak Hour Factor	0.84	0.84	0.84	0.81	0.81	0.81	0.65	0.65	0.65	0.77	0.77	0.77
Hourly flow rate (vph)	23	1820	61	46	1088	58	48	0	60	36	1	30
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1254							
pX, platoon unblocked												
vC, conflicting volume	1146			1881			2531	3103	910	2194	3105	544
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1146			1881			2531	3103	910	2194	3105	544
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			85			0	100	78	0	86	94
cM capacity (veh/h)	606			315			10	9	277	17	9	483

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	23	910	910	61	46	544	544	58	108	68
Volume Left	23	0	0	0	46	0	0	0	48	36
Volume Right	0	0	0	61	0	0	0	58	60	30
cSH	606	1700	1700	1700	315	1700	1700	1700	22	29
Volume to Capacity	0.04	0.54	0.54	0.04	0.15	0.32	0.32	0.03	4.98	2.34
Queue Length 95th (ft)	3	0	0	0	13	0	0	0	Err	200
Control Delay (s)	11.2	0.0	0.0	0.0	18.4	0.0	0.0	0.0	Err	903.8
Lane LOS	B				C				F	F
Approach Delay (s)	0.1				0.7				9999.0	903.8
Approach LOS									F	F

Intersection Summary			
Average Delay	348.3		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	407	7	163	710	19	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.75	0.75
Hourly flow rate (vph)	442	8	177	772	25	135
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			450		1183	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			450		1183	221
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		83	83
cM capacity (veh/h)			1107		153	783

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	221	221	8	177	386	386	25	135
Volume Left	0	0	0	177	0	0	25	0
Volume Right	0	0	8	0	0	0	0	135
cSH	1700	1700	1700	1107	1700	1700	153	783
Volume to Capacity	0.13	0.13	0.00	0.16	0.23	0.23	0.17	0.17
Queue Length 95th (ft)	0	0	0	14	0	0	14	15
Control Delay (s)	0.0	0.0	0.0	8.9	0.0	0.0	33.1	10.6
Lane LOS				A			D	B
Approach Delay (s)	0.0			1.7			14.1	
Approach LOS							B	

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	238	10	147	427	29	55
Peak Hour Factor	0.91	0.91	0.95	0.95	0.72	0.72
Hourly flow rate (vph)	262	11	155	449	40	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			273		796	131
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			273		796	131
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		86	91
cM capacity (veh/h)			1288		285	895

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	131	131	11	155	225	225	40	76
Volume Left	0	0	0	155	0	0	40	0
Volume Right	0	0	11	0	0	0	0	76
cSH	1700	1700	1700	1288	1700	1700	285	895
Volume to Capacity	0.08	0.08	0.01	0.12	0.13	0.13	0.14	0.09
Queue Length 95th (ft)	0	0	0	10	0	0	12	7
Control Delay (s)	0.0	0.0	0.0	8.2	0.0	0.0	19.7	9.4
Lane LOS				A			C	A
Approach Delay (s)	0.0			2.1			12.9	
Approach LOS							B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	243	15	16	348	28	18
Peak Hour Factor	0.84	0.84	0.88	0.88	0.64	0.64
Hourly flow rate (vph)	289	18	18	395	44	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			307		523	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			307		523	145
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		91	97
cM capacity (veh/h)			1250		476	876

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	145	145	18	18	198	198	44	28
Volume Left	0	0	0	18	0	0	44	0
Volume Right	0	0	18	0	0	0	0	28
cSH	1700	1700	1700	1250	1700	1700	476	876
Volume to Capacity	0.09	0.09	0.01	0.01	0.12	0.12	0.09	0.03
Queue Length 95th (ft)	0	0	0	1	0	0	8	2
Control Delay (s)	0.0	0.0	0.0	7.9	0.0	0.0	13.3	9.2
Lane LOS				A			B	A
Approach Delay (s)	0.0			0.3			11.7	
Approach LOS							B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	15	1	1	11	21	0	2	0	11	0	8
Peak Hour Factor	0.75	0.75	0.75	0.69	0.69	0.69	0.50	0.50	0.50	0.68	0.68	0.68
Hourly flow rate (vph)	7	20	1	1	16	30	0	4	0	16	0	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	7	21	1	46	0	4	16	12
Volume Left (vph)	7	0	1	0	0	0	16	0
Volume Right (vph)	0	1	0	30	0	0	0	12
Hadj (s)	0.53	-0.01	0.53	-0.43	0.00	0.03	0.53	-0.67
Departure Headway (s)	5.1	4.6	5.1	4.2	4.7	4.7	5.2	4.0
Degree Utilization, x	0.01	0.03	0.00	0.05	0.00	0.01	0.02	0.01
Capacity (veh/h)	691	766	694	844	765	740	670	872
Control Delay (s)	7.0	6.5	6.9	6.2	6.5	6.5	7.1	5.9
Approach Delay (s)	6.6		6.2		6.5		6.6	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.4		
HCM Level of Service	A		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	103	3	6	77	113	3	3	7	66	12	11
Peak Hour Factor	0.90	0.52	0.52	0.77	0.77	0.77	0.58	0.58	0.58	0.67	0.67	0.67
Hourly flow rate (vph)	13	198	6	8	100	147	5	5	12	99	18	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	247			204			319	490	102	329	419	123
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	247			204			319	490	102	329	419	123
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	99	99	83	97	98
cM capacity (veh/h)	1316			1365			577	470	933	580	515	904

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	13	132	72	8	67	180	5	17	99	18	16
Volume Left	13	0	0	8	0	0	5	0	99	0	0
Volume Right	0	0	6	0	0	147	0	12	0	0	16
cSH	1316	1700	1700	1365	1700	1700	577	720	580	515	904
Volume to Capacity	0.01	0.08	0.04	0.01	0.04	0.11	0.01	0.02	0.17	0.03	0.02
Queue Length 95th (ft)	1	0	0	0	0	0	1	2	15	3	1
Control Delay (s)	7.8	0.0	0.0	7.7	0.0	0.0	11.3	10.1	12.5	12.2	9.1
Lane LOS	A			A			B	B	B	B	A
Approach Delay (s)	0.5			0.2			10.4		12.0		
Approach LOS							B		B		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	204	13	26	286	31	28	12	18	55	38	78
Peak Hour Factor	0.76	0.76	0.76	0.91	0.91	0.91	0.81	0.81	0.81	0.86	0.86	0.86
Hourly flow rate (vph)	24	268	17	29	314	34	35	15	22	64	44	91
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	348			286			651	730	143	600	721	174
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	348			286			651	730	143	600	721	174
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			87	96	97	82	87	89
cM capacity (veh/h)	1207			1274			275	333	879	351	337	839

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	24	179	107	29	210	139	35	37	64	135
Volume Left	24	0	0	29	0	0	35	0	64	0
Volume Right	0	0	17	0	0	34	0	22	0	91
cSH	1207	1700	1700	1274	1700	1700	275	531	351	564
Volume to Capacity	0.02	0.11	0.06	0.02	0.12	0.08	0.13	0.07	0.18	0.24
Queue Length 95th (ft)	2	0	0	2	0	0	11	6	16	23
Control Delay (s)	8.0	0.0	0.0	7.9	0.0	0.0	20.0	12.3	17.5	13.4
Lane LOS	A			A			C	B	C	B
Approach Delay (s)	0.6			0.6			16.0		14.7	
Approach LOS							C		B	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	74	420	0	0	392	11	0	0	0	132	0	73
Peak Hour Factor	0.64	0.64	0.64	0.84	0.84	0.84	0.90	0.90	0.90	0.71	0.71	0.71
Hourly flow rate (vph)	116	656	0	0	467	13	0	0	0	186	0	103
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1058							
pX, platoon unblocked												
vC, conflicting volume	480			656			1224	1367	328	1033	1361	240
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	480			656			1224	1367	328	1033	1361	240
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			100			100	100	100	0	100	86
cM capacity (veh/h)	1079			927			107	130	668	172	131	761

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	116	438	219	0	311	169	0	0	0	186	0	103
Volume Left	116	0	0	0	0	0	0	0	0	186	0	0
Volume Right	0	0	0	0	0	13	0	0	0	0	0	103
cSH	1079	1700	1700	1700	1700	1700	1700	1700	1700	172	1700	761
Volume to Capacity	0.11	0.26	0.13	0.00	0.18	0.10	0.00	0.00	0.00	1.08	0.00	0.14
Queue Length 95th (ft)	9	0	0	0	0	0	0	0	0	232	0	12
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.8	0.0	10.5
Lane LOS	A						A	A	A	F	A	B
Approach Delay (s)	1.3			0.0			0.0			98.9		
Approach LOS							A			F		

Intersection Summary			
Average Delay	19.2		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	46	4	28	7	0	24	19	646	14	74	1083	104
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.96	0.96	0.96	0.94	0.94	0.94
Hourly flow rate (vph)	54	5	33	8	0	28	20	673	15	79	1152	111
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1769	2092	631	1481	2133	336	1263			688		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1769	2092	631	1481	2133	336	1263			688		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	90	92	88	100	96	96			91		
cM capacity (veh/h)	46	46	424	67	43	659	546			902		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	54	38	8	28	20	336	336	15	79	768	495
Volume Left	54	0	8	0	20	0	0	0	79	0	0
Volume Right	0	33	0	28	0	0	0	15	0	0	111
cSH	46	208	67	659	546	1700	1700	1700	902	1700	1700
Volume to Capacity	1.18	0.18	0.12	0.04	0.04	0.20	0.20	0.01	0.09	0.45	0.29
Queue Length 95th (ft)	126	16	10	3	3	0	0	0	7	0	0
Control Delay (s)	330.4	26.1	65.8	10.7	11.8	0.0	0.0	0.0	9.4	0.0	0.0
Lane LOS	F	D	F	B	B				A		
Approach Delay (s)	205.5		23.1		0.3				0.5		
Approach LOS	F		C								

Intersection Summary			
Average Delay	9.5		
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	1	19	28	2	15	20	729	37	67	1083	17
Peak Hour Factor	0.73	0.73	0.73	0.54	0.54	0.54	0.97	0.97	0.97	0.94	0.94	0.94
Hourly flow rate (vph)	16	1	26	52	4	28	21	752	38	71	1152	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1750	2135	585	1538	2106	376	1170			790		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1750	2135	585	1538	2106	376	1170			790		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	63	97	94	21	92	96	97			91		
cM capacity (veh/h)	45	43	454	66	45	622	593			826		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	16	27	52	31	21	376	376	38	71	768	402
Volume Left	16	0	52	0	21	0	0	0	71	0	0
Volume Right	0	26	0	28	0	0	0	38	0	0	18
cSH	45	307	66	247	593	1700	1700	1700	826	1700	1700
Volume to Capacity	0.37	0.09	0.79	0.13	0.03	0.22	0.22	0.02	0.09	0.45	0.24
Queue Length 95th (ft)	32	7	90	11	3	0	0	0	7	0	0
Control Delay (s)	127.1	17.9	158.2	21.7	11.3	0.0	0.0	0.0	9.8	0.0	0.0
Lane LOS	F	C	F	C	B				A		
Approach Delay (s)	58.8		106.6		0.3				0.6		
Approach LOS	F		F								

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑			↑↑			↑↑	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	0	30	41	2	6	55	804	70	12	1126	24
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.96	0.96	0.96	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	39	53	3	8	57	838	73	13	1185	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1766	2248	605	1609	2188	419	1211			910		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1766	2248	605	1609	2188	419	1211			910		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	91	8	93	99	90			98		
cM capacity (veh/h)	46	36	441	58	40	583	572			744		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	44	53	10	57	419	419	73	13	790	420
Volume Left	5	53	0	57	0	0	0	13	0	0
Volume Right	39	0	8	0	0	0	73	0	0	25
cSH	218	58	132	572	1700	1700	1700	744	1700	1700
Volume to Capacity	0.20	0.92	0.08	0.10	0.25	0.25	0.04	0.02	0.46	0.25
Queue Length 95th (ft)	18	105	6	8	0	0	0	1	0	0
Control Delay (s)	25.7	209.7	34.5	12.0	0.0	0.0	0.0	9.9	0.0	0.0
Lane LOS	D	F	D	B				A		
Approach Delay (s)	25.7	181.1		0.7				0.1		
Approach LOS	D	F								

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	66	9	7	126	17	10	10	2	11	15	1
Peak Hour Factor	0.80	0.80	0.80	0.83	0.83	0.83	0.79	0.79	0.79	0.84	0.84	0.84
Hourly flow rate (vph)	2	82	11	8	152	20	13	13	3	13	18	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	96	181	28	32
Volume Left (vph)	3	8	13	13
Volume Right (vph)	11	20	3	1
Hadj (s)	-0.03	-0.02	0.07	0.09
Departure Headway (s)	4.2	4.1	4.6	4.6
Degree Utilization, x	0.11	0.21	0.04	0.04
Capacity (veh/h)	836	857	728	721
Control Delay (s)	7.7	8.2	7.8	7.8
Approach Delay (s)	7.7	8.2	7.8	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	898	95	64	1613	29	90	0	81	36	3	27
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.71	0.71	0.71	0.79	0.79	0.79
Hourly flow rate (vph)	10	955	101	67	1698	31	127	0	114	46	4	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					1254							
pX, platoon unblocked	0.98						0.98	0.98		0.98	0.98	0.98
vC, conflicting volume	1728			1056			1994	2838	478	2444	2908	849
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1723			1056			1994	2854	478	2452	2926	827
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			90			0	100	79	0	70	89
cM capacity (veh/h)	356			655			22	14	534	11	13	309

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	10	478	478	101	67	849	849	31	241	84
Volume Left	10	0	0	0	67	0	0	0	127	46
Volume Right	0	0	0	101	0	0	0	31	114	34
cSH	356	1700	1700	1700	655	1700	1700	1700	40	18
Volume to Capacity	0.03	0.28	0.28	0.06	0.10	0.50	0.50	0.02	6.03	4.53
Queue Length 95th (ft)	2	0	0	0	9	0	0	0	Err	Err
Control Delay (s)	15.4	0.0	0.0	0.0	11.1	0.0	0.0	0.0	Err	Err
Lane LOS	C				B				F	F
Approach Delay (s)	0.1				0.4				Err	Err
Approach LOS									F	F

Intersection Summary			
Average Delay	1018.3		
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

Appendix G

2015 No-Build Level of Service Analyses

Level of Service Analysis	Pages
AM 2015 No-Build Condition - Signalized	15
PM 2015 No-Build Condition - Signalized	15
AM 2015 No-Build Condition - Unsignalized	5
PM 2015 No-Build Condition - Unsignalized	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3520		1681	1687	1583			
Flt Permitted	0.07	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	255	3539			3520		1681	1687	1583			
Volume (vph)	790	120	0	0	1070	40	870	10	120	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	832	126	0	0	1126	42	916	11	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	44	0	0	0
Lane Group Flow (vph)	832	126	0	0	1166	0	458	469	82	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	91.7	91.7			51.7		48.3	48.3	48.3			
Effective Green, g (s)	92.7	92.7			52.7		49.3	49.3	49.3			
Actuated g/C Ratio	0.62	0.62			0.35		0.33	0.33	0.33			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	920	2187			1237		552	554	520			
v/s Ratio Prot	c0.22	0.04			0.33							
v/s Ratio Perm	c0.34						0.27	0.28	0.05			
v/c Ratio	0.90	0.06			0.94		0.83	0.85	0.16			
Uniform Delay, d1	46.3	11.3			47.2		46.5	46.8	35.6			
Progression Factor	1.01	0.76			1.00		1.00	1.00	1.00			
Incremental Delay, d2	5.9	0.0			14.0		13.5	14.8	0.6			
Delay (s)	52.9	8.6			61.2		60.0	61.6	36.3			
Level of Service	D	A			E		E	E	D			
Approach Delay (s)		47.1			61.2			57.9			0.0	
Approach LOS		D			E			E			A	

Intersection Summary			
HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.87		1.00	0.89	
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	3539	1583	1770	3539	1583	1770	1622		1770	1650	
Flt Permitted	0.12	1.00	1.00	0.04	1.00	1.00	0.72	1.00		0.62	1.00	
Satd. Flow (perm)	226	3539	1583	67	3539	1583	1349	1622		1153	1650	
Volume (vph)	30	2400	100	60	1480	70	50	10	60	40	10	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	32	2526	105	63	1558	74	62	12	75	50	12	38
RTOR Reduction (vph)	0	0	16	0	0	19	0	41	0	0	33	0
Lane Group Flow (vph)	32	2526	89	63	1558	55	62	46	0	50	17	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	114.1	109.6	109.6	114.7	109.9	109.9	20.6	20.6		20.6	20.6	
Effective Green, g (s)	116.1	110.6	110.6	116.7	110.9	110.9	21.6	21.6		21.6	21.6	
Actuated g/C Ratio	0.77	0.74	0.74	0.78	0.74	0.74	0.14	0.14		0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	2609	1167	118	2617	1170	194	234		166	238	
v/s Ratio Prot	0.01	c0.71		c0.02	0.44			0.03			0.01	
v/s Ratio Perm	0.10		0.06	0.39		0.03	c0.05			0.04		
v/c Ratio	0.14	0.97	0.08	0.53	0.60	0.05	0.32	0.20		0.30	0.07	
Uniform Delay, d1	6.9	18.1	5.5	43.5	9.1	5.3	57.6	56.6		57.4	55.5	
Progression Factor	1.74	2.00	2.58	1.05	1.76	2.41	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.6	0.0	2.1	0.2	0.0	4.3	1.9		4.6	0.6	
Delay (s)	12.0	37.7	14.1	47.9	16.1	12.7	61.9	58.4		62.1	56.1	
Level of Service	B	D	B	D	B	B	E	E		E	E	
Approach Delay (s)		36.5			17.2			59.9			59.1	
Approach LOS		D			B			E			E	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.4%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.96	
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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1785	
Flt Permitted	0.05	1.00	1.00	0.05	1.00	1.00	0.12	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	97	3539	1583	102	3539	1583	233	1863	1583	374	1785	
Volume (vph)	210	2260	290	160	1460	160	270	290	80	190	260	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	2379	305	168	1537	168	300	322	89	211	289	111
RTOR Reduction (vph)	0	0	0	0	0	70	0	0	70	0	9	0
Lane Group Flow (vph)	221	2379	305	168	1537	98	300	322	19	211	391	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	91.0	79.0	150.0	79.0	72.0	72.0	47.0	31.0	31.0	41.0	28.0	
Effective Green, g (s)	92.0	80.0	150.0	81.0	73.0	73.0	49.0	32.0	32.0	43.0	29.0	
Actuated g/C Ratio	0.61	0.53	1.00	0.54	0.49	0.49	0.33	0.21	0.21	0.29	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	227	1887	1583	144	1722	770	250	397	338	238	345	
v/s Ratio Prot	0.10	c0.67		c0.06	0.43		c0.14	0.17		0.08	0.22	
v/s Ratio Perm	0.50		0.19	0.57		0.06	c0.26		0.01	0.17		
v/c Ratio	0.97	1.26	0.19	1.17	0.89	0.13	1.20	0.81	0.06	0.89	1.13	
Uniform Delay, d1	51.0	35.0	0.0	73.2	34.9	21.1	68.7	56.1	47.0	45.4	60.5	
Progression Factor	1.34	0.88	1.00	1.30	0.96	1.29	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	117.7	0.0	122.6	5.7	0.1	121.9	16.3	0.3	30.1	89.8	
Delay (s)	80.4	148.6	0.0	217.4	39.2	27.2	190.6	72.5	47.3	75.4	150.3	
Level of Service	F	F	A	F	D	C	F	E	D	E	F	
Approach Delay (s)		127.8			54.1			119.1			124.4	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM Average Control Delay	103.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.4%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1770	3508		1770	3536			1780	1583		1758	
Flt Permitted	0.12	1.00		0.03	1.00			0.76	1.00		0.50	
Satd. Flow (perm)	229	3508		61	3536			1422	1583		887	
Volume (vph)	10	2740	170	80	1560	10	130	10	120	10	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	11	2884	179	84	1642	11	153	12	141	12	12	10
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	39	0	9	0
Lane Group Flow (vph)	11	3060	0	84	1653	0	0	165	102	0	25	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	119.6	118.0		124.4	120.4			13.0	13.0		13.0	
Effective Green, g (s)	121.6	119.0		126.4	121.4			14.0	14.0		14.0	
Actuated g/C Ratio	0.81	0.79		0.84	0.81			0.09	0.09		0.09	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	212	2783		108	2862			133	148		83	
v/s Ratio Prot	0.00	c0.87		c0.03	0.47							
v/s Ratio Perm	0.04			0.62				c0.12	0.06		0.03	
v/c Ratio	0.05	1.10		0.78	0.58			1.24	0.69		0.30	
Uniform Delay, d1	4.1	15.5		73.6	5.1			68.0	65.9		63.4	
Progression Factor	1.14	0.98		0.83	1.89			1.00	1.00		1.00	
Incremental Delay, d2	0.0	46.4		10.6	0.1			156.5	23.1		9.1	
Delay (s)	4.8	61.6		71.4	9.8			224.5	89.0		72.5	
Level of Service	A	E		E	A			F	F		E	
Approach Delay (s)		61.4			12.8			162.1			72.5	
Approach LOS		E			B			F			E	

Intersection Summary			
HCM Average Control Delay	51.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.2%	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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.89	
Flt Protected	0.95	1.00			1.00					0.95	0.99	
Satd. Flow (prot)	1770	3539			5048					1681	1558	
Flt Permitted	0.11	1.00			1.00					0.76	0.91	
Satd. Flow (perm)	211	3539			5048					1340	1437	
Volume (vph)	60	3060	0	0	1640	80	0	0	0	30	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	63	3221	0	0	1640	84	0	0	0	38	0	25
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	24	0
Lane Group Flow (vph)	63	3221	0	0	1721	0	0	0	0	28	11	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	132.5	132.5			122.5					7.5	7.5	
Effective Green, g (s)	133.5	133.5			123.5					8.5	8.5	
Actuated g/C Ratio	0.89	0.89			0.82					0.06	0.06	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	250	3150			4156					76	81	
v/s Ratio Prot	0.01	c0.91			0.34							
v/s Ratio Perm	0.21									c0.02	0.01	
v/c Ratio	0.25	1.02			0.41					0.37	0.14	
Uniform Delay, d1	1.9	8.2			3.6					68.2	67.3	
Progression Factor	0.86	1.26			1.41					1.00	1.00	
Incremental Delay, d2	0.0	12.1			0.2					3.0	0.8	
Delay (s)	1.7	22.5			5.2					71.2	68.1	
Level of Service	A	C			A					E	E	
Approach Delay (s)		22.1			5.2			0.0			69.5	
Approach LOS		C			A			A			E	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.6%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	3539	1583	3433	3539	1583	3433	3539	2787	1770	3274	
Flt Permitted	0.41	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	760	3539	1583	3433	3539	1583	3433	3539	2787	1770	3274	
Volume (vph)	10	1380	130	650	610	50	110	60	1620	40	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	11	1453	137	684	642	53	116	63	1705	50	12	12
RTOR Reduction (vph)	0	0	89	0	0	26	0	0	45	0	11	0
Lane Group Flow (vph)	11	1453	48	684	642	27	116	63	1660	50	13	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	5	2		1	6		8	8	8 1	4	4	
Permitted Phases	2		2			6						
Actuated Green, G (s)	53.6	52.0	52.0	24.0	74.4	74.4	46.0	46.0	75.0	8.0	8.0	
Effective Green, g (s)	55.6	53.0	53.0	25.0	75.4	75.4	47.0	47.0	76.0	9.0	9.0	
Actuated g/C Ratio	0.37	0.35	0.35	0.17	0.50	0.50	0.31	0.31	0.51	0.06	0.06	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	299	1250	559	572	1779	796	1076	1109	1412	106	196	
v/s Ratio Prot	0.00	c0.41		c0.20	0.18		0.03	0.02	c0.60	c0.03	0.00	
v/s Ratio Perm	0.01		0.03			0.02						
v/c Ratio	0.04	1.16	0.09	1.20	0.36	0.03	0.11	0.06	1.18	0.47	0.06	
Uniform Delay, d1	29.9	48.5	32.4	62.5	22.7	18.9	36.6	36.0	37.0	68.2	66.5	
Progression Factor	1.06	0.94	1.40	0.89	0.93	2.02	0.92	0.92	0.82	1.00	1.00	
Incremental Delay, d2	0.0	80.8	0.3	103.4	0.1	0.0	0.2	0.1	85.4	14.3	0.6	
Delay (s)	31.6	126.4	45.7	159.2	21.2	38.2	33.8	33.1	115.9	82.5	67.2	
Level of Service	C	F	D	F	C	D	C	C	F	F	E	
Approach Delay (s)		118.8			90.3			108.0			77.5	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	106.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	247	3539	1770	1583
Volume (vph)	1210	50	120	710	40	210
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.85	0.85
Adj. Flow (vph)	1274	53	133	789	47	247
RTOR Reduction (vph)	0	22	0	0	0	22
Lane Group Flow (vph)	1274	31	133	789	47	225
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	42.6	42.6	55.9	55.9	9.1	17.4
Effective Green, g (s)	43.6	43.6	56.9	56.9	10.1	19.4
Actuated g/C Ratio	0.58	0.58	0.76	0.76	0.13	0.26
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2057	920	376	2685	238	494
v/s Ratio Prot	c0.36		0.04	0.22	0.03	c0.06
v/s Ratio Perm		0.02	0.22			0.09
v/c Ratio	0.62	0.03	0.35	0.29	0.20	0.45
Uniform Delay, d1	10.3	6.7	5.8	2.8	28.8	23.4
Progression Factor	0.74	1.28	4.13	0.73	1.11	0.97
Incremental Delay, d2	0.4	0.0	0.6	0.1	1.8	0.7
Delay (s)	8.0	8.6	24.5	2.1	34.0	23.3
Level of Service	A	A	C	A	C	C
Approach Delay (s)	8.0			5.4	25.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	238	3539	1770	1583
Volume (vph)	1000	80	70	600	50	370
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.85	0.85
Adj. Flow (vph)	1053	84	78	667	59	435
RTOR Reduction (vph)	0	53	0	0	0	16
Lane Group Flow (vph)	1053	31	78	667	59	419
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	26.3	26.3	46.8	46.8	18.2	33.7
Effective Green, g (s)	27.3	27.3	47.8	47.8	19.2	35.7
Actuated g/C Ratio	0.36	0.36	0.64	0.64	0.26	0.48
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1288	576	489	2256	453	838
v/s Ratio Prot	c0.30		0.04	0.19	0.03	c0.11
v/s Ratio Perm		0.02	0.07			0.15
v/c Ratio	0.82	0.05	0.16	0.30	0.13	0.50
Uniform Delay, d1	21.6	15.5	8.5	6.1	21.5	13.5
Progression Factor	0.71	0.31	2.03	1.54	1.00	1.11
Incremental Delay, d2	3.2	0.0	0.1	0.1	0.6	0.5
Delay (s)	18.5	4.8	17.4	9.5	22.0	15.5
Level of Service	B	A	B	A	C	B
Approach Delay (s)	17.5			10.3	16.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.12	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	227	3539	1770	1583
Volume (vph)	1020	110	90	540	110	310
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.80	0.80
Adj. Flow (vph)	1074	116	100	600	138	388
RTOR Reduction (vph)	0	71	0	0	0	18
Lane Group Flow (vph)	1074	45	100	600	138	370
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	27.8	27.8	42.8	42.8	22.2	32.2
Effective Green, g (s)	28.8	28.8	43.8	43.8	23.2	34.2
Actuated g/C Ratio	0.38	0.38	0.58	0.58	0.31	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1359	608	359	2067	548	806
v/s Ratio Prot	c0.30		0.04	0.17	0.08	c0.07
v/s Ratio Perm		0.03	0.12			0.17
v/c Ratio	0.79	0.07	0.28	0.29	0.25	0.46
Uniform Delay, d1	20.4	14.6	10.4	7.8	19.4	14.0
Progression Factor	1.00	1.00	1.01	0.84	1.00	1.00
Incremental Delay, d2	3.2	0.1	0.4	0.1	1.1	0.4
Delay (s)	23.6	14.7	10.9	6.7	20.5	14.5
Level of Service	C	B	B	A	C	B
Approach Delay (s)	22.8			7.3	16.0	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	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												
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	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1723		1770	3539	1583	1770	3539	1583
Flt Permitted	0.43	1.00	1.00	0.75	1.00		0.21	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	800	1863	1583	1398	1723		398	3539	1583	174	3539	1583
Volume (vph)	200	10	350	10	10	10	670	1460	20	20	630	150
Peak-hour factor, PHF	0.90	0.90	0.90	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	222	11	389	12	12	12	705	1537	21	21	663	158
RTOR Reduction (vph)	0	0	312	0	12	0	0	0	6	0	0	113
Lane Group Flow (vph)	222	11	77	12	12	0	705	1537	15	21	663	45
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	28.8	28.8	28.8	4.5	4.5		111.2	103.8	103.8	44.2	41.8	41.8
Effective Green, g (s)	29.8	29.8	29.8	5.5	5.5		112.2	104.8	104.8	46.2	42.8	42.8
Actuated g/C Ratio	0.20	0.20	0.20	0.04	0.04		0.75	0.70	0.70	0.31	0.29	0.29
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	290	370	314	51	63		896	2473	1106	90	1010	452
v/s Ratio Prot	c0.10	0.01			0.01		c0.34	0.43		0.01	0.19	
v/s Ratio Perm	c0.05		0.05	0.01			c0.25		0.01	0.07		0.03
v/c Ratio	0.77	0.03	0.25	0.24	0.20		0.79	0.62	0.01	0.23	0.66	0.10
Uniform Delay, d1	55.1	48.4	50.6	70.2	70.1		24.4	12.0	6.9	40.1	47.1	39.4
Progression Factor	1.00	0.98	1.90	1.00	1.00		0.74	0.67	0.80	0.42	0.24	0.01
Incremental Delay, d2	11.3	0.0	0.4	2.4	1.5		2.9	0.7	0.0	0.1	0.3	0.0
Delay (s)	66.2	47.5	96.7	72.6	71.6		20.9	8.8	5.5	17.1	11.5	0.4
Level of Service	E	D	F	E	E		C	A	A	B	B	A
Approach Delay (s)		85.0			72.0			12.5			9.6	
Approach LOS		F			E			B			A	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	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												
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	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1640		1770	1601		1770	3539	1583	1770	3539	1583
Flt Permitted	0.23	1.00		0.72	1.00		0.30	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)	816	1640		1338	1601		565	3539	1583	77	3539	1583
Volume (vph)	210	10	40	20	10	140	60	1860	10	20	760	140
Peak-hour factor, PHF	0.85	0.85	0.85	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	12	47	25	12	175	63	1958	11	21	800	147
RTOR Reduction (vph)	0	39	0	0	53	0	0	0	3	0	0	40
Lane Group Flow (vph)	247	20	0	25	134	0	63	1958	8	21	800	107
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	33.0	25.6		20.8	18.4		103.5	99.2	99.2	100.5	97.7	107.3
Effective Green, g (s)	34.0	26.6		22.8	19.4		105.5	100.2	100.2	102.5	98.7	109.3
Actuated g/C Ratio	0.23	0.18		0.15	0.13		0.70	0.67	0.67	0.68	0.66	0.73
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	370	291		213	207		440	2364	1057	96	2329	1196
v/s Ratio Prot	c0.05	0.01		0.00	0.08		0.01	c0.55		c0.01	0.23	0.01
v/s Ratio Perm	c0.10			0.02			0.10		0.01	0.15		0.06
v/c Ratio	0.67	0.07		0.12	0.65		0.14	0.83	0.01	0.22	0.34	0.09
Uniform Delay, d1	49.2	51.4		54.7	62.0		7.5	18.5	8.3	21.5	11.3	5.9
Progression Factor	1.00	1.00		1.00	1.00		0.43	0.95	0.43	1.40	0.46	0.63
Incremental Delay, d2	4.5	0.1		0.2	6.8		0.1	2.9	0.0	0.9	0.3	0.0
Delay (s)	53.7	51.5		55.0	68.8		3.3	20.5	3.6	31.0	5.5	3.8
Level of Service	D	D		D	E		A	C	A	C	A	A
Approach Delay (s)		53.3			67.2			19.8			5.8	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.6%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1674		1770	1617		1770	3539	1583	1770	3539	1583
Flt Permitted	0.52	1.00		0.73	1.00		0.30	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	967	1674		1365	1617		556	3539	1583	178	3539	1583
Volume (vph)	30	10	20	70	10	70	10	1690	20	20	860	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	25	88	12	88	11	1779	21	21	905	11
RTOR Reduction (vph)	0	22	0	0	79	0	0	0	4	0	0	2
Lane Group Flow (vph)	38	15	0	88	21	0	11	1779	17	21	905	9
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	14.6	14.6		14.6	14.6		119.4	117.0	117.0	121.4	118.0	118.0
Effective Green, g (s)	15.6	15.6		15.6	15.6		121.4	118.0	118.0	123.4	119.0	119.0
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.81	0.79	0.79	0.82	0.79	0.79
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	101	174		142	168		478	2784	1245	193	2808	1256
v/s Ratio Prot		0.01			0.01		0.00	c0.50		c0.00	0.26	
v/s Ratio Perm	0.04			c0.06			0.02		0.01	0.09		0.01
v/c Ratio	0.38	0.08		0.62	0.13		0.02	0.64	0.01	0.11	0.32	0.01
Uniform Delay, d1	62.7	60.7		64.4	61.0		2.9	6.9	3.4	6.1	4.3	3.2
Progression Factor	1.00	1.00		1.00	1.00		1.76	2.51	2.82	1.14	0.26	0.04
Incremental Delay, d2	2.3	0.2		7.8	0.3		0.0	0.8	0.0	0.2	0.3	0.0
Delay (s)	65.0	60.9		72.2	61.3		5.1	18.1	9.7	7.2	1.4	0.1
Level of Service	E	E		E	E		A	B	A	A	A	A
Approach Delay (s)		63.0			66.4			17.9			1.5	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1629		1770	1650		1770	3539	1583	1770	3539	1583
Flt Permitted	0.72	1.00		0.39	1.00		0.21	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1349	1629		726	1650		391	3539	1583	151	3539	1583
Volume (vph)	40	10	50	130	10	30	50	1660	30	10	1040	20
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	50	12	62	162	12	38	53	1747	32	11	1095	21
RTOR Reduction (vph)	0	58	0	0	33	0	0	0	10	0	0	7
Lane Group Flow (vph)	50	16	0	162	17	0	53	1747	22	11	1095	14
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	14.1	8.4		28.8	18.1		108.3	103.8	103.8	104.1	101.7	101.7
Effective Green, g (s)	16.1	9.4		29.8	19.1		110.3	104.8	104.8	106.1	102.7	102.7
Actuated g/C Ratio	0.11	0.06		0.20	0.13		0.74	0.70	0.70	0.71	0.68	0.68
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	164	102		258	210		338	2473	1106	144	2423	1084
v/s Ratio Prot	0.01	0.01		c0.07	0.01		c0.01	c0.49		0.00	0.31	
v/s Ratio Perm	0.02			c0.06			0.11		0.01	0.05		0.01
v/c Ratio	0.30	0.16		0.63	0.08		0.16	0.71	0.02	0.08	0.45	0.01
Uniform Delay, d1	61.5	66.5		53.2	57.7		7.0	13.4	6.9	12.4	10.8	7.5
Progression Factor	1.00	1.00		1.00	1.00		0.21	0.31	0.03	0.39	0.35	0.02
Incremental Delay, d2	1.1	0.7		4.7	0.2		0.1	0.9	0.0	0.2	0.6	0.0
Delay (s)	62.6	67.3		57.9	57.9		1.6	5.0	0.2	5.1	4.3	0.1
Level of Service	E	E		E	E		A	A	A	A	A	A
Approach Delay (s)		65.4			57.9			4.9			4.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1615		1770	3539	1583	1770	3539	1583
Flt Permitted	0.63	1.00		0.62	1.00		0.17	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1165	1650		1146	1615		314	3539	1583	93	3539	1583
Volume (vph)	30	10	30	300	20	160	30	1560	90	110	1090	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	38	353	24	188	32	1642	95	116	1147	11
RTOR Reduction (vph)	0	32	0	0	78	0	0	0	47	0	0	5
Lane Group Flow (vph)	38	18	0	353	134	0	32	1642	48	116	1147	6
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	25.2	21.5		50.9	42.2		77.9	74.7	74.7	89.1	80.9	80.9
Effective Green, g (s)	27.2	22.5		51.9	43.2		79.9	75.7	75.7	90.1	81.9	81.9
Actuated g/C Ratio	0.18	0.15		0.35	0.29		0.53	0.50	0.50	0.60	0.55	0.55
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	230	248		502	465		208	1786	799	172	1932	864
v/s Ratio Prot	0.01	0.01		c0.12	0.08		0.00	c0.46		c0.05	0.32	
v/s Ratio Perm	0.02			c0.12			0.08		0.03	0.36		0.00
v/c Ratio	0.17	0.07		0.70	0.29		0.15	0.92	0.06	0.67	0.59	0.01
Uniform Delay, d1	51.4	54.8		40.1	41.5		18.8	34.3	19.0	38.3	22.9	15.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.40	0.72	0.99
Incremental Delay, d2	0.3	0.6		4.4	1.6		0.3	8.1	0.0	9.1	0.4	0.0
Delay (s)	51.7	55.3		44.6	43.0		19.1	42.4	19.0	62.7	16.9	15.3
Level of Service	D	E		D	D		B	D	B	E	B	B
Approach Delay (s)		53.8			44.0			40.7			21.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	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												
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
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00			1.00		1.00
Frt	1.00	1.00		1.00	0.98		1.00			1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95			0.95		1.00
Satd. Flow (prot)	1770	3539		1770	3469		1770			1770		1583
Flt Permitted	0.28	1.00		0.45	1.00		0.76			0.76		1.00
Satd. Flow (perm)	530	3539		836	3469		1410			1410		1583
Volume (vph)	80	490	0	40	660	100	10	0	0	40	0	30
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	89	544	0	44	733	111	11	0	0	50	0	38
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	0	35
Lane Group Flow (vph)	89	544	0	44	835	0	11	0	0	50	0	3
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	59.5	59.5		49.2	49.2		5.5			5.5		5.5
Effective Green, g (s)	60.5	60.5		50.2	50.2		6.5			6.5		6.5
Actuated g/C Ratio	0.81	0.81		0.67	0.67		0.09			0.09		0.09
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0			5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0		3.0
Lane Grp Cap (vph)	532	2855		560	2322		122			122		137
v/s Ratio Prot	0.01	c0.15			c0.24							
v/s Ratio Perm	0.12			0.05			0.01			c0.04		0.00
v/c Ratio	0.17	0.19		0.08	0.36		0.09			0.41		0.02
Uniform Delay, d1	2.0	1.7		4.3	5.4		31.5			32.4		31.3
Progression Factor	1.00	1.00		0.94	1.21		1.00			1.00		1.00
Incremental Delay, d2	0.1	0.1		0.2	0.3		0.3			2.2		0.1
Delay (s)	2.1	1.8		4.3	6.8		31.8			34.7		31.4
Level of Service	A	A		A	A		C			C		C
Approach Delay (s)		1.9			6.7			31.8			33.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.7%	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												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3527		1681	1686	1583			
Flt Permitted	0.14	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	518	3539			3527		1681	1686	1583			
Volume (vph)	190	390	0	0	440	10	1870	10	420	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	200	411	0	0	463	11	1968	11	442	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	35	0	0	0
Lane Group Flow (vph)	200	411	0	0	473	0	984	995	407	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	34.9	34.9			22.9		105.1	105.1	105.1			
Effective Green, g (s)	35.9	35.9			23.9		106.1	106.1	106.1			
Actuated g/C Ratio	0.24	0.24			0.16		0.71	0.71	0.71			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	279	847			562		1189	1193	1120			
v/s Ratio Prot	c0.04	0.12			c0.13							
v/s Ratio Perm	0.13						0.59	0.59	0.26			
v/c Ratio	0.72	0.49			0.84		0.83	0.83	0.36			
Uniform Delay, d1	47.6	49.1			61.2		15.5	15.7	8.6			
Progression Factor	1.04	1.04			1.00		1.00	1.00	1.00			
Incremental Delay, d2	6.9	0.4			11.0		6.7	6.9	0.9			
Delay (s)	56.6	51.4			72.2		22.2	22.6	9.6			
Level of Service	E	D			E		C	C	A			
Approach Delay (s)		53.1			72.2			20.1			0.0	
Approach LOS		D			E			C			A	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.86		1.00	0.88	
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	3539	1583	1770	3539	1583	1770	1605		1770	1637	
Flt Permitted	0.04	1.00	1.00	0.11	1.00	1.00	0.70	1.00		0.42	1.00	
Satd. Flow (perm)	69	3539	1583	204	3539	1583	1299	1605		778	1637	
Volume (vph)	10	1500	140	90	2750	40	160	10	120	50	10	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	11	1579	147	95	2895	42	188	12	141	62	12	50
RTOR Reduction (vph)	0	0	32	0	0	7	0	82	0	0	38	0
Lane Group Flow (vph)	11	1579	115	95	2895	35	188	71	0	62	24	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	109.1	107.5	107.5	119.4	112.8	112.8	20.6	20.6		20.6	20.6	
Effective Green, g (s)	111.1	108.5	108.5	120.4	113.8	113.8	21.6	21.6		21.6	21.6	
Actuated g/C Ratio	0.74	0.72	0.72	0.80	0.76	0.76	0.14	0.14		0.14	0.14	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	81	2560	1145	246	2685	1201	187	231		112	236	
v/s Ratio Prot	0.00	0.45		c0.02	c0.82			0.04			0.01	
v/s Ratio Perm	0.10		0.07	0.29		0.02	c0.14			0.08		
v/c Ratio	0.14	0.62	0.10	0.39	1.08	0.03	1.01	0.31		0.55	0.10	
Uniform Delay, d1	72.9	10.4	6.2	9.3	18.1	4.5	64.2	57.5		59.7	55.8	
Progression Factor	1.78	1.73	3.87	1.13	1.52	1.14	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.3	0.0	0.8	41.1	0.0	67.2	3.4		18.3	0.9	
Delay (s)	130.2	18.2	24.0	11.3	68.6	5.1	131.4	60.9		78.0	56.7	
Level of Service	F	B	C	B	E	A	F	E		E	E	
Approach Delay (s)		19.4			66.0			99.8			67.3	
Approach LOS		B			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.2%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1756	
Flt Permitted	0.06	1.00	1.00	0.06	1.00	1.00	0.13	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	108	3539	1583	102	3539	1583	248	1863	1583	1154	1756	
Volume (vph)	120	1330	300	170	2690	120	490	200	140	160	210	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	126	1400	316	179	2832	126	544	222	156	178	233	144
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	116	0	15	0
Lane Group Flow (vph)	126	1400	316	179	2832	98	544	222	40	178	362	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	71.7	67.7	150.0	86.0	77.0	77.0	54.0	37.2	37.2	36.8	25.0	
Effective Green, g (s)	73.7	68.7	150.0	87.0	78.0	78.0	55.0	38.2	38.2	38.8	26.0	
Actuated g/C Ratio	0.49	0.46	1.00	0.58	0.52	0.52	0.37	0.25	0.25	0.26	0.17	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	108	1621	1583	218	1840	823	345	474	403	351	304	
v/s Ratio Prot	c0.04	0.40		0.08	c0.80		c0.26	0.12		0.04	0.21	
v/s Ratio Perm	0.53		0.20	0.40		0.06	c0.32		0.03	0.09		
v/c Ratio	1.17	0.86	0.20	0.82	1.54	0.12	1.58	0.47	0.10	0.51	1.19	
Uniform Delay, d1	74.6	36.5	0.0	44.9	36.0	18.4	64.7	47.3	42.7	45.8	62.0	
Progression Factor	1.43	0.95	1.00	1.22	0.97	1.29	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	109.8	2.3	0.1	2.4	242.9	0.0	273.1	3.3	0.5	1.2	113.9	
Delay (s)	216.7	36.8	0.1	57.3	277.7	23.7	337.8	50.6	43.2	47.0	175.9	
Level of Service	F	D	A	E	F	C	F	D	D	D	F	
Approach Delay (s)		42.8			254.9			218.8			134.6	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	178.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.5%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	3499		1770	3537			1777	1583		1736	
Flt Permitted	0.04	1.00		0.04	1.00			0.69	1.00		0.49	
Satd. Flow (perm)	76	3499		73	3537			1292	1583		868	
Volume (vph)	30	1830	150	100	2720	10	260	10	80	20	10	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	32	1926	158	105	2863	11	306	12	94	25	12	20
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	39	0	13	0
Lane Group Flow (vph)	32	2080	0	105	2874	0	0	318	55	0	44	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	99.6	97.2		110.0	102.6			30.0	30.0		30.0	
Effective Green, g (s)	101.6	98.2		111.0	103.6			31.0	31.0		31.0	
Actuated g/C Ratio	0.68	0.65		0.74	0.69			0.21	0.21		0.21	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	90	2291		154	2443			267	327		179	
v/s Ratio Prot	0.01	0.59		c0.04	c0.81							
v/s Ratio Perm	0.23			0.47				c0.25	0.03		0.05	
v/c Ratio	0.36	0.91		0.68	1.18			1.19	0.17		0.24	
Uniform Delay, d1	40.1	22.1		44.0	23.2			59.5	48.9		49.7	
Progression Factor	1.11	0.77		1.07	1.05			1.00	1.00		1.00	
Incremental Delay, d2	1.4	3.5		1.1	79.8			116.9	1.1		3.2	
Delay (s)	46.1	20.6		48.3	104.0			176.4	50.0		52.9	
Level of Service	D	C		D	F			F	D		D	
Approach Delay (s)		21.0			102.1			147.5			52.9	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM Average Control Delay	74.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.4%	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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.91	
Flt Protected	0.95	1.00			1.00					0.95	0.98	
Satd. Flow (prot)	1770	3539			5035					1681	1582	
Flt Permitted	0.04	1.00			1.00					0.76	0.86	
Satd. Flow (perm)	74	3539			5035					1340	1396	
Volume (vph)	180	2050	0	0	2680	180	0	0	0	250	0	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	189	2158	0	0	2680	189	0	0	0	312	0	150
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	35	0
Lane Group Flow (vph)	189	2158	0	0	2864	0	0	0	0	205	222	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	114.6	114.6			95.6					25.4	25.4	
Effective Green, g (s)	115.6	115.6			96.6					26.4	26.4	
Actuated g/C Ratio	0.77	0.77			0.64					0.18	0.18	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	227	2727			3243					236	246	
v/s Ratio Prot	0.08	c0.61			c0.57							
v/s Ratio Perm	0.56									0.15	c0.16	
v/c Ratio	0.83	0.79			0.88					0.87	0.90	
Uniform Delay, d1	52.0	10.1			22.0					60.1	60.6	
Progression Factor	1.26	0.43			0.94					1.00	1.00	
Incremental Delay, d2	14.7	1.5			0.4					26.9	32.9	
Delay (s)	80.4	5.9			21.1					87.0	93.4	
Level of Service	F	A			C					F	F	
Approach Delay (s)		11.9			21.1			0.0			90.6	
Approach LOS		B			C			A			F	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	3539	1583	3433	3539	1583	3433	3539	2787	1770	3361	
Flt Permitted	0.12	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	229	3539	1583	3433	3539	1583	3433	3539	2787	1770	3361	
Volume (vph)	30	870	180	1550	1330	20	330	20	1090	70	60	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	32	916	189	1632	1400	21	347	21	1147	88	75	38
RTOR Reduction (vph)	0	0	144	0	0	6	0	0	27	0	36	0
Lane Group Flow (vph)	32	916	45	1632	1400	15	347	21	1120	88	77	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	5	2		1	6		8	8	8 1	4	4	
Permitted Phases	2		2			6						
Actuated Green, G (s)	35.0	35.0	35.0	71.0	103.6	103.6	16.0	16.0	87.0	8.0	8.0	
Effective Green, g (s)	36.0	36.0	36.0	72.0	104.6	104.6	17.0	17.0	89.0	9.0	9.0	
Actuated g/C Ratio	0.24	0.24	0.24	0.48	0.70	0.70	0.11	0.11	0.59	0.06	0.06	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	90	849	380	1648	2468	1104	389	401	1654	106	202	
v/s Ratio Prot	0.01	c0.26		c0.48	0.40		c0.10	0.01	0.40	c0.05	0.02	
v/s Ratio Perm	0.08		0.03			0.01						
v/c Ratio	0.36	1.08	0.12	0.99	0.57	0.01	0.89	0.05	0.68	0.83	0.38	
Uniform Delay, d1	47.4	57.0	44.6	38.7	11.4	6.9	65.6	59.3	20.7	69.7	67.8	
Progression Factor	0.81	0.91	1.76	0.54	0.46	0.65	0.85	0.80	0.81	1.00	1.00	
Incremental Delay, d2	2.0	52.3	0.5	14.4	0.2	0.0	20.6	0.2	1.7	50.1	5.4	
Delay (s)	40.7	104.0	78.9	35.1	5.3	4.5	76.4	47.5	18.6	119.9	73.2	
Level of Service	D	F	E	D	A	A	E	D	B	F	E	
Approach Delay (s)		98.1			21.2			32.2			93.7	
Approach LOS		F			C			C			F	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.17	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	313	3539	1770	1583
Volume (vph)	940	60	240	1730	80	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.85	0.85
Adj. Flow (vph)	989	63	253	1821	94	176
RTOR Reduction (vph)	0	34	0	0	0	24
Lane Group Flow (vph)	989	29	253	1821	94	152
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	33.9	33.9	49.8	49.8	15.2	26.1
Effective Green, g (s)	34.9	34.9	50.8	50.8	16.2	28.1
Actuated g/C Ratio	0.47	0.47	0.68	0.68	0.22	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1647	737	443	2397	382	678
v/s Ratio Prot	0.28		0.09	c0.51	c0.05	0.04
v/s Ratio Perm		0.02	0.30			0.06
v/c Ratio	0.60	0.04	0.57	0.76	0.25	0.22
Uniform Delay, d1	14.9	10.9	7.9	8.0	24.3	16.0
Progression Factor	0.66	1.48	1.20	1.07	1.07	1.00
Incremental Delay, d2	0.6	0.0	1.5	1.2	1.5	0.2
Delay (s)	10.4	16.2	11.0	9.8	27.6	16.2
Level of Service	B	B	B	A	C	B
Approach Delay (s)	10.8			9.9	20.2	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.23	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	427	3539	1770	1583
Volume (vph)	740	120	320	1260	140	150
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.85	0.85
Adj. Flow (vph)	822	133	337	1326	165	176
RTOR Reduction (vph)	0	71	0	0	0	24
Lane Group Flow (vph)	822	62	337	1326	165	152
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	33.7	33.7	50.7	50.7	14.3	26.3
Effective Green, g (s)	34.7	34.7	51.7	51.7	15.3	28.3
Actuated g/C Ratio	0.46	0.46	0.69	0.69	0.20	0.38
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1637	732	527	2440	361	682
v/s Ratio Prot	0.23		c0.11	0.37	c0.09	0.04
v/s Ratio Perm		0.04	c0.33			0.06
v/c Ratio	0.50	0.08	0.64	0.54	0.46	0.22
Uniform Delay, d1	14.1	11.3	6.8	5.8	26.2	15.9
Progression Factor	0.50	0.21	2.13	0.44	0.97	1.33
Incremental Delay, d2	0.2	0.0	1.8	0.2	4.1	0.2
Delay (s)	7.2	2.4	16.2	2.7	29.5	21.2
Level of Service	A	A	B	A	C	C
Approach Delay (s)	6.6			5.5	25.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	246	3539	1770	1583
Volume (vph)	850	200	220	1040	210	230
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.85	0.85
Adj. Flow (vph)	944	222	232	1095	247	271
RTOR Reduction (vph)	0	144	0	0	0	21
Lane Group Flow (vph)	944	78	232	1095	247	250
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	25.3	25.3	40.2	40.2	24.8	34.7
Effective Green, g (s)	26.3	26.3	41.2	41.2	25.8	36.7
Actuated g/C Ratio	0.35	0.35	0.55	0.55	0.34	0.49
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1241	555	357	1944	609	859
v/s Ratio Prot	c0.27		c0.09	0.31	c0.14	0.04
v/s Ratio Perm		0.05	0.26			0.12
v/c Ratio	0.76	0.14	0.65	0.56	0.41	0.29
Uniform Delay, d1	21.6	16.6	12.4	11.0	18.8	11.4
Progression Factor	1.00	1.00	1.08	0.58	1.00	1.00
Incremental Delay, d2	2.8	0.1	3.5	0.3	2.0	0.2
Delay (s)	24.4	16.7	16.9	6.7	20.8	11.6
Level of Service	C	B	B	A	C	B
Approach Delay (s)	22.9			8.5	16.0	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	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												
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	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1704		1770	3539	1583	1770	3539	1583
Flt Permitted	0.31	1.00	1.00	0.74	1.00		0.07	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	577	1863	1583	1372	1704		132	3539	1583	496	3539	1583
Volume (vph)	370	30	660	60	30	40	570	1020	10	20	1470	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	389	32	695	75	38	50	600	1074	11	21	1547	74
RTOR Reduction (vph)	0	0	343	0	32	0	0	0	4	0	0	24
Lane Group Flow (vph)	389	32	352	75	56	0	600	1074	7	21	1547	50
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	37.0	37.0	37.0	8.0	8.0		95.6	95.6	95.6	59.0	59.0	59.0
Effective Green, g (s)	38.0	38.0	38.0	9.0	9.0		96.6	96.6	96.6	60.0	60.0	60.0
Actuated g/C Ratio	0.25	0.25	0.25	0.06	0.06		0.64	0.64	0.64	0.40	0.40	0.40
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	345	472	401	82	102		522	2279	1019	227	1416	633
v/s Ratio Prot	c0.19	0.02			0.03		c0.31	0.30		0.00	c0.44	
v/s Ratio Perm	c0.10		0.22	0.05			c0.44		0.00	0.03		0.03
v/c Ratio	1.13	0.07	0.88	0.91	0.55		1.15	0.47	0.01	0.09	1.09	0.08
Uniform Delay, d1	52.8	42.5	53.8	70.1	68.5		48.0	13.6	9.5	28.2	45.0	27.9
Progression Factor	1.03	0.99	1.21	1.00	1.00		1.17	0.70	1.23	0.36	0.34	0.10
Incremental Delay, d2	86.5	0.1	18.1	70.8	5.9		86.3	0.6	0.0	0.1	46.5	0.1
Delay (s)	140.8	42.3	83.2	140.9	74.5		142.6	10.3	11.8	10.2	61.7	2.8
Level of Service	F	D	F	F	E		F	B	B	B	E	A
Approach Delay (s)		102.1			105.0			57.4			58.4	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.4%	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												
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	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1637		1770	1629		1770	3539	1583	1770	3539	1583
Flt Permitted	0.44	1.00		0.72	1.00		0.08	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	1580	1637		1335	1629		152	3539	1583	293	3539	1583
Volume (vph)	70	10	40	10	10	50	30	1260	20	110	1700	160
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	12	50	12	12	62	32	1326	21	116	1789	168
RTOR Reduction (vph)	0	45	0	0	57	0	0	0	6	0	0	35
Lane Group Flow (vph)	88	17	0	12	17	0	32	1326	15	116	1789	133
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	23.1	15.3		13.5	10.5		109.4	105.4	105.4	114.0	107.7	107.7
Effective Green, g (s)	24.3	16.3		15.5	11.5		111.4	106.4	106.4	116.0	108.7	108.7
Actuated g/C Ratio	0.16	0.11		0.10	0.08		0.74	0.71	0.71	0.77	0.72	0.72
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	365	178		150	125		167	2510	1123	298	2565	1147
v/s Ratio Prot	c0.01	0.01		0.00	0.01		0.01	0.37		c0.02	c0.51	
v/s Ratio Perm	c0.02			0.01			0.14		0.01	0.28		0.08
v/c Ratio	0.24	0.10		0.08	0.13		0.19	0.53	0.01	0.39	0.70	0.12
Uniform Delay, d1	54.2	60.2		60.7	64.6		10.9	10.1	6.4	7.3	11.5	6.2
Progression Factor	1.00	1.00		1.00	1.00		2.01	2.14	2.70	2.42	0.34	0.01
Incremental Delay, d2	0.3	0.2		0.2	0.5		0.5	0.7	0.0	0.1	0.1	0.0
Delay (s)	54.5	60.5		60.9	65.1		22.5	22.3	17.3	17.8	4.0	0.1
Level of Service	D	E		E	E		C	C	B	B	A	A
Approach Delay (s)		57.0			64.5			22.3			4.5	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1674		1770	3539	1583	1770	3539	1583
Flt Permitted	0.73	1.00		0.72	1.00		0.10	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	1365	1650		1349	1674		193	3539	1583	271	3539	1583
Volume (vph)	20	10	30	40	10	20	30	1390	60	100	1700	30
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	12	38	50	12	25	32	1463	63	105	1789	32
RTOR Reduction (vph)	0	35	0	0	23	0	0	0	13	0	0	5
Lane Group Flow (vph)	25	15	0	50	14	0	32	1463	50	105	1789	27
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	9.5	9.5		9.5	9.5		122.0	117.3	117.3	129.0	120.8	120.8
Effective Green, g (s)	10.5	10.5		10.5	10.5		124.0	118.3	118.3	131.0	121.8	121.8
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.83	0.79	0.79	0.87	0.81	0.81
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	96	116		94	117		219	2791	1248	329	2874	1285
v/s Ratio Prot		0.01			0.01		0.01	0.41		c0.02	c0.51	
v/s Ratio Perm	0.02			c0.04			0.12		0.03	0.26		0.02
v/c Ratio	0.26	0.13		0.53	0.12		0.15	0.52	0.04	0.32	0.62	0.02
Uniform Delay, d1	66.1	65.4		67.4	65.4		4.4	5.7	3.5	3.9	5.4	2.7
Progression Factor	1.00	1.00		1.00	1.00		1.02	0.52	0.60	3.15	2.52	2.58
Incremental Delay, d2	1.4	0.5		5.7	0.5		0.3	0.6	0.0	0.4	0.8	0.0
Delay (s)	67.5	65.9		73.1	65.9		4.8	3.6	2.1	12.7	14.3	7.0
Level of Service	E	E		E	E		A	A	A	B	B	A
Approach Delay (s)		66.5			70.0			3.5			14.1	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1637		1770	1723		1770	3539	1583	1770	3539	1583
Flt Permitted	0.74	1.00		0.45	1.00		0.07	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	1381	1637		831	1723		123	3539	1583	232	3539	1583
Volume (vph)	10	10	40	60	10	10	80	1500	100	20	1760	40
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	12	50	75	12	12	84	1579	105	21	1853	42
RTOR Reduction (vph)	0	47	0	0	11	0	0	0	27	0	0	9
Lane Group Flow (vph)	12	15	0	75	13	0	84	1579	78	21	1853	33
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	10.7	8.3		19.9	12.9		119.5	111.0	111.0	109.9	106.2	106.2
Effective Green, g (s)	12.7	9.3		21.3	13.9		120.7	112.0	112.0	111.9	107.2	107.2
Actuated g/C Ratio	0.08	0.06		0.14	0.09		0.80	0.75	0.75	0.75	0.71	0.71
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	126	101		168	160		203	2642	1182	221	2529	1131
v/s Ratio Prot	0.00	0.01		c0.02	0.01		c0.03	0.45		0.00	c0.52	
v/s Ratio Perm	0.01			c0.04			0.31		0.05	0.07		0.02
v/c Ratio	0.10	0.15		0.45	0.08		0.41	0.60	0.07	0.10	0.73	0.03
Uniform Delay, d1	63.3	66.6		57.7	62.2		16.6	8.7	5.1	6.9	12.8	6.2
Progression Factor	1.00	1.00		1.00	1.00		2.43	0.06	0.00	1.53	1.01	1.96
Incremental Delay, d2	0.3	0.7		1.9	0.2		0.6	0.4	0.0	0.2	1.6	0.0
Delay (s)	63.6	67.3		59.6	62.4		41.0	0.9	0.0	10.8	14.6	12.2
Level of Service	E	E		E	E		D	A	A	B	B	B
Approach Delay (s)		66.7			60.3			2.8			14.5	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1676		1770	1616		1770	3539	1583	1770	3539	1583
Flt Permitted	0.64	1.00		0.52	1.00		0.05	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1189	1676		975	1616		101	3539	1583	93	3539	1583
Volume (vph)	30	20	40	380	20	150	60	1640	230	190	1590	30
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	25	50	422	22	167	63	1726	242	200	1674	32
RTOR Reduction (vph)	0	44	0	0	105	0	0	0	119	0	0	9
Lane Group Flow (vph)	38	31	0	422	84	0	63	1726	123	200	1674	23
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	20.2	17.0		47.0	38.8		78.2	75.0	75.0	93.0	84.8	84.8
Effective Green, g (s)	22.2	18.0		48.0	39.8		80.2	76.0	76.0	94.0	85.8	85.8
Actuated g/C Ratio	0.15	0.12		0.32	0.27		0.53	0.51	0.51	0.63	0.57	0.57
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	192	201		450	429		101	1793	802	215	2024	905
v/s Ratio Prot	0.01	0.02		c0.16	0.05		0.02	c0.49		c0.09	0.47	
v/s Ratio Perm	0.02			c0.14			0.32		0.08	0.50		0.01
v/c Ratio	0.20	0.15		0.94	0.20		0.62	0.96	0.15	0.93	0.83	0.02
Uniform Delay, d1	55.6	59.2		47.0	42.7		26.7	35.6	19.8	51.3	26.1	13.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.35	0.95	1.27
Incremental Delay, d2	0.5	1.6		27.2	1.0		11.4	13.4	0.1	33.9	2.1	0.0
Delay (s)	56.1	60.8		74.1	43.7		38.2	49.1	19.9	103.0	26.8	17.7
Level of Service	E	E		E	D		D	D	B	F	C	B
Approach Delay (s)		59.2			64.7			45.3			34.7	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	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												
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
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00			1.00		1.00
Frt	1.00	1.00		1.00	1.00		1.00			1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95			0.95		1.00
Satd. Flow (prot)	1770	3539		1770	3522		1770			1770		1583
Flt Permitted	0.31	1.00		0.35	1.00		0.76			0.76		1.00
Satd. Flow (perm)	583	3539		651	3522		1410			1410		1583
Volume (vph)	110	720	0	90	580	20	110	0	0	200	0	110
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	122	800	0	100	644	22	122	0	0	235	0	129
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	97
Lane Group Flow (vph)	122	800	0	100	663	0	122	0	0	235	0	32
Turn Type	pm+pt			Perm			Perm		Perm	Perm		Perm
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	47.6	47.6		36.8	36.8		17.4			17.4		17.4
Effective Green, g (s)	48.6	48.6		37.8	37.8		18.4			18.4		18.4
Actuated g/C Ratio	0.65	0.65		0.50	0.50		0.25			0.25		0.25
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0			5.0		5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0		3.0
Lane Grp Cap (vph)	485	2293		328	1775		346			346		388
v/s Ratio Prot	0.02	c0.23			c0.19							
v/s Ratio Perm	0.14			0.15			0.09			c0.17		0.02
v/c Ratio	0.25	0.35		0.30	0.37		0.35			0.68		0.08
Uniform Delay, d1	5.6	6.0		10.9	11.4		23.4			25.6		21.8
Progression Factor	1.00	1.00		0.83	0.88		1.00			1.00		1.00
Incremental Delay, d2	0.3	0.4		0.8	0.2		0.6			5.2		0.1
Delay (s)	5.9	6.4		9.9	10.3		24.0			30.9		21.9
Level of Service	A	A		A	B		C			C		C
Approach Delay (s)		6.4			10.2			24.0			27.7	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.6%	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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	120	220	70	40	140	90	30	70	30	20	40	10
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	141	259	82	50	175	112	38	88	38	25	50	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	288			341			807	970	171	824	955	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	288			341			807	970	171	824	955	144
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			96			81	59	96	84	77	99
cM capacity (veh/h)	1271			1215			197	215	843	155	219	878

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	141	173	169	50	117	171	38	125	25	62
Volume Left	141	0	0	50	0	0	38	0	25	0
Volume Right	0	0	82	0	0	112	0	38	0	12
cSH	1271	1700	1700	1215	1700	1700	197	276	155	258
Volume to Capacity	0.11	0.10	0.10	0.04	0.07	0.10	0.19	0.45	0.16	0.24
Queue Length 95th (ft)	9	0	0	3	0	0	17	55	14	23
Control Delay (s)	8.2	0.0	0.0	8.1	0.0	0.0	27.5	28.3	32.7	23.4
Lane LOS	A			A			D	D	D	C
Approach Delay (s)	2.4			1.2			28.1		26.1	
Approach LOS							D		D	

Intersection Summary			
Average Delay	7.9		
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	80	10	10	100	70	10	10	10	70	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	100	12	12	125	88	12	12	12	88	12	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	212			112			238	369	56	288	331	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	212			112			238	369	56	288	331	106
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	98	99	86	98	99
cM capacity (veh/h)	1355			1475			667	549	998	615	577	927

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	12	67	46	12	83	129	12	25	88	12	12
Volume Left	12	0	0	12	0	0	12	0	88	0	0
Volume Right	0	0	12	0	0	88	0	12	0	0	12
cSH	1355	1700	1700	1475	1700	1700	667	709	615	577	927
Volume to Capacity	0.01	0.04	0.03	0.01	0.05	0.08	0.02	0.04	0.14	0.02	0.01
Queue Length 95th (ft)	1	0	0	1	0	0	1	3	12	2	1
Control Delay (s)	7.7	0.0	0.0	7.5	0.0	0.0	10.5	10.3	11.8	11.4	8.9
Lane LOS	A			A			B	B	B	B	A
Approach Delay (s)	0.8			0.4			10.3		11.5		
Approach LOS							B		B		

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	20	10	10	30	50	10	10	10	10	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	25	12	12	38	62	12	12	12	12	12	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	38	13	100	13	25	13	25
Volume Left (vph)	13	0	13	0	13	0	13	0
Volume Right (vph)	0	13	0	63	0	13	0	13
Hadj (s)	0.53	-0.20	0.53	-0.40	0.53	-0.32	0.53	-0.32
Departure Headway (s)	5.3	4.6	5.3	4.3	5.4	4.6	5.4	4.6
Degree Utilization, x	0.02	0.05	0.02	0.12	0.02	0.03	0.02	0.03
Capacity (veh/h)	666	766	664	812	638	753	635	753
Control Delay (s)	7.2	6.6	7.2	6.7	7.3	6.5	7.3	6.5
Approach Delay (s)	6.7		6.8		6.8		6.8	
Approach LOS	A		A		A		A	

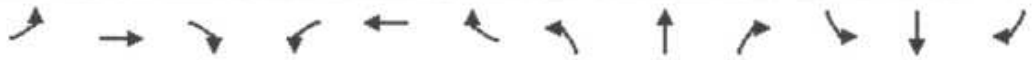
Intersection Summary			
Delay	6.8		
HCM Level of Service	A		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	270	30	10	170	40	50	30	20	40	30	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	35	318	35	12	200	47	62	38	25	50	38	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	388	259	125	100
Volume Left (vph)	35	12	63	50
Volume Right (vph)	35	47	25	13
Hadj (s)	0.00	-0.07	0.01	0.06
Departure Headway (s)	4.9	5.0	5.7	5.8
Degree Utilization, x	0.53	0.36	0.20	0.16
Capacity (veh/h)	697	672	549	538
Control Delay (s)	13.4	10.9	10.2	10.0
Approach Delay (s)	13.4	10.9	10.2	10.0
Approach LOS	B	B	B	A

Intersection Summary			
Delay	11.8		
HCM Level of Service	B		
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	290	10	10	210	10	10	10	10	10	10	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Hourly flow rate (vph)	12	341	12	12	247	12	12	12	12	12	12	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	259			353			535	653	176	489	653	129
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259			353			535	653	176	489	653	129
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	97	99	97	97	99
cM capacity (veh/h)	1303			1202			407	378	836	437	378	896

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	12	227	125	12	165	94	12	8	17	12	8	16
Volume Left	12	0	0	12	0	0	12	0	0	12	0	0
Volume Right	0	0	12	0	0	12	0	0	12	0	0	12
cSH	1303	1700	1700	1202	1700	1700	407	378	642	437	378	667
Volume to Capacity	0.01	0.13	0.07	0.01	0.10	0.06	0.03	0.02	0.03	0.03	0.02	0.02
Queue Length 95th (ft)	1	0	0	1	0	0	2	2	2	2	2	2
Control Delay (s)	7.8	0.0	0.0	8.0	0.0	0.0	14.1	14.7	10.8	13.5	14.7	10.5
Lane LOS	A			A			B	B	B	B	B	B
Approach Delay (s)	0.3			0.3			12.8			12.4		
Approach LOS							B			B		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	300	20	40	420	50	40	20	30	80	60	120
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.80	0.80	0.80	0.85	0.85	0.85
Hourly flow rate (vph)	35	353	24	44	467	56	50	25	38	94	71	141
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	522			376			934	1046	188	880	1030	261
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	522			376			934	1046	188	880	1030	261
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			96			60	88	95	53	67	81
cM capacity (veh/h)	1040			1179			126	211	822	198	216	738

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	35	235	141	44	311	211	50	62	94	212
Volume Left	35	0	0	44	0	0	50	0	94	0
Volume Right	0	0	24	0	0	56	0	38	0	141
cSH	1040	1700	1700	1179	1700	1700	126	381	198	408
Volume to Capacity	0.03	0.14	0.08	0.04	0.18	0.12	0.40	0.16	0.47	0.52
Queue Length 95th (ft)	3	0	0	3	0	0	42	15	58	72
Control Delay (s)	8.6	0.0	0.0	8.2	0.0	0.0	51.0	16.3	38.5	22.9
Lane LOS	A			A			F	C	E	C
Approach Delay (s)	0.7			0.6			31.7		27.7	
Approach LOS							D		D	

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	150	10	10	110	170	10	10	10	100	20	20
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	188	12	12	129	200	12	12	12	125	25	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	329			200			369	597	100	415	503	165
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329			200			369	597	100	415	503	165
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			98	97	99	75	95	97
cM capacity (veh/h)	1227			1370			511	403	936	491	456	851

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	125	75	12	86	243	12	25	125	25	25
Volume Left	25	0	0	12	0	0	12	0	125	0	0
Volume Right	0	0	12	0	0	200	0	12	0	0	25
cSH	1227	1700	1700	1370	1700	1700	511	563	491	456	851
Volume to Capacity	0.02	0.07	0.04	0.01	0.05	0.14	0.02	0.04	0.25	0.05	0.03
Queue Length 95th (ft)	2	0	0	1	0	0	2	3	25	4	2
Control Delay (s)	8.0	0.0	0.0	7.7	0.0	0.0	12.2	11.7	14.8	13.4	9.4
Lane LOS	A			A			B	B	B	B	A
Approach Delay (s)	0.9			0.3			11.9		13.8		
Approach LOS							B		B		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	20	10	10	20	30	10	10	10	20	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	25	12	12	25	38	12	12	12	25	12	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	38	13	63	13	25	25	25
Volume Left (vph)	13	0	13	0	13	0	25	0
Volume Right (vph)	0	13	0	38	0	13	0	13
Hadj (s)	0.53	-0.20	0.53	-0.39	0.53	-0.32	0.53	-0.32
Departure Headway (s)	5.3	4.6	5.3	4.4	5.4	4.5	5.3	4.5
Degree Utilization, x	0.02	0.05	0.02	0.08	0.02	0.03	0.04	0.03
Capacity (veh/h)	665	764	659	800	649	769	648	771
Control Delay (s)	7.2	6.6	7.2	6.5	7.3	6.5	7.4	6.4
Approach Delay (s)	6.7		6.6		6.7		6.9	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.7		
HCM Level of Service	A		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	100	10	10	190	30	20	20	10	20	20	10
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	125	12	12	224	35	25	25	12	25	25	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	150	271	63	63
Volume Left (vph)	13	12	25	25
Volume Right (vph)	13	35	13	13
Hadj (s)	0.00	-0.04	-0.01	-0.01
Departure Headway (s)	4.5	4.4	4.9	4.9
Degree Utilization, x	0.19	0.33	0.09	0.09
Capacity (veh/h)	764	793	663	659
Control Delay (s)	8.6	9.5	8.4	8.4
Approach Delay (s)	8.6	9.5	8.4	8.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	9.0		
HCM Level of Service	A		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱			↑↑↱			↑↑↱	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	200	10	10	200	10	10	10	10	10	10	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	235	12	12	235	12	12	12	12	12	12	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	247			247			425	535	124	425	535	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	247			247			425	535	124	425	535	124
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	97	99	97	97	99
cM capacity (veh/h)	1316			1316			489	442	904	489	442	904

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	12	157	90	12	157	90	12	8	17	12	8	17
Volume Left	12	0	0	12	0	0	12	0	0	12	0	0
Volume Right	0	0	12	0	0	12	0	0	12	0	0	12
cSH	1316	1700	1700	1316	1700	1700	489	442	717	489	442	717
Volume to Capacity	0.01	0.09	0.05	0.01	0.09	0.05	0.03	0.02	0.02	0.03	0.02	0.02
Queue Length 95th (ft)	1	0	0	1	0	0	2	1	2	2	1	2
Control Delay (s)	7.8	0.0	0.0	7.8	0.0	0.0	12.6	13.3	10.1	12.6	13.3	10.1
Lane LOS	A			A			B	B	B	B	B	B
Approach Delay (s)	0.4			0.4			11.7			11.7		
Approach LOS							B			B		

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix H

2015 Build Level of Service Analyses

Level of Service Analysis	Pages
AM 2015 Build Condition - Signalized	16
PM 2015 Build Condition - Signalized	16
AM 2015 Build Condition - Unsignalized	13
PM 2015 Build Condition - Unsignalized	13

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3521		1681	1687	1583			
Flt Permitted	0.07	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	254	3539			3521		1681	1687	1583			
Volume (vph)	890	130	0	0	1100	40	940	10	120	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	937	137	0	0	1158	42	989	11	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	42	0	0	0
Lane Group Flow (vph)	937	137	0	0	1198	0	495	505	84	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	93.8	93.8			51.8		46.2	46.2	46.2			
Effective Green, g (s)	94.8	94.8			52.8		47.2	47.2	47.2			
Actuated g/C Ratio	0.63	0.63			0.35		0.31	0.31	0.31			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	966	2237			1239		529	531	498			
v/s Ratio Prot	c0.25	0.04			0.34							
v/s Ratio Perm	c0.37						0.29	0.30	0.05			
v/c Ratio	0.97	0.06			0.97		0.94	0.95	0.17			
Uniform Delay, d1	47.6	10.6			47.7		49.9	50.3	37.2			
Progression Factor	1.04	0.81			1.00		1.00	1.00	1.00			
Incremental Delay, d2	8.9	0.0			18.0		26.1	28.6	0.7			
Delay (s)	58.4	8.5			65.7		76.0	78.9	37.9			
Level of Service	E	A			E		E	E	D			
Approach Delay (s)		52.1			65.7			73.0			0.0	
Approach LOS		D			E			E			A	

Intersection Summary			
HCM Average Control Delay	63.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.4%	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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.87		1.00	0.89	
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	3539	1583	1770	3539	1583	1770	1622		1770	1650	
Flt Permitted	0.12	1.00	1.00	0.03	1.00	1.00	0.72	1.00		0.52	1.00	
Satd. Flow (perm)	220	3539	1583	61	3539	1583	1349	1622		974	1650	
Volume (vph)	30	2710	120	60	1600	70	60	10	60	40	10	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	32	2853	126	63	1684	74	75	12	75	50	12	38
RTOR Reduction (vph)	0	0	13	0	0	14	0	40	0	0	35	0
Lane Group Flow (vph)	32	2853	113	63	1684	60	75	47	0	50	15	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	122.7	119.9	119.9	125.5	121.3	121.3	10.9	10.9		10.9	10.9	
Effective Green, g (s)	124.7	120.9	120.9	127.5	122.3	122.3	11.9	11.9		11.9	11.9	
Actuated g/C Ratio	0.83	0.81	0.81	0.85	0.82	0.82	0.08	0.08		0.08	0.08	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	222	2852	1276	111	2885	1291	107	129		77	131	
v/s Ratio Prot	0.00	c0.81		c0.02	0.48			0.03			0.01	
v/s Ratio Perm	0.12		0.07	0.46		0.04	c0.06			0.05		
v/c Ratio	0.14	1.00	0.09	0.57	0.58	0.05	0.70	0.37		0.65	0.11	
Uniform Delay, d1	3.9	14.5	3.0	72.5	4.9	2.7	67.3	65.5		67.0	64.2	
Progression Factor	1.70	2.20	2.38	1.02	1.87	2.51	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	5.1	0.0	2.1	0.1	0.0	31.9	7.9		35.4	1.8	
Delay (s)	6.7	37.1	7.2	76.0	9.2	6.7	99.2	73.4		102.4	65.9	
Level of Service	A	D	A	E	A	A	F	E		F	E	
Approach Delay (s)		35.5			11.4			85.3			84.2	
Approach LOS		D			B			F			F	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.96	
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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1780	
Flt Permitted	0.05	1.00	1.00	0.05	1.00	1.00	0.13	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	94	3539	1583	99	3539	1583	240	1863	1583	341	1780	
Volume (vph)	210	2590	330	160	1590	160	290	290	80	190	260	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	2726	347	168	1674	168	322	322	89	211	289	122
RTOR Reduction (vph)	0	0	0	0	0	64	0	0	67	0	10	0
Lane Group Flow (vph)	221	2726	347	168	1674	104	322	322	22	211	401	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	93.0	82.0	150.0	80.0	74.0	74.0	45.0	30.0	30.0	39.0	27.0	
Effective Green, g (s)	94.0	83.0	150.0	82.0	75.0	75.0	47.0	31.0	31.0	41.0	28.0	
Actuated g/C Ratio	0.63	0.55	1.00	0.55	0.50	0.50	0.31	0.21	0.21	0.27	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	227	1958	1583	132	1770	792	238	385	327	217	332	
v/s Ratio Prot	0.10	c0.77		c0.06	0.47		c0.14	0.17		0.08	0.23	
v/s Ratio Perm	0.51		0.22	0.63		0.07	c0.28		0.01	0.18		
v/c Ratio	0.97	1.39	0.22	1.27	0.95	0.13	1.35	0.84	0.07	0.97	1.21	
Uniform Delay, d1	52.2	33.5	0.0	73.7	35.6	20.1	69.2	57.1	47.9	48.6	61.0	
Progression Factor	1.33	0.87	1.00	1.21	1.08	1.19	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	176.8	0.0	164.2	9.9	0.1	183.9	19.0	0.4	52.9	118.7	
Delay (s)	81.9	205.8	0.0	253.1	48.2	24.0	253.0	76.1	48.3	101.5	179.7	
Level of Service	F	F	A	F	D	C	F	E	D	F	F	
Approach Delay (s)		175.8			63.3			150.4			153.2	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	136.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	130.2%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1770	3509		1770	3536			1780	1583		1758	
Flt Permitted	0.10	1.00		0.03	1.00			0.76	1.00		0.43	
Satd. Flow (perm)	184	3509		61	3536			1420	1583		770	
Volume (vph)	10	3110	190	80	1710	10	140	10	120	10	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	11	3274	200	84	1800	11	165	12	141	12	12	10
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	36	0	9	0
Lane Group Flow (vph)	11	3471	0	84	1811	0	0	177	105	0	25	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	119.6	118.0		124.4	120.4			13.0	13.0		13.0	
Effective Green, g (s)	121.6	119.0		126.4	121.4			14.0	14.0		14.0	
Actuated g/C Ratio	0.81	0.79		0.84	0.81			0.09	0.09		0.09	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	177	2784		108	2862			133	148		72	
v/s Ratio Prot	0.00	c0.99		c0.03	0.51							
v/s Ratio Perm	0.05			0.62				c0.12	0.07		0.03	
v/c Ratio	0.06	1.25		0.78	0.63			1.33	0.71		0.35	
Uniform Delay, d1	5.0	15.5		21.5	5.6			68.0	66.0		63.7	
Progression Factor	1.14	0.97		0.77	1.89			1.00	1.00		1.00	
Incremental Delay, d2	0.0	111.4		3.2	0.0			191.3	24.8		12.7	
Delay (s)	5.8	126.4		19.7	10.6			259.3	90.8		76.4	
Level of Service	A	F		B	B			F	F		E	
Approach Delay (s)		126.0			11.0			184.6			76.4	
Approach LOS		F			B			F			E	

Intersection Summary			
HCM Average Control Delay	91.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.6%	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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.87	
Flt Protected	0.95	1.00			1.00					0.95	0.99	
Satd. Flow (prot)	1770	3539			5051					1681	1530	
Flt Permitted	0.09	1.00			1.00					0.76	0.96	
Satd. Flow (perm)	174	3539			5051					1340	1478	
Volume (vph)	60	3450	0	0	1800	80	0	0	0	30	0	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	63	3632	0	0	1800	84	0	0	0	38	0	38
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	36	0
Lane Group Flow (vph)	63	3632	0	0	1881	0	0	0	0	32	8	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	132.1	132.1			122.0					7.9	7.9	
Effective Green, g (s)	133.1	133.1			123.0					8.9	8.9	
Actuated g/C Ratio	0.89	0.89			0.82					0.06	0.06	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	219	3140			4142					80	88	
v/s Ratio Prot	0.01	c1.03			0.37							
v/s Ratio Perm	0.24									c0.02	0.01	
v/c Ratio	0.29	1.16			0.45					0.40	0.09	
Uniform Delay, d1	2.4	8.5			3.9					68.0	66.7	
Progression Factor	0.87	1.17			1.55					1.00	1.00	
Incremental Delay, d2	0.1	70.9			0.3					3.3	0.5	
Delay (s)	2.1	80.8			6.3					71.2	67.2	
Level of Service	A	F			A					E	E	
Approach Delay (s)		79.4			6.3			0.0			68.9	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	54.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.4%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	3539	1583	3433	3539	1583	3433	3539	2787	1770	3274	
Flt Permitted	0.41	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	760	3539	1583	3433	3539	1583	3433	3539	2787	1770	3274	
Volume (vph)	10	1430	130	820	610	50	110	60	1960	40	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	11	1505	137	863	642	53	116	63	2063	50	12	12
RTOR Reduction (vph)	0	0	92	0	0	27	0	0	45	0	11	0
Lane Group Flow (vph)	11	1505	45	863	642	26	116	63	2018	50	13	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	5	2		1	6		8	8	8 1	4	4	
Permitted Phases	2		2			6						
Actuated Green, G (s)	49.6	48.0	48.0	26.0	72.4	72.4	48.0	48.0	79.0	8.0	8.0	
Effective Green, g (s)	51.6	49.0	49.0	27.0	73.4	73.4	49.0	49.0	80.0	9.0	9.0	
Actuated g/C Ratio	0.34	0.33	0.33	0.18	0.49	0.49	0.33	0.33	0.53	0.06	0.06	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	1156	517	618	1732	775	1121	1156	1486	106	196	
v/s Ratio Prot	0.00	c0.43		c0.25	0.18		0.03	0.02	c0.72	c0.03	0.00	
v/s Ratio Perm	0.01		0.03			0.02						
v/c Ratio	0.04	1.30	0.09	1.40	0.37	0.03	0.10	0.05	1.36	0.47	0.06	
Uniform Delay, d1	32.5	50.5	35.0	61.5	23.9	19.9	35.2	34.6	35.0	68.2	66.5	
Progression Factor	1.08	1.03	1.60	0.87	0.85	1.83	0.88	0.88	0.76	1.00	1.00	
Incremental Delay, d2	0.0	141.1	0.3	187.3	0.1	0.0	0.1	0.0	163.6	14.3	0.6	
Delay (s)	35.0	193.0	56.3	240.7	20.4	36.3	30.9	30.6	190.2	82.5	67.2	
Level of Service	D	F	E	F	C	D	C	C	F	F	E	
Approach Delay (s)		180.6			142.9			177.5			77.5	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	167.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.11	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	207	3539	1770	1583
Volume (vph)	1260	50	120	710	40	210
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.85	0.85
Adj. Flow (vph)	1326	53	133	789	47	247
RTOR Reduction (vph)	0	24	0	0	0	21
Lane Group Flow (vph)	1326	29	133	789	47	226
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	40.6	40.6	54.0	54.0	11.0	19.4
Effective Green, g (s)	41.6	41.6	55.0	55.0	12.0	21.4
Actuated g/C Ratio	0.55	0.55	0.73	0.73	0.16	0.29
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1963	878	348	2595	283	536
v/s Ratio Prot	c0.37		0.05	0.22	0.03	c0.05
v/s Ratio Perm		0.02	0.23			0.09
v/c Ratio	0.68	0.03	0.38	0.30	0.17	0.42
Uniform Delay, d1	11.9	7.6	7.4	3.4	27.2	21.8
Progression Factor	1.01	2.11	3.53	0.73	1.06	0.91
Incremental Delay, d2	0.7	0.0	0.7	0.1	1.3	0.5
Delay (s)	12.7	16.0	26.9	2.6	30.1	20.4
Level of Service	B	B	C	A	C	C
Approach Delay (s)	12.8			6.1	21.9	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	248	3539	1770	1583
Volume (vph)	1000	80	70	600	60	420
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.85	0.85
Adj. Flow (vph)	1053	84	78	667	71	494
RTOR Reduction (vph)	0	55	0	0	0	14
Lane Group Flow (vph)	1053	29	78	667	71	480
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	25.1	25.1	48.3	48.3	16.7	34.9
Effective Green, g (s)	26.1	26.1	49.3	49.3	17.7	36.9
Actuated g/C Ratio	0.35	0.35	0.66	0.66	0.24	0.49
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1232	551	553	2326	418	863
v/s Ratio Prot	c0.30		0.04	0.19	0.04	c0.14
v/s Ratio Perm		0.02	0.06			0.16
v/c Ratio	0.85	0.05	0.14	0.29	0.17	0.56
Uniform Delay, d1	22.7	16.2	8.1	5.4	22.8	13.3
Progression Factor	0.71	0.42	2.03	1.27	1.02	1.05
Incremental Delay, d2	4.6	0.0	0.1	0.1	0.9	0.8
Delay (s)	20.7	6.9	16.5	7.0	24.1	14.8
Level of Service	C	A	B	A	C	B
Approach Delay (s)	19.7			8.0	16.0	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.12	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	227	3539	1770	1583
Volume (vph)	1020	110	90	540	110	310
Peak-hour factor, PHF	0.95	0.95	0.90	0.90	0.80	0.80
Adj. Flow (vph)	1074	116	100	600	138	388
RTOR Reduction (vph)	0	71	0	0	0	18
Lane Group Flow (vph)	1074	45	100	600	138	370
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	27.8	27.8	42.8	42.8	22.2	32.2
Effective Green, g (s)	28.8	28.8	43.8	43.8	23.2	34.2
Actuated g/C Ratio	0.38	0.38	0.58	0.58	0.31	0.46
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1359	608	359	2067	548	806
v/s Ratio Prot	c0.30		0.04	0.17	0.08	c0.07
v/s Ratio Perm		0.03	0.12			0.17
v/c Ratio	0.79	0.07	0.28	0.29	0.25	0.46
Uniform Delay, d1	20.4	14.6	10.4	7.8	19.4	14.0
Progression Factor	1.00	1.00	1.33	0.65	1.00	1.00
Incremental Delay, d2	3.2	0.1	0.4	0.1	1.1	0.4
Delay (s)	23.6	14.7	14.2	5.2	20.5	14.5
Level of Service	C	B	B	A	C	B
Approach Delay (s)	22.8			6.5	16.0	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.1%	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												
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	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1772		1770	3539	1583	1770	3539	1583
Flt Permitted	0.46	1.00	1.00	0.75	1.00		0.13	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	864	1863	1583	1398	1772		240	3539	1583	275	3539	1583
Volume (vph)	540	10	370	10	20	10	700	1460	20	20	630	130
Peak-hour factor, PHF	0.90	0.90	0.90	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	11	411	12	25	12	737	1537	21	21	663	137
RTOR Reduction (vph)	0	0	266	0	11	0	0	0	6	0	0	103
Lane Group Flow (vph)	600	11	145	12	26	0	737	1537	15	21	663	34
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	51.9	51.9	51.9	5.9	5.9		88.1	80.7	80.7	28.5	26.1	26.1
Effective Green, g (s)	52.9	52.9	52.9	6.9	6.9		89.1	81.7	81.7	30.5	27.1	27.1
Actuated g/C Ratio	0.35	0.35	0.35	0.05	0.05		0.59	0.54	0.54	0.20	0.18	0.18
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	558	657	558	64	82		734	1928	862	90	639	286
v/s Ratio Prot	c0.30	0.01			0.01		c0.39	0.43		0.01	0.19	
v/s Ratio Perm	c0.08		0.09	0.01			c0.21		0.01	0.04		0.02
v/c Ratio	1.08	0.02	0.26	0.19	0.31		1.00	0.80	0.02	0.23	1.04	0.12
Uniform Delay, d1	46.3	31.6	34.6	68.9	69.3		42.4	27.5	15.7	72.5	61.5	51.4
Progression Factor	1.07	0.99	1.82	1.00	1.00		0.86	0.84	0.89	0.22	0.20	0.05
Incremental Delay, d2	58.7	0.0	0.2	1.4	2.2		27.1	2.2	0.0	0.1	22.2	0.1
Delay (s)	108.0	31.2	63.2	70.3	71.4		63.4	25.2	14.0	15.8	34.6	2.7
Level of Service	F	C	E	E	E		E	C	B	B	C	A
Approach Delay (s)		89.2			71.1			37.4			28.8	
Approach LOS		F			E			D			C	

Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.8%	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												
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	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1592		1770	1601		1770	3539	1583	1770	3539	1583
Flt Permitted	0.23	1.00		0.21	1.00		0.29	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)	823	1592		382	1601		531	3539	1583	81	3539	1583
Volume (vph)	210	10	310	20	10	140	190	1890	10	20	780	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	221	11	326	25	12	175	200	1989	11	21	821	147
RTOR Reduction (vph)	0	210	0	0	54	0	0	0	3	0	0	44
Lane Group Flow (vph)	221	127	0	25	133	0	200	1989	8	21	821	103
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	30.1	23.1		20.9	18.5		109.5	101.4	101.4	98.9	95.8	102.8
Effective Green, g (s)	31.5	24.1		22.9	19.5		110.5	102.4	102.4	100.9	96.8	104.8
Actuated g/C Ratio	0.21	0.16		0.15	0.13		0.74	0.68	0.68	0.67	0.65	0.70
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	256		90	208		471	2416	1081	101	2284	1148
v/s Ratio Prot	c0.04	0.08		0.01	0.08		c0.03	c0.56		0.01	0.23	0.00
v/s Ratio Perm	c0.11			0.04			0.29		0.01	0.13		0.06
v/c Ratio	0.71	0.50		0.28	0.64		0.42	0.82	0.01	0.21	0.36	0.09
Uniform Delay, d1	51.1	57.4		72.7	61.9		7.2	17.2	7.6	20.1	12.3	7.3
Progression Factor	0.97	1.20		1.00	1.00		0.40	0.94	0.31	1.67	0.44	0.26
Incremental Delay, d2	7.1	1.5		1.7	6.3		0.5	2.6	0.0	0.6	0.3	0.0
Delay (s)	56.6	70.2		74.3	68.2		3.4	18.8	2.4	34.1	5.7	1.9
Level of Service	E	E		E	E		A	B	A	C	A	A
Approach Delay (s)		64.8			69.0			17.3			5.7	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1674		1770	1617		1770	3539	1583	1770	3539	1583
Flt Permitted	0.52	1.00		0.73	1.00		0.21	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	969	1674		1365	1617		399	3539	1583	138	3539	1583
Volume (vph)	30	10	20	70	10	70	10	1840	20	20	1130	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	25	88	12	88	11	1937	21	21	1189	11
RTOR Reduction (vph)	0	22	0	0	79	0	0	0	5	0	0	2
Lane Group Flow (vph)	38	15	0	88	21	0	11	1937	16	21	1189	9
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	14.7	14.7		14.7	14.7		119.2	116.8	116.8	121.4	117.9	117.9
Effective Green, g (s)	15.7	15.7		15.7	15.7		121.2	117.8	117.8	123.4	118.9	118.9
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.81	0.79	0.79	0.82	0.79	0.79
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	101	175		143	169		353	2779	1243	162	2805	1255
v/s Ratio Prot		0.01			0.01		0.00	c0.55		c0.00	0.34	
v/s Ratio Perm	0.04			c0.06			0.02		0.01	0.10		0.01
v/c Ratio	0.38	0.08		0.62	0.13		0.03	0.70	0.01	0.13	0.42	0.01
Uniform Delay, d1	62.6	60.7		64.3	60.9		3.2	7.6	3.5	8.1	4.9	3.2
Progression Factor	1.00	1.00		1.00	1.00		1.64	2.52	2.54	1.59	0.81	0.68
Incremental Delay, d2	2.3	0.2		7.6	0.3		0.0	1.0	0.0	0.3	0.4	0.0
Delay (s)	64.9	60.9		71.9	61.3		5.3	20.3	8.9	13.2	4.4	2.2
Level of Service	E	E		E	E		A	C	A	B	A	A
Approach Delay (s)		62.9			66.2			20.1			4.5	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1629		1770	1637		1770	3539	1583	1770	3539	1583
Flt Permitted	0.72	1.00		0.39	1.00		0.14	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1335	1629		731	1637		265	3539	1583	116	3539	1583
Volume (vph)	40	10	50	130	10	40	50	1800	30	10	1310	20
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	50	12	62	162	12	50	53	1895	32	11	1379	21
RTOR Reduction (vph)	0	58	0	0	44	0	0	0	9	0	0	6
Lane Group Flow (vph)	50	16	0	162	18	0	53	1895	23	11	1379	15
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	12.4	8.5		27.3	18.4		109.9	105.4	105.4	105.5	103.2	103.2
Effective Green, g (s)	14.4	9.5		28.3	19.4		111.9	106.4	106.4	107.5	104.2	104.2
Actuated g/C Ratio	0.10	0.06		0.19	0.13		0.75	0.71	0.71	0.72	0.69	0.69
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	142	103		240	212		253	2510	1123	120	2458	1100
v/s Ratio Prot	0.01	0.01		c0.07	0.01		c0.01	c0.54		0.00	0.39	
v/s Ratio Perm	0.02			c0.06			0.15		0.01	0.06		0.01
v/c Ratio	0.35	0.15		0.68	0.09		0.21	0.75	0.02	0.09	0.56	0.01
Uniform Delay, d1	63.1	66.5		54.5	57.5		8.3	13.6	6.4	14.1	11.5	7.1
Progression Factor	1.00	1.00		1.00	1.00		0.21	0.40	0.08	0.43	0.37	0.04
Incremental Delay, d2	1.5	0.7		7.3	0.2		0.2	1.1	0.0	0.3	0.9	0.0
Delay (s)	64.6	67.2		61.8	57.7		1.9	6.5	0.5	6.4	5.2	0.3
Level of Service	E	E		E	E		A	A	A	A	A	A
Approach Delay (s)		66.1			60.6			6.2			5.1	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.3%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1613		1770	3539	1583	1770	3539	1583
Flt Permitted	0.62	1.00		0.61	1.00		0.11	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1152	1650		1127	1613		210	3539	1583	88	3539	1583
Volume (vph)	30	10	30	300	20	170	30	1690	90	130	1330	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	38	353	24	200	32	1779	95	137	1400	11
RTOR Reduction (vph)	0	33	0	0	78	0	0	0	44	0	0	4
Lane Group Flow (vph)	38	17	0	353	146	0	32	1779	51	137	1400	7
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	23.0	19.3		45.7	37.0		82.9	79.7	79.7	94.3	86.1	86.1
Effective Green, g (s)	25.0	20.3		46.7	38.0		84.9	80.7	80.7	95.3	87.1	87.1
Actuated g/C Ratio	0.17	0.14		0.31	0.25		0.57	0.54	0.54	0.64	0.58	0.58
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	211	223		447	409		163	1904	852	175	2055	919
v/s Ratio Prot	0.01	0.01		c0.12	0.09		0.01	c0.50		c0.06	0.40	
v/s Ratio Perm	0.02			c0.13			0.11		0.03	0.44		0.00
v/c Ratio	0.18	0.08		0.79	0.36		0.20	0.93	0.06	0.78	0.68	0.01
Uniform Delay, d1	53.2	56.7		45.1	46.0		18.4	32.2	16.5	45.2	21.8	13.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.33	0.79	1.12
Incremental Delay, d2	0.4	0.7		9.0	2.4		0.6	9.1	0.0	17.3	0.8	0.0
Delay (s)	53.6	57.3		54.1	48.4		19.0	41.3	16.6	77.3	18.0	14.9
Level of Service	D	E		D	D		B	D	B	E	B	B
Approach Delay (s)		55.7			51.9			39.7			23.2	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.2%	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												
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	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3467		1770	3470		1770	1863	1583	1770	1863	1583
Flt Permitted	0.33	1.00		0.33	1.00		0.75	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	616	3467		623	3470		1397	1863	1583	1398	1863	1583
Volume (vph)	80	510	80	250	670	100	40	10	340	40	10	30
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	89	567	89	278	744	111	44	11	378	50	12	38
RTOR Reduction (vph)	0	10	0	0	9	0	0	0	60	0	0	35
Lane Group Flow (vph)	89	646	0	278	846	0	44	11	318	50	12	3
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases	1	6		5	2			4	5		8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	46.5	41.2		59.4	49.1		5.6	5.6	18.8	5.6	5.6	5.6
Effective Green, g (s)	48.5	42.2		60.4	50.1		6.6	6.6	20.8	6.6	6.6	6.6
Actuated g/C Ratio	0.65	0.56		0.81	0.67		0.09	0.09	0.28	0.09	0.09	0.09
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	495	1951		719	2318		123	164	523	123	164	139
v/s Ratio Prot	0.02	0.19		0.07	0.24			0.01	c0.12		0.01	
v/s Ratio Perm	0.10			c0.24			0.03		0.09	0.04		0.00
v/c Ratio	0.18	0.33		0.39	0.37		0.36	0.07	0.61	0.41	0.07	0.02
Uniform Delay, d1	4.9	8.8		2.3	5.5		32.2	31.4	23.6	32.3	31.4	31.3
Progression Factor	1.00	1.00		2.45	1.04		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.5		0.2	0.3		1.8	0.2	2.0	2.2	0.2	0.1
Delay (s)	5.1	9.3		5.9	6.0		34.0	31.5	25.6	34.5	31.6	31.3
Level of Service	A	A		A	A		C	C	C	C	C	C
Approach Delay (s)		8.8			6.0			26.6			33.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.43	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	792	3539	3539	1583	1770	1583
Volume (vph)	40	250	200	130	270	80
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.85	0.85
Adj. Flow (vph)	44	278	222	144	318	94
RTOR Reduction (vph)	0	0	0	34	0	36
Lane Group Flow (vph)	44	278	222	110	318	58
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6
Actuated Green, G (s)	19.5	19.5	9.6	55.1	45.5	45.5
Effective Green, g (s)	20.5	20.5	10.6	57.1	46.5	46.5
Actuated g/C Ratio	0.27	0.27	0.14	0.76	0.62	0.62
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	293	967	500	1290	1097	981
v/s Ratio Prot	0.01	c0.08	c0.06	0.05	c0.18	
v/s Ratio Perm	0.03			0.02		0.04
v/c Ratio	0.15	0.29	0.44	0.08	0.29	0.06
Uniform Delay, d1	20.4	21.5	29.5	2.3	6.6	5.6
Progression Factor	1.00	1.00	1.02	0.91	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.6	0.0	0.7	0.1
Delay (s)	20.7	21.7	30.6	2.1	7.3	5.7
Level of Service	C	C	C	A	A	A
Approach Delay (s)		21.5	19.4		6.9	
Approach LOS		C	B		A	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	33.8%	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												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3529		1681	1686	1583			
Flt Permitted	0.12	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	438	3539			3529		1681	1686	1583			
Volume (vph)	210	430	0	0	520	10	2010	10	420	0	0	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	233	478	0	0	578	11	2116	11	442	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	32	0	0	0
Lane Group Flow (vph)	233	478	0	0	588	0	1058	1069	410	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	39.0	39.0			28.0		101.0	101.0	101.0			
Effective Green, g (s)	40.0	40.0			29.0		102.0	102.0	102.0			
Actuated g/C Ratio	0.27	0.27			0.19		0.68	0.68	0.68			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	257	944			682		1143	1146	1076			
v/s Ratio Prot	c0.04	0.14			0.17							
v/s Ratio Perm	c0.20						0.63	0.63	0.26			
v/c Ratio	0.91	0.51			0.86		0.93	0.93	0.38			
Uniform Delay, d1	48.4	46.6			58.6		20.7	21.0	10.4			
Progression Factor	0.98	0.99			1.00		1.00	1.00	1.00			
Incremental Delay, d2	25.7	1.4			13.6		13.9	14.7	1.0			
Delay (s)	73.4	47.6			72.1		34.6	35.7	11.4			
Level of Service	E	D			E		C	D	B			
Approach Delay (s)		56.0			72.1			31.1			0.0	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.86		1.00	0.88	
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	3539	1583	1770	3539	1583	1770	1605		1770	1637	
Flt Permitted	0.04	1.00	1.00	0.08	1.00	1.00	0.69	1.00		0.40	1.00	
Satd. Flow (perm)	68	3539	1583	152	3539	1583	1293	1605		739	1637	
Volume (vph)	10	1680	170	100	3020	40	180	10	120	50	10	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	11	1768	179	105	3179	42	212	12	141	62	12	50
RTOR Reduction (vph)	0	0	31	0	0	6	0	66	0	0	37	0
Lane Group Flow (vph)	11	1768	148	105	3179	36	212	87	0	62	25	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	110.0	108.4	108.4	120.8	114.2	114.2	19.2	19.2		19.2	19.2	
Effective Green, g (s)	112.0	109.4	109.4	121.8	115.2	115.2	20.2	20.2		20.2	20.2	
Actuated g/C Ratio	0.75	0.73	0.73	0.81	0.77	0.77	0.13	0.13		0.13	0.13	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	80	2581	1155	214	2718	1216	174	216		100	220	
v/s Ratio Prot	0.00	0.50		c0.03	c0.90			0.05			0.02	
v/s Ratio Perm	0.10		0.09	0.37		0.02	c0.16			0.08		
v/c Ratio	0.14	0.69	0.13	0.49	1.17	0.03	1.22	0.40		0.62	0.11	
Uniform Delay, d1	72.9	11.0	6.1	13.8	17.4	4.1	64.9	59.4		61.3	57.0	
Progression Factor	1.65	1.55	2.90	1.23	1.34	1.04	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.4	0.0	1.2	79.2	0.0	139.1	5.5		25.6	1.0	
Delay (s)	120.9	17.4	17.6	18.2	102.5	4.3	204.0	64.9		86.8	58.1	
Level of Service	F	B	B	B	F	A	F	E		F	E	
Approach Delay (s)		18.0			98.6			145.7			72.4	
Approach LOS		B			F			F			E	

Intersection Summary			
HCM Average Control Delay	73.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.8%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1751	
Flt Permitted	0.06	1.00	1.00	0.05	1.00	1.00	0.13	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	103	3539	1583	98	3539	1583	248	1863	1583	1154	1751	
Volume (vph)	130	1550	370	170	2980	120	550	200	140	160	210	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1632	389	179	3137	126	611	222	156	178	233	156
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	87	0	16	0
Lane Group Flow (vph)	137	1632	389	179	3137	101	611	222	69	178	373	0
Turn Type	pm+pt		Free	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8	2		2	6		
Actuated Green, G (s)	75.0	71.0	150.0	86.0	77.0	77.0	54.0	37.2	37.2	36.8	25.0	
Effective Green, g (s)	77.0	72.0	150.0	87.0	78.0	78.0	55.0	38.2	38.2	38.8	26.0	
Actuated g/C Ratio	0.51	0.48	1.00	0.58	0.52	0.52	0.37	0.25	0.25	0.26	0.17	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	108	1699	1583	179	1840	823	345	474	403	351	304	
v/s Ratio Prot	0.04	0.46		c0.07	c0.89		c0.30	0.12		0.04	0.21	
v/s Ratio Perm	0.60		0.25	0.51		0.06	c0.35		0.04	0.09		
v/c Ratio	1.27	0.96	0.25	1.00	1.70	0.12	1.77	0.47	0.17	0.51	1.23	
Uniform Delay, d1	74.6	37.6	0.0	49.8	36.0	18.5	64.7	47.3	43.6	45.8	62.0	
Progression Factor	1.47	0.99	1.00	1.18	0.99	1.28	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	127.5	2.0	0.0	20.2	317.4	0.0	358.6	3.3	0.9	1.2	128.1	
Delay (s)	237.5	39.3	0.0	78.7	353.0	23.6	423.2	50.6	44.5	47.0	190.1	
Level of Service	F	D	A	E	F	C	F	D	D	D	F	
Approach Delay (s)		44.8			326.7			279.9			145.2	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	220.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	153.0%	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												
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	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	3498		1770	3537			1777	1583		1727	
Flt Permitted	0.04	1.00		0.04	1.00			0.68	1.00		0.43	
Satd. Flow (perm)	75	3498		75	3537			1274	1583		766	
Volume (vph)	30	2120	180	100	3080	10	310	10	80	20	10	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	32	2232	189	105	3242	11	365	12	94	25	12	25
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	32	0	16	0
Lane Group Flow (vph)	32	2417	0	105	3253	0	0	377	62	0	46	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	101.2	98.0		102.8	98.8			33.0	33.0		33.0	
Effective Green, g (s)	103.2	99.0		104.8	99.8			34.0	34.0		34.0	
Actuated g/C Ratio	0.69	0.66		0.70	0.67			0.23	0.23		0.23	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	99	2309		109	2353			289	359		174	
v/s Ratio Prot	0.01	0.69		c0.03	c0.92							
v/s Ratio Perm	0.21			0.64				c0.30	0.04		0.06	
v/c Ratio	0.32	1.05		0.96	1.38			1.30	0.17		0.26	
Uniform Delay, d1	72.2	25.5		74.5	25.1			58.0	46.7		47.7	
Progression Factor	1.18	1.04		1.22	0.93			1.00	1.00		1.00	
Incremental Delay, d2	0.8	26.7		17.7	172.4			159.9	1.0		3.7	
Delay (s)	86.1	53.3		108.8	195.8			217.9	47.7		51.3	
Level of Service	F	D		F	F			F	D		D	
Approach Delay (s)		53.7			193.1			183.9			51.3	
Approach LOS		D			F			F			D	

Intersection Summary			
HCM Average Control Delay	137.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.5%	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												
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	
Lane Util. Factor	1.00	0.95			0.91					0.95	0.95	
Frt	1.00	1.00			0.99					1.00	0.90	
Flt Protected	0.95	1.00			1.00					0.95	0.98	
Satd. Flow (prot)	1770	3539			5043					1681	1569	
Flt Permitted	0.04	1.00			1.00					0.76	0.88	
Satd. Flow (perm)	70	3539			5043					1340	1412	
Volume (vph)	180	2380	0	0	3090	180	0	0	0	250	0	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	189	2505	0	0	3253	189	0	0	0	294	0	176
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	45	0
Lane Group Flow (vph)	189	2505	0	0	3438	0	0	0	0	200	225	0
Turn Type	pm+pt		Perm	pm+pt			Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		
Actuated Green, G (s)	118.0	118.0			102.0					22.0	22.0	
Effective Green, g (s)	119.0	119.0			103.0					23.0	23.0	
Actuated g/C Ratio	0.79	0.79			0.69					0.15	0.15	
Clearance Time (s)	5.0	5.0			5.0					5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	192	2808			3463					205	217	
v/s Ratio Prot	0.08	c0.71			0.68							
v/s Ratio Perm	c0.71									0.15	c0.16	
v/c Ratio	0.98	0.89			0.99					0.98	1.04	
Uniform Delay, d1	71.1	11.0			23.1					63.2	63.5	
Progression Factor	0.99	0.77			1.18					1.00	1.00	
Incremental Delay, d2	36.5	2.0			3.2					55.3	71.2	
Delay (s)	106.7	10.4			30.6					118.6	134.7	
Level of Service	F	B			C					F	F	
Approach Delay (s)		17.2			30.6			0.0			127.8	
Approach LOS		B			C			A			F	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	3539	1583	3433	3539	1583	3433	3539	2787	1770	3361	
Flt Permitted	0.12	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	226	3539	1583	3433	3539	1583	3433	3539	2787	1770	3361	
Volume (vph)	30	920	180	1950	1370	20	330	20	1380	70	60	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	32	968	189	2053	1442	21	347	21	1453	88	75	38
RTOR Reduction (vph)	0	0	147	0	0	6	0	0	22	0	36	0
Lane Group Flow (vph)	32	968	42	2053	1442	15	347	21	1431	88	77	0
Turn Type	pm+pt		Perm	Prot		Perm	Split		pt+ov	Split		
Protected Phases	5	2		1	6		8	8	8 1	4	4	
Permitted Phases	2		2			6						
Actuated Green, G (s)	34.4	32.0	32.0	74.0	103.6	103.6	16.0	16.0	90.0	8.0	8.0	
Effective Green, g (s)	36.4	33.0	33.0	75.0	104.6	104.6	17.0	17.0	92.0	9.0	9.0	
Actuated g/C Ratio	0.24	0.22	0.22	0.50	0.70	0.70	0.11	0.11	0.61	0.06	0.06	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	90	779	348	1717	2468	1104	389	401	1709	106	202	
v/s Ratio Prot	0.01	c0.27		c0.60	0.41		c0.10	0.01	0.51	c0.05	0.02	
v/s Ratio Perm	0.08		0.03			0.01						
v/c Ratio	0.36	1.24	0.12	1.20	0.58	0.01	0.89	0.05	0.84	0.83	0.38	
Uniform Delay, d1	46.7	58.5	46.9	37.5	11.6	6.9	65.6	59.3	23.0	69.7	67.8	
Progression Factor	1.40	1.17	2.57	0.62	0.27	0.13	1.00	0.98	1.28	1.00	1.00	
Incremental Delay, d2	2.0	118.4	0.6	89.9	0.1	0.0	14.6	0.1	2.6	50.1	5.4	
Delay (s)	67.6	187.0	121.1	113.2	3.2	0.9	79.9	58.1	32.1	119.9	73.2	
Level of Service	E	F	F	F	A	A	E	E	C	F	E	
Approach Delay (s)		173.3			67.4			41.5			93.7	
Approach LOS		F			E			D			F	

Intersection Summary			
HCM Average Control Delay	79.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.15	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	288	3539	1770	1583
Volume (vph)	990	60	240	1770	80	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.85	0.85
Adj. Flow (vph)	1042	63	253	1863	94	176
RTOR Reduction (vph)	0	33	0	0	0	35
Lane Group Flow (vph)	1042	30	253	1863	94	141
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	34.5	34.5	49.7	49.7	15.3	25.5
Effective Green, g (s)	35.5	35.5	50.7	50.7	16.3	27.5
Actuated g/C Ratio	0.47	0.47	0.68	0.68	0.22	0.37
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1675	749	416	2392	385	665
v/s Ratio Prot	0.29		0.09	c0.53	c0.05	0.03
v/s Ratio Perm		0.02	0.32			0.06
v/c Ratio	0.62	0.04	0.61	0.78	0.24	0.21
Uniform Delay, d1	14.7	10.6	8.5	8.3	24.3	16.3
Progression Factor	0.66	1.57	1.55	1.04	1.07	1.01
Incremental Delay, d2	0.7	0.0	2.1	1.4	1.5	0.2
Delay (s)	10.4	16.7	15.3	10.0	27.4	16.6
Level of Service	B	B	B	B	C	B
Approach Delay (s)	10.7			10.7	20.4	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.22	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	405	3539	1770	1583
Volume (vph)	740	120	360	1260	140	200
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.85	0.85
Adj. Flow (vph)	822	133	379	1326	165	235
RTOR Reduction (vph)	0	75	0	0	0	23
Lane Group Flow (vph)	822	58	379	1326	165	212
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	31.7	31.7	50.2	50.2	14.8	28.3
Effective Green, g (s)	32.7	32.7	51.2	51.2	15.8	30.3
Actuated g/C Ratio	0.44	0.44	0.68	0.68	0.21	0.40
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1543	690	540	2416	373	724
v/s Ratio Prot	0.23		c0.14	0.37	c0.09	0.06
v/s Ratio Perm		0.04	c0.34			0.08
v/c Ratio	0.53	0.08	0.70	0.55	0.44	0.29
Uniform Delay, d1	15.5	12.4	7.8	6.0	25.8	15.1
Progression Factor	0.53	0.25	1.82	0.63	0.93	1.13
Incremental Delay, d2	0.3	0.0	2.7	0.2	3.7	0.2
Delay (s)	8.6	3.1	16.9	4.0	27.7	17.3
Level of Service	A	A	B	A	C	B
Approach Delay (s)	7.8			6.8	21.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	245	3539	1770	1583
Volume (vph)	850	200	220	1040	210	230
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.85	0.85
Adj. Flow (vph)	944	222	232	1095	247	271
RTOR Reduction (vph)	0	144	0	0	0	21
Lane Group Flow (vph)	944	78	232	1095	247	250
Turn Type		Perm	pm+pt			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4	8			2
Actuated Green, G (s)	25.4	25.4	40.3	40.3	24.7	34.6
Effective Green, g (s)	26.4	26.4	41.3	41.3	25.7	36.6
Actuated g/C Ratio	0.35	0.35	0.55	0.55	0.34	0.49
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1246	557	357	1949	607	857
v/s Ratio Prot	c0.27		c0.09	0.31	c0.14	0.04
v/s Ratio Perm		0.05	0.26			0.12
v/c Ratio	0.76	0.14	0.65	0.56	0.41	0.29
Uniform Delay, d1	21.5	16.6	12.3	11.0	18.8	11.5
Progression Factor	1.00	1.00	1.15	0.70	1.00	1.00
Incremental Delay, d2	2.7	0.1	3.5	0.3	2.0	0.2
Delay (s)	24.2	16.7	17.7	8.0	20.8	11.7
Level of Service	C	B	B	A	C	B
Approach Delay (s)	22.7			9.7	16.0	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	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												
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	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1723		1770	3539	1583	1770	3539	1583
Flt Permitted	0.31	1.00	1.00	0.72	1.00		0.09	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	573	1863	1583	1346	1723		163	3539	1583	163	3539	1583
Volume (vph)	660	50	700	60	40	40	600	1020	10	20	1470	440
Peak-hour factor, PHF	0.95	0.95	0.95	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	695	53	737	75	50	50	632	1074	11	21	1547	463
RTOR Reduction (vph)	0	0	299	0	24	0	0	0	5	0	0	154
Lane Group Flow (vph)	695	53	438	75	76	0	632	1074	6	21	1547	309
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	52.0	52.0	52.0	8.0	8.0		80.6	80.6	80.6	48.0	48.0	48.0
Effective Green, g (s)	53.0	53.0	53.0	9.0	9.0		81.6	81.6	81.6	49.0	49.0	49.0
Actuated g/C Ratio	0.35	0.35	0.35	0.06	0.06		0.54	0.54	0.54	0.33	0.33	0.33
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	522	658	559	81	103		474	1925	861	90	1156	517
v/s Ratio Prot	c0.36	0.03			0.04		c0.32	0.30		0.01	c0.44	
v/s Ratio Perm	c0.12		0.28	0.06			0.40		0.00	0.07		0.20
v/c Ratio	1.33	0.08	0.78	0.93	0.73		1.33	0.56	0.01	0.23	1.34	0.60
Uniform Delay, d1	44.9	32.3	43.4	70.2	69.3		53.6	22.4	15.7	37.8	50.5	42.3
Progression Factor	0.88	0.83	1.00	1.00	1.00		1.04	1.06	0.78	0.26	0.35	0.24
Incremental Delay, d2	158.1	0.0	4.9	74.7	23.4		162.8	1.1	0.0	0.1	152.8	0.5
Delay (s)	197.9	26.9	48.3	144.9	92.7		218.7	24.7	12.2	10.1	170.5	10.6
Level of Service	F	C	D	F	F		F	C	B	B	F	B
Approach Delay (s)		117.5			115.1			96.0			132.4	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	116.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	127.1%	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												
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	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1593		1770	1629		1770	3539	1583	1770	3539	1583
Flt Permitted	0.51	1.00		0.29	1.00		0.05	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	1829	1593		536	1629		88	3539	1583	369	3539	1583
Volume (vph)	80	10	270	10	10	50	380	1300	20	110	1740	180
Peak-hour factor, PHF	0.85	0.85	0.85	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	94	12	318	12	12	62	400	1368	21	116	1832	189
RTOR Reduction (vph)	0	264	0	0	56	0	0	0	6	0	0	54
Lane Group Flow (vph)	94	66	0	12	18	0	400	1368	15	116	1832	135
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	20.5	15.9		14.5	12.9		117.5	106.5	106.5	86.1	80.1	84.7
Effective Green, g (s)	22.5	16.9		16.5	13.9		118.5	107.5	107.5	88.1	81.1	86.7
Actuated g/C Ratio	0.15	0.11		0.11	0.09		0.79	0.72	0.72	0.59	0.54	0.58
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	334	179		80	151		444	2536	1134	282	1913	957
v/s Ratio Prot	c0.01	c0.04		0.00	0.01		c0.20	0.39		0.02	c0.52	0.01
v/s Ratio Perm	0.03			0.01			0.51		0.01	0.22		0.08
v/c Ratio	0.28	0.37		0.15	0.12		0.90	0.54	0.01	0.41	0.96	0.14
Uniform Delay, d1	55.8	61.6		72.9	62.4		50.4	9.8	6.1	13.7	32.8	14.5
Progression Factor	0.94	1.57		1.00	1.00		0.51	2.30	2.32	0.43	0.26	0.04
Incremental Delay, d2	0.5	1.3		0.9	0.3		16.9	0.6	0.0	0.1	1.8	0.0
Delay (s)	52.8	98.1		73.8	62.8		42.5	23.2	14.1	6.0	10.2	0.6
Level of Service	D	F		E	E		D	C	B	A	B	A
Approach Delay (s)		88.0			64.3			27.4			9.1	
Approach LOS		F			E			C			A	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1650		1770	3539	1583	1770	3539	1583
Flt Permitted	0.72	1.00		0.72	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1349	1650		1349	1650		135	3539	1583	150	3539	1583
Volume (vph)	30	10	30	40	10	30	30	1760	60	110	1950	40
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	38	50	12	38	32	1853	63	116	2053	42
RTOR Reduction (vph)	0	35	0	0	35	0	0	0	14	0	0	7
Lane Group Flow (vph)	38	15	0	50	15	0	32	1853	49	116	2053	35
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	9.5	9.5		9.5	9.5		118.9	115.2	115.2	130.5	121.8	121.8
Effective Green, g (s)	10.5	10.5		10.5	10.5		120.9	116.2	116.2	131.5	122.8	122.8
Actuated g/C Ratio	0.07	0.07		0.07	0.07		0.81	0.77	0.77	0.88	0.82	0.82
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	94	116		94	116		160	2742	1226	254	2897	1296
v/s Ratio Prot		0.01			0.01		0.01	0.52		c0.03	c0.58	
v/s Ratio Perm	0.03			c0.04			0.15		0.03	0.37		0.02
v/c Ratio	0.40	0.13		0.53	0.13		0.20	0.68	0.04	0.46	0.71	0.03
Uniform Delay, d1	66.8	65.4		67.4	65.4		6.6	8.0	3.9	12.2	5.9	2.5
Progression Factor	1.00	1.00		1.00	1.00		1.72	0.14	0.00	0.65	2.39	2.71
Incremental Delay, d2	2.8	0.5		5.7	0.5		0.4	1.0	0.0	0.6	0.7	0.0
Delay (s)	69.6	65.9		73.1	65.9		11.7	2.1	0.0	8.6	14.7	6.9
Level of Service	E	E		E	E		B	A	A	A	B	A
Approach Delay (s)		67.5			69.5			2.2			14.3	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.88		1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1637		1770	1674		1770	3539	1583	1770	3539	1583
Flt Permitted	0.73	1.00		0.48	1.00		0.04	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	1365	1637		887	1674		74	3539	1583	132	3539	1583
Volume (vph)	20	10	40	60	10	20	80	1850	100	20	2000	40
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	12	50	75	12	25	84	1947	105	21	2105	42
RTOR Reduction (vph)	0	47	0	0	23	0	0	0	25	0	0	9
Lane Group Flow (vph)	25	15	0	75	14	0	84	1947	80	21	2105	33
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	10.4	7.3		15.6	9.9		121.9	113.2	113.2	112.1	108.3	108.3
Effective Green, g (s)	12.4	8.3		17.6	10.9		123.0	114.2	114.2	114.1	109.3	109.3
Actuated g/C Ratio	0.08	0.06		0.12	0.07		0.82	0.76	0.76	0.76	0.73	0.73
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	124	91		144	122		170	2694	1205	153	2579	1153
v/s Ratio Prot	0.01	0.01		c0.02	0.01		c0.03	c0.55		0.00	c0.59	
v/s Ratio Perm	0.01			c0.04			0.37		0.05	0.10		0.02
v/c Ratio	0.20	0.16		0.52	0.11		0.49	0.72	0.07	0.14	0.82	0.03
Uniform Delay, d1	64.0	67.5		61.1	65.0		32.1	9.5	4.5	9.8	13.6	5.6
Progression Factor	1.00	1.00		1.00	1.00		2.09	0.24	0.01	1.57	1.48	2.12
Incremental Delay, d2	0.8	0.8		3.4	0.4		0.2	0.2	0.0	0.3	2.2	0.0
Delay (s)	64.8	68.4		64.4	65.4		67.2	2.4	0.1	15.7	22.4	12.0
Level of Service	E	E		E	E		E	A	A	B	C	B
Approach Delay (s)		67.4			64.8			4.9			22.2	
Approach LOS		E			E			A			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.7%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1676		1770	1610		1770	3539	1583	1770	3539	1583
Flt Permitted	0.61	1.00		0.52	1.00		0.05	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1143	1676		975	1610		91	3539	1583	87	3539	1583
Volume (vph)	30	20	40	380	20	190	60	1950	230	220	1810	30
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	25	50	422	22	211	63	2053	242	232	1905	32
RTOR Reduction (vph)	0	44	0	0	101	0	0	0	110	0	0	8
Lane Group Flow (vph)	38	31	0	422	132	0	63	2053	132	232	1905	24
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	20.2	17.0		41.0	32.8		84.2	81.0	81.0	99.0	90.8	90.8
Effective Green, g (s)	22.2	18.0		42.0	33.8		86.2	82.0	82.0	100.0	91.8	91.8
Actuated g/C Ratio	0.15	0.12		0.28	0.23		0.57	0.55	0.55	0.67	0.61	0.61
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	187	201		379	363		99	1935	865	215	2166	969
v/s Ratio Prot	0.01	0.02		c0.15	0.08		0.02	0.58		c0.10	0.54	
v/s Ratio Perm	0.02			c0.16			0.35		0.08	c0.62		0.02
v/c Ratio	0.20	0.15		1.11	0.36		0.64	1.06	0.15	1.08	0.88	0.02
Uniform Delay, d1	55.6	59.2		52.0	49.0		28.6	34.0	16.8	70.2	24.5	11.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.27	0.77	1.12
Incremental Delay, d2	0.5	1.6		80.6	2.8		12.6	38.9	0.1	70.4	2.8	0.0
Delay (s)	56.2	60.8		132.6	51.8		41.2	72.9	16.9	159.5	21.5	12.9
Level of Service	E	E		F	D		D	E	B	F	C	B
Approach Delay (s)		59.2			103.9			66.3			36.1	
Approach LOS		E			F			E			D	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.8%	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												
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	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		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	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3465		1770	3522		1770	1863	1583	1770	1863	1583
Flt Permitted	0.40	1.00		0.13	1.00		0.75	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	752	3465		247	3522		1397	1863	1583	1397	1863	1583
Volume (vph)	110	740	120	490	600	20	220	10	360	200	10	110
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	122	822	133	516	632	21	259	12	424	235	12	129
RTOR Reduction (vph)	0	16	0	0	3	0	0	0	328	0	0	100
Lane Group Flow (vph)	122	939	0	516	650	0	259	12	96	235	12	29
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	29.3	25.2		49.1	40.0		15.9	15.9	15.9	15.9	15.9	15.9
Effective Green, g (s)	31.3	26.2		50.1	41.0		16.9	16.9	16.9	16.9	16.9	16.9
Actuated g/C Ratio	0.42	0.35		0.67	0.55		0.23	0.23	0.23	0.23	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	383	1210		569	1925		315	420	357	315	420	357
v/s Ratio Prot	0.02	0.27		c0.24	0.18			0.01			0.01	
v/s Ratio Perm	0.11			c0.37			c0.19		0.06	0.17		0.02
v/c Ratio	0.32	0.78		0.91	0.34		0.82	0.03	0.27	0.75	0.03	0.08
Uniform Delay, d1	13.7	21.8		18.9	9.5		27.6	22.6	23.9	27.1	22.6	22.9
Progression Factor	1.00	1.00		1.64	0.62		1.03	1.04	1.21	1.00	1.00	1.00
Incremental Delay, d2	0.5	4.9		2.2	0.0		15.7	0.0	0.4	9.3	0.0	0.1
Delay (s)	14.2	26.7		33.3	5.9		44.2	23.5	29.3	36.3	22.7	23.0
Level of Service	B	C		C	A		D	C	C	D	C	C
Approach Delay (s)		25.3			18.0			34.8			31.3	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.45	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	844	3539	3539	1583	1770	1583
Volume (vph)	110	120	180	350	230	70
Peak-hour factor, PHF	0.85	0.85	0.95	0.95	0.85	0.85
Adj. Flow (vph)	129	141	189	368	271	82
RTOR Reduction (vph)	0	0	0	104	0	34
Lane Group Flow (vph)	129	141	189	264	271	48
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases	4			8		6
Actuated Green, G (s)	22.3	22.3	9.1	51.8	42.7	42.7
Effective Green, g (s)	23.3	23.3	10.1	53.8	43.7	43.7
Actuated g/C Ratio	0.31	0.31	0.13	0.72	0.58	0.58
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	376	1099	477	1220	1031	922
v/s Ratio Prot	c0.04	0.04	0.05	0.13	c0.15	
v/s Ratio Perm	c0.06			0.04		0.03
v/c Ratio	0.34	0.13	0.40	0.22	0.26	0.05
Uniform Delay, d1	19.3	18.6	29.7	3.5	7.7	6.7
Progression Factor	1.00	1.00	1.10	1.90	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.4	0.1	0.6	0.1
Delay (s)	19.9	18.6	33.2	6.8	8.3	6.8
Level of Service	B	B	C	A	A	A
Approach Delay (s)		19.2	15.8		8.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.4%	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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	120	240	70	40	160	100	30	70	40	30	40	10
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	141	282	82	50	200	125	38	88	50	38	50	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	325			365			843	1031	182	880	1010	162
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	325			365			843	1031	182	880	1010	162
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			96			79	55	94	72	75	99
cM capacity (veh/h)	1231			1190			182	197	829	132	202	854

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	141	188	176	50	133	192	38	138	38	62
Volume Left	141	0	0	50	0	0	38	0	38	0
Volume Right	0	0	82	0	0	125	0	50	0	12
cSH	1231	1700	1700	1190	1700	1700	182	272	132	239
Volume to Capacity	0.11	0.11	0.10	0.04	0.08	0.11	0.21	0.51	0.28	0.26
Queue Length 95th (ft)	10	0	0	3	0	0	19	66	27	25
Control Delay (s)	8.3	0.0	0.0	8.2	0.0	0.0	29.9	31.0	42.7	25.3
Lane LOS	A			A			D	D	E	D
Approach Delay (s)	2.3			1.1			30.8		31.9	
Approach LOS							D		D	

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	60	90	10	10	110	80	10	10	10	80	10	20
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	75	112	12	12	138	100	12	12	12	100	12	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	238			125			394	531	62	438	488	119
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	238			125			394	531	62	438	488	119
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			99			97	97	99	78	97	97
cM capacity (veh/h)	1327			1459			489	423	989	461	448	911

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	75	75	50	12	92	146	12	25	100	12	25
Volume Left	75	0	0	12	0	0	12	0	100	0	0
Volume Right	0	0	12	0	0	100	0	12	0	0	25
cSH	1327	1700	1700	1459	1700	1700	489	593	461	448	911
Volume to Capacity	0.06	0.04	0.03	0.01	0.05	0.09	0.03	0.04	0.22	0.03	0.03
Queue Length 95th (ft)	4	0	0	1	0	0	2	3	20	2	2
Control Delay (s)	7.9	0.0	0.0	7.5	0.0	0.0	12.6	11.3	14.9	13.3	9.1
Lane LOS	A			A			B	B	B	B	A
Approach Delay (s)	3.0			0.4			11.7		13.7		
Approach LOS							B		B		

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	10	100	20	120	10	50
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	125	25	150	12	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			138		200	69
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			138		200	69
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		98	94
cM capacity (veh/h)			1444		757	980

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	8	129	25	75	75	12	62
Volume Left	0	0	25	0	0	12	0
Volume Right	0	125	0	0	0	0	62
cSH	1700	1700	1444	1700	1700	757	980
Volume to Capacity	0.00	0.08	0.02	0.04	0.04	0.02	0.06
Queue Length 95th (ft)	0	0	1	0	0	1	5
Control Delay (s)	0.0	0.0	7.5	0.0	0.0	9.8	8.9
Lane LOS			A			A	A
Approach Delay (s)	0.0		1.1			9.1	
Approach LOS						A	

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	20	10	10	30	60	10	10	10	10	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	25	12	12	38	75	12	12	12	12	12	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	38	13	113	13	25	13	25
Volume Left (vph)	13	0	13	0	13	0	13	0
Volume Right (vph)	0	13	0	75	0	13	0	13
Hadj (s)	0.53	-0.20	0.53	-0.43	0.53	-0.32	0.53	-0.32
Departure Headway (s)	5.3	4.6	5.3	4.3	5.5	4.6	5.5	4.6
Degree Utilization, x	0.02	0.05	0.02	0.13	0.02	0.03	0.02	0.03
Capacity (veh/h)	665	765	664	817	634	746	630	746
Control Delay (s)	7.2	6.6	7.2	6.8	7.4	6.6	7.4	6.6
Approach Delay (s)	6.7		6.8		6.8		6.8	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.8		
HCM Level of Service	A		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	340	30	10	310	40	50	30	20	40	30	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	35	400	35	12	365	47	62	38	25	50	38	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	471	424	125	100
Volume Left (vph)	35	12	63	50
Volume Right (vph)	35	47	25	13
Hadj (s)	0.00	-0.03	0.01	0.06
Departure Headway (s)	5.3	5.4	6.5	6.6
Degree Utilization, x	0.69	0.63	0.23	0.18
Capacity (veh/h)	471	643	468	460
Control Delay (s)	19.5	17.0	11.4	11.1
Approach Delay (s)	19.5	17.0	11.4	11.1
Approach LOS	C	C	B	B

Intersection Summary			
Delay	16.9		
HCM Level of Service	C		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	330	10	10	290	10	10	10	10	10	10	60
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Hourly flow rate (vph)	35	388	12	12	341	12	12	12	12	12	12	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	353			400			735	841	200	654	841	176
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	353			400			735	841	200	654	841	176
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			95	96	98	96	96	92
cM capacity (veh/h)	1202			1155			265	288	808	325	288	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	35	259	141	12	227	125	12	8	17	12	8	75
Volume Left	35	0	0	12	0	0	12	0	0	12	0	0
Volume Right	0	0	12	0	0	12	0	0	12	0	0	71
cSH	1202	1700	1700	1155	1700	1700	265	288	556	325	288	760
Volume to Capacity	0.03	0.15	0.08	0.01	0.13	0.07	0.05	0.03	0.03	0.04	0.03	0.10
Queue Length 95th (ft)	2	0	0	1	0	0	4	2	2	3	2	8
Control Delay (s)	8.1	0.0	0.0	8.1	0.0	0.0	19.3	17.9	11.7	16.5	17.9	10.3
Lane LOS	A			A			C	C	B	C	C	B
Approach Delay (s)	0.7			0.3			15.6			11.7		
Approach LOS							C			B		

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	30.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	10	10	30	10	10	30	30	20	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	12	12	12	12	38	12	12	38	38	25	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	25	13	50	13	50	38	38
Volume Left (vph)	13	0	13	0	13	0	38	0
Volume Right (vph)	0	13	0	38	0	38	0	13
Hadj (s)	0.53	-0.32	0.53	-0.49	0.53	-0.49	0.53	-0.20
Departure Headway (s)	5.4	4.6	5.4	4.4	5.3	4.3	5.3	4.6
Degree Utilization, x	0.02	0.03	0.02	0.06	0.02	0.06	0.06	0.05
Capacity (veh/h)	648	760	642	794	656	809	655	761
Control Delay (s)	7.3	6.5	7.3	6.4	7.2	6.4	7.4	6.6
Approach Delay (s)	6.8		6.6		6.5		7.0	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.7		
HCM Level of Service	A		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	20	20	10	10	10	20
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	25	12	12	12	25

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	50	25	38
Volume Left (vph)	25	0	13
Volume Right (vph)	25	13	0
Hadj (s)	-0.17	-0.27	0.10
Departure Headway (s)	3.9	3.8	4.1
Degree Utilization, x	0.05	0.03	0.04
Capacity (veh/h)	911	927	856
Control Delay (s)	7.1	6.9	7.3
Approach Delay (s)	7.1	6.9	7.3
Approach LOS	A	A	A

Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	80	40	40	40	10	10	120	40	10	350	50
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	24	94	47	50	50	12	12	141	47	12	412	59

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	24	141	50	63	12	188	12	471
Volume Left (vph)	24	0	50	0	12	0	12	0
Volume Right (vph)	0	47	0	13	0	47	0	59
Hadj (s)	0.53	-0.20	0.53	-0.11	0.53	-0.14	0.53	-0.05
Departure Headway (s)	7.0	6.3	7.1	6.5	6.5	5.8	6.1	5.6
Degree Utilization, x	0.05	0.25	0.10	0.11	0.02	0.30	0.02	0.73
Capacity (veh/h)	471	526	460	504	527	591	562	629
Control Delay (s)	9.2	10.1	9.7	9.1	8.4	10.1	8.1	20.6
Approach Delay (s)	10.0		9.4		10.0		20.3	
Approach LOS	B		A		A		C	

Intersection Summary			
Delay	15.1		
HCM Level of Service	C		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	60	60	20	110	290	20
Peak Hour Factor	0.80	0.80	0.80	0.80	0.85	0.85
Hourly flow rate (vph)	75	75	25	138	341	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	529	341	365			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	529	341	365			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	89	98			
cM capacity (veh/h)	500	701	1194			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	75	75	25	138	341	24
Volume Left	75	0	25	0	0	0
Volume Right	0	75	0	0	0	24
cSH	500	701	1194	1700	1700	1700
Volume to Capacity	0.15	0.11	0.02	0.08	0.20	0.01
Queue Length 95th (ft)	13	9	2	0	0	0
Control Delay (s)	13.5	10.7	8.1	0.0	0.0	0.0
Lane LOS	B	B	A			
Approach Delay (s)	12.1		1.2		0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	50	50	100	80	140	290
Peak Hour Factor	0.80	0.80	0.80	0.80	0.85	0.85
Hourly flow rate (vph)	62	62	125	100	165	341
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	796	125			225	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	796	125			225	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	80	93			88	
cM capacity (veh/h)	313	926			1344	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	62	62	125	100	165	341
Volume Left	62	0	0	0	165	0
Volume Right	0	62	0	100	0	0
cSH	313	926	1700	1700	1344	1700
Volume to Capacity	0.20	0.07	0.07	0.06	0.12	0.20
Queue Length 95th (ft)	18	5	0	0	10	0
Control Delay (s)	19.4	9.2	0.0	0.0	8.1	0.0
Lane LOS	C	A			A	
Approach Delay (s)	14.3		0.0		2.6	
Approach LOS	B					

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	150	50	80	230	10
Peak Hour Factor	0.85	0.85	0.80	0.80	0.85	0.85
Hourly flow rate (vph)	12	176	62	100	271	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	162				262	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	162				262	62
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				62	99
cM capacity (veh/h)	1416				720	1002

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	12	176	62	100	271	12
Volume Left	12	0	0	0	271	0
Volume Right	0	0	0	100	0	12
cSH	1416	1700	1700	1700	720	1002
Volume to Capacity	0.01	0.10	0.04	0.06	0.38	0.01
Queue Length 95th (ft)	1	0	0	0	44	1
Control Delay (s)	7.6	0.0	0.0	0.0	13.0	8.6
Lane LOS	A				B	A
Approach Delay (s)	0.5		0.0		12.8	
Approach LOS					B	

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	370	20	50	490	80	40	20	30	110	60	120
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.80	0.80	0.80	0.85	0.85	0.85
Hourly flow rate (vph)	35	435	24	56	544	89	50	25	38	129	71	141
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	633			459			1077	1262	229	1038	1229	317
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	633			459			1077	1262	229	1038	1229	317
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			95			41	84	95	10	56	79
cM capacity (veh/h)	946			1098			85	154	773	144	161	679

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	35	290	169	56	363	270	50	62	129	212
Volume Left	35	0	0	56	0	0	50	0	129	0
Volume Right	0	0	24	0	0	89	0	38	0	141
cSH	946	1700	1700	1098	1700	1700	85	297	144	328
Volume to Capacity	0.04	0.17	0.10	0.05	0.21	0.16	0.59	0.21	0.90	0.65
Queue Length 95th (ft)	3	0	0	4	0	0	67	20	152	106
Control Delay (s)	9.0	0.0	0.0	8.5	0.0	0.0	95.8	20.3	109.7	33.9
Lane LOS	A			A			F	C	F	D
Approach Delay (s)	0.6			0.7			53.9		62.7	
Approach LOS							F		F	

Intersection Summary			
Average Delay	17.3		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	70	180	10	10	150	200	10	10	20	120	20	60
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	82	212	12	12	176	235	12	12	25	150	25	75
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	412			224			582	818	112	619	706	206
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			224			582	818	112	619	706	206
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			99			96	96	97	54	92	91
cM capacity (veh/h)	1144			1342			318	284	920	329	330	801

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	82	141	82	12	118	294	12	38	150	25	75
Volume Left	82	0	0	12	0	0	12	0	150	0	0
Volume Right	0	0	12	0	0	235	0	25	0	0	75
cSH	1144	1700	1700	1342	1700	1700	318	527	329	330	801
Volume to Capacity	0.07	0.08	0.05	0.01	0.07	0.17	0.04	0.07	0.46	0.08	0.09
Queue Length 95th (ft)	6	0	0	1	0	0	3	6	57	6	8
Control Delay (s)	8.4	0.0	0.0	7.7	0.0	0.0	16.8	12.3	24.8	16.8	10.0
Lane LOS	A			A			C	B	C	C	A
Approach Delay (s)	2.3			0.2			13.5		19.5		
Approach LOS							B		C		

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↰	↑↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	200	10	50	160	10	50
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	250	12	62	200	12	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			262		481	131
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			262		481	131
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		97	93
cM capacity (veh/h)			1299		489	894

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	167	96	62	100	100	12	62
Volume Left	0	0	62	0	0	12	0
Volume Right	0	12	0	0	0	0	62
cSH	1700	1700	1299	1700	1700	489	894
Volume to Capacity	0.10	0.06	0.05	0.06	0.06	0.03	0.07
Queue Length 95th (ft)	0	0	4	0	0	2	6
Control Delay (s)	0.0	0.0	7.9	0.0	0.0	12.6	9.3
Lane LOS			A			B	A
Approach Delay (s)	0.0		1.9			9.9	
Approach LOS						A	

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	20	10	10	30	40	10	10	10	30	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	25	12	12	38	50	12	12	12	38	12	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	38	13	88	13	25	38	25
Volume Left (vph)	13	0	13	0	13	0	38	0
Volume Right (vph)	0	13	0	50	0	13	0	13
Hadj (s)	0.53	-0.20	0.53	-0.37	0.53	-0.32	0.53	-0.32
Departure Headway (s)	5.4	4.6	5.3	4.4	5.4	4.6	5.4	4.6
Degree Utilization, x	0.02	0.05	0.02	0.11	0.02	0.03	0.06	0.03
Capacity (veh/h)	657	753	654	789	639	753	639	758
Control Delay (s)	7.3	6.7	7.2	6.8	7.3	6.5	7.5	6.5
Approach Delay (s)	6.8		6.8		6.8		7.1	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	6.9		
HCM Level of Service	A		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	290	10	10	310	30	20	20	10	20	20	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	341	12	12	365	35	25	25	12	25	25	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	365	412	63	63
Volume Left (vph)	12	12	25	25
Volume Right (vph)	12	35	13	13
Hadj (s)	0.02	-0.01	-0.01	-0.01
Departure Headway (s)	4.8	4.7	5.9	5.9
Degree Utilization, x	0.49	0.54	0.10	0.10
Capacity (veh/h)	718	739	525	528
Control Delay (s)	12.3	13.1	9.5	9.5
Approach Delay (s)	12.3	13.1	9.5	9.5
Approach LOS	B	B	A	A

Intersection Summary			
Delay	12.3		
HCM Level of Service	B		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	90	230	10	10	270	10	10	10	10	10	10	50
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.85	0.85	0.85
Hourly flow rate (vph)	106	271	12	12	318	12	12	12	12	12	12	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	329			282			735	841	141	713	841	165
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329			282			735	841	141	713	841	165
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			99			95	95	99	96	96	93
cM capacity (veh/h)	1227			1277			257	271	881	282	271	851

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	106	180	102	12	212	118	12	25	12	71
Volume Left	106	0	0	12	0	0	12	0	12	0
Volume Right	0	0	12	0	0	12	0	12	0	59
cSH	1227	1700	1700	1277	1700	1700	257	415	282	627
Volume to Capacity	0.09	0.11	0.06	0.01	0.12	0.07	0.05	0.06	0.04	0.11
Queue Length 95th (ft)	7	0	0	1	0	0	4	5	3	9
Control Delay (s)	8.2	0.0	0.0	7.8	0.0	0.0	19.7	14.2	18.3	11.5
Lane LOS	A			A			C	B	C	B
Approach Delay (s)	2.2			0.3			16.1		12.4	
Approach LOS							C		B	

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	40	10	40	10	30	50	50	10	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.85	0.85	0.85	0.80	0.80	0.80
Hourly flow rate (vph)	12	12	12	50	12	50	12	35	59	62	12	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	13	25	50	63	12	94	63	25
Volume Left (vph)	13	0	50	0	12	0	63	0
Volume Right (vph)	0	13	0	50	0	59	0	13
Hadj (s)	0.53	-0.32	0.53	-0.53	0.53	-0.40	0.53	-0.32
Departure Headway (s)	5.6	4.8	5.5	4.5	5.5	4.5	5.5	4.6
Degree Utilization, x	0.02	0.03	0.08	0.08	0.02	0.12	0.10	0.03
Capacity (veh/h)	609	720	622	768	633	762	631	745
Control Delay (s)	7.5	6.7	7.8	6.7	7.4	7.0	7.9	6.6
Approach Delay (s)	7.0		7.2		7.0		7.5	
Approach LOS	A		A		A		A	

Intersection Summary			
Delay	7.2		
HCM Level of Service	A		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	10	10	30	30	30	40
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	12	12	38	38	38	50

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	25	75	88
Volume Left (vph)	13	0	38
Volume Right (vph)	13	38	0
Hadj (s)	-0.17	-0.27	0.12
Departure Headway (s)	4.1	3.8	4.1
Degree Utilization, x	0.03	0.08	0.10
Capacity (veh/h)	847	932	858
Control Delay (s)	7.2	7.1	7.6
Approach Delay (s)	7.2	7.1	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.3		
HCM Level of Service	A		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	50	30	60	100	10	40	380	50	10	220	30
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85
Hourly flow rate (vph)	59	59	35	71	118	12	44	422	56	12	259	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	882	867	276	886	857	450	294			478		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	882	867	276	886	857	450	294			478		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	66	79	95	65	58	98	96			99		
cM capacity (veh/h)	171	278	762	205	282	609	1267			1084		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	59	94	71	129	44	478	12	294
Volume Left	59	0	71	0	44	0	12	0
Volume Right	0	35	0	12	0	56	0	35
cSH	171	365	205	296	1267	1700	1084	1700
Volume to Capacity	0.34	0.26	0.35	0.44	0.04	0.28	0.01	0.17
Queue Length 95th (ft)	36	25	36	53	3	0	1	0
Control Delay (s)	36.8	18.3	31.6	26.3	7.9	0.0	8.4	0.0
Lane LOS	E	C	D	D	A		A	
Approach Delay (s)	25.4		28.2		0.7		0.3	
Approach LOS	D		D					

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	40	30	60	350	160	70
Peak Hour Factor	0.80	0.80	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	50	38	71	412	188	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	741	188	271			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	741	188	271			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	96	95			
cM capacity (veh/h)	363	854	1293			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	50	38	71	412	188	82
Volume Left	50	0	71	0	0	0
Volume Right	0	38	0	0	0	82
cSH	363	854	1293	1700	1700	1700
Volume to Capacity	0.14	0.04	0.05	0.24	0.11	0.05
Queue Length 95th (ft)	12	3	4	0	0	0
Control Delay (s)	16.5	9.4	7.9	0.0	0.0	0.0
Lane LOS	C	A	A			
Approach Delay (s)	13.5		1.2		0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	100	160	320	80	90	170
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	118	188	376	94	106	200
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	788	376			471	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	788	376			471	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	64	72			90	
cM capacity (veh/h)	325	670			1091	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	118	188	376	94	106	200
Volume Left	118	0	0	0	106	0
Volume Right	0	188	0	94	0	0
cSH	325	670	1700	1700	1091	1700
Volume to Capacity	0.36	0.28	0.22	0.06	0.10	0.12
Queue Length 95th (ft)	40	29	0	0	8	0
Control Delay (s)	22.2	12.5	0.0	0.0	8.7	0.0
Lane LOS	C	B			A	
Approach Delay (s)	16.2		0.0		3.0	
Approach LOS	C					

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	100	180	260	150	10
Peak Hour Factor	0.85	0.85	0.90	0.90	0.80	0.80
Hourly flow rate (vph)	12	118	200	289	188	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	489				341	200
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	489				341	200
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				71	99
cM capacity (veh/h)	1074				648	841

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	12	118	200	289	188	12
Volume Left	12	0	0	0	188	0
Volume Right	0	0	0	289	0	12
cSH	1074	1700	1700	1700	648	841
Volume to Capacity	0.01	0.07	0.12	0.17	0.29	0.01
Queue Length 95th (ft)	1	0	0	0	30	1
Control Delay (s)	8.4	0.0	0.0	0.0	12.8	9.3
Lane LOS	A				B	A
Approach Delay (s)	0.8		0.0		12.6	
Approach LOS					B	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix I

2015 Mitigation Level of Service Analyses

Level of Service Analysis	Pages
AM 2015 Mitigated No-Build Condition - Signalized	8
PM 2015 Mitigated No-Build Condition - Signalized	8
AM 2015 Mitigated Build Condition - Signalized	8
PM 2015 Mitigated Build Condition - Signalized	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3520		1681	1687	1583			
Flt Permitted	0.09	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	318	3539			3520		1681	1687	1583			
Volume (vph)	790	120	0	0	1070	40	870	10	120	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	832	126	0	0	1126	42	916	11	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	56	0	0	0
Lane Group Flow (vph)	832	126	0	0	1166	0	458	469	70	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	72.5	72.5			40.5		37.5	37.5	37.5			
Effective Green, g (s)	73.5	73.5			41.5		38.5	38.5	38.5			
Actuated g/C Ratio	0.61	0.61			0.35		0.32	0.32	0.32			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	922	2168			1217		539	541	508			
v/s Ratio Prot	c0.21	0.04			c0.33							
v/s Ratio Perm	0.34						0.27	0.28	0.04			
v/c Ratio	0.90	0.06			0.96		0.85	0.87	0.14			
Uniform Delay, d1	35.6	9.3			38.4		38.0	38.3	28.9			
Progression Factor	0.93	0.95			1.00		1.00	1.00	1.00			
Incremental Delay, d2	8.8	0.0			16.6		15.4	16.9	0.6			
Delay (s)	41.7	8.9			55.0		53.4	55.2	29.5			
Level of Service	D	A			D		D	E	C			
Approach Delay (s)		37.4			55.0			51.4			0.0	
Approach LOS		D			D			D			A	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.87		1.00	0.89	
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	5085	1583	1770	5085	1583	1770	1622		1770	1650	
Flt Permitted	0.13	1.00	1.00	0.05	1.00	1.00	0.72	1.00		0.68	1.00	
Satd. Flow (perm)	234	5085	1583	95	5085	1583	1349	1622		1261	1650	
Volume (vph)	30	2400	100	60	1480	70	50	10	60	40	10	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	32	2526	105	63	1558	74	62	12	75	50	12	38
RTOR Reduction (vph)	0	0	24	0	0	26	0	60	0	0	30	0
Lane Group Flow (vph)	32	2526	81	63	1558	48	62	28	0	50	20	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	79.2	75.2	75.2	83.2	77.2	77.2	23.8	23.8		23.8	23.8	
Effective Green, g (s)	81.2	76.2	76.2	85.2	78.2	78.2	24.8	24.8		24.8	24.8	
Actuated g/C Ratio	0.68	0.64	0.64	0.71	0.65	0.65	0.21	0.21		0.21	0.21	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	222	3229	1005	165	3314	1032	279	335		261	341	
v/s Ratio Prot	0.01	c0.50		c0.02	0.31			0.02			0.01	
v/s Ratio Perm	0.09		0.05	0.25		0.03	c0.05			0.04		
v/c Ratio	0.14	0.78	0.08	0.38	0.47	0.05	0.22	0.08		0.19	0.06	
Uniform Delay, d1	7.2	15.9	8.4	16.7	10.5	7.5	39.6	38.4		39.3	38.2	
Progression Factor	1.88	1.68	3.22	1.34	1.43	2.61	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.5	0.0	0.6	0.0	0.0	1.8	0.5		1.6	0.3	
Delay (s)	13.7	27.1	27.1	23.0	15.0	19.6	41.4	38.9		40.9	38.5	
Level of Service	B	C	C	C	B	B	D	D		D	D	
Approach Delay (s)		27.0			15.5			39.9			39.7	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
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)	1770	5085	1583	1770	5085	1583	3433	1863	1583	1770	3392	
Flt Permitted	0.07	1.00	1.00	0.08	1.00	1.00	0.95	1.00	1.00	0.22	1.00	
Satd. Flow (perm)	140	5085	1583	151	5085	1583	3433	1863	1583	418	3392	
Volume (vph)	210	2260	290	160	1460	160	270	290	80	190	260	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	2379	305	168	1537	168	300	322	89	211	289	111
RTOR Reduction (vph)	0	0	0	0	0	99	0	0	70	0	34	0
Lane Group Flow (vph)	221	2379	305	168	1537	69	300	322	19	211	366	0
Turn Type	pm+pt		Free	pm+pt		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8			2	6		
Actuated Green, G (s)	70.0	57.0	120.0	56.4	48.4	48.4	12.0	25.0	25.0	33.0	23.0	
Effective Green, g (s)	71.0	58.0	120.0	58.4	49.4	49.4	13.0	26.0	26.0	35.0	24.0	
Actuated g/C Ratio	0.59	0.48	1.00	0.49	0.41	0.41	0.11	0.22	0.22	0.29	0.20	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	322	2458	1583	195	2093	652	372	404	343	246	678	
v/s Ratio Prot	0.10	c0.47		c0.06	0.30		c0.09	c0.17		0.08	0.11	
v/s Ratio Perm	0.31		c0.19	0.36		0.04			0.01	0.17		
v/c Ratio	0.69	0.97	0.19	0.86	0.73	0.11	0.81	0.80	0.06	0.86	0.54	
Uniform Delay, d1	29.7	30.1	0.0	29.8	29.8	21.7	52.3	44.5	37.3	35.8	43.1	
Progression Factor	1.29	1.25	1.00	1.26	0.46	0.85	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.9	6.7	0.1	28.8	1.3	0.1	12.0	15.0	0.3	24.3	3.1	
Delay (s)	41.1	44.4	0.1	66.5	15.1	18.5	64.3	59.5	37.6	60.1	46.1	
Level of Service	D	D	A	E	B	B	E	E	D	E	D	
Approach Delay (s)		39.5			20.0			58.8			51.0	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.7%	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												
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1770	5041		1770	5080			1780	1583		1758	
Flt Permitted	0.13	1.00		0.05	1.00			0.78	1.00		0.87	
Satd. Flow (perm)	233	5041		84	5080			1452	1583		1556	
Volume (vph)	10	2740	170	80	1560	10	130	10	120	10	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	11	2884	179	84	1642	11	153	12	141	12	12	10
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	47	0	9	0
Lane Group Flow (vph)	11	3058	0	84	1652	0	0	165	94	0	25	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	84.6	83.8		92.6	87.8			16.4	16.4		16.4	
Effective Green, g (s)	86.6	84.8		94.6	88.8			17.4	17.4		17.4	
Actuated g/C Ratio	0.72	0.71		0.79	0.74			0.14	0.14		0.14	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	191	3562		148	3759			211	230		226	
v/s Ratio Prot	0.00	c0.61		c0.03	0.33							
v/s Ratio Perm	0.04			0.42				c0.11	0.06		0.02	
v/c Ratio	0.06	0.86		0.57	0.44			0.78	0.41		0.11	
Uniform Delay, d1	4.9	13.1		24.4	6.0			49.5	46.6		44.6	
Progression Factor	0.51	0.54		1.43	1.93			1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.9		3.3	0.1			24.5	5.3		1.0	
Delay (s)	2.6	8.9		38.2	11.7			74.0	51.9		45.6	
Level of Service	A	A		D	B			E	D		D	
Approach Delay (s)		8.9			12.9			63.8			45.6	
Approach LOS		A			B			E			D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.5%	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												
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	
Lane Util. Factor	1.00	0.86			0.91	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	0.89	
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.99	
Satd. Flow (prot)	1770	6408			5085	1583				1681	1554	
Flt Permitted	0.12	1.00			1.00	1.00				0.76	0.92	
Satd. Flow (perm)	226	6408			5085	1583				1340	1443	
Volume (vph)	60	3060	0	0	1640	80	0	0	0	30	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	63	3221	0	0	1640	84	0	0	0	38	0	25
RTOR Reduction (vph)	0	0	0	0	0	18	0	0	0	0	23	0
Lane Group Flow (vph)	63	3221	0	0	1640	66	0	0	0	29	11	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Actuated Green, G (s)	103.1	103.1			93.4	93.4				6.9	6.9	
Effective Green, g (s)	104.1	104.1			94.4	94.4				7.9	7.9	
Actuated g/C Ratio	0.87	0.87			0.79	0.79				0.07	0.07	
Clearance Time (s)	5.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	269	5559			4000	1245				88	95	
v/s Ratio Prot	0.01	c0.50			0.32							
v/s Ratio Perm	0.19					0.04				c0.02	0.01	
v/c Ratio	0.23	0.58			0.41	0.05				0.33	0.11	
Uniform Delay, d1	2.0	2.1			4.0	2.8				53.5	52.7	
Progression Factor	1.09	1.19			0.62	0.26				1.00	1.00	
Incremental Delay, d2	0.3	0.3			0.3	0.1				2.2	0.5	
Delay (s)	2.4	2.8			2.8	0.8				55.7	53.3	
Level of Service	A	A			A	A				E	D	
Approach Delay (s)		2.8			2.7			0.0			54.4	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	3.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	1770	3274	
Flt Permitted	0.32	1.00	1.00	0.95	1.00	1.00	0.74	1.00	1.00	0.71	1.00	
Satd. Flow (perm)	605	5085	1583	3433	5085	1583	2677	3539	2000	1330	3274	
Volume (vph)	10	1380	130	650	610	50	110	60	1620	40	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	11	1453	137	684	642	53	116	63	1705	50	12	12
RTOR Reduction (vph)	0	0	0	0	0	20	0	0	0	0	10	0
Lane Group Flow (vph)	11	1453	137	684	642	33	116	63	1705	50	14	0
Turn Type	pm+pt		Free	Prot		Perm	pm+pt		Free	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free			6	8		Free	4		
Actuated Green, G (s)	40.0	40.0	120.0	36.0	73.6	73.6	24.0	18.0	120.0	24.0	18.0	
Effective Green, g (s)	41.0	41.0	120.0	37.0	74.6	74.6	26.0	19.0	120.0	26.0	19.0	
Actuated g/C Ratio	0.34	0.34	1.00	0.31	0.62	0.62	0.22	0.16	1.00	0.22	0.16	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	240	1737	1583	1059	3161	984	624	560	2000	314	518	
v/s Ratio Prot	0.00	0.29		0.20	0.13		0.01	0.02		0.01	0.00	
v/s Ratio Perm	0.01		0.09			0.02	0.03		c0.85	0.03		
v/c Ratio	0.05	0.84	0.09	0.65	0.20	0.03	0.19	0.11	0.85	0.16	0.03	
Uniform Delay, d1	26.4	36.4	0.0	35.8	9.8	8.8	38.1	43.3	0.0	37.9	42.7	
Progression Factor	0.79	0.82	1.00	0.65	0.38	0.68	0.75	0.77	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.9	0.0	2.9	0.0	0.0	0.1	0.4	4.6	1.1	0.1	
Delay (s)	20.9	31.6	0.0	26.3	3.7	6.0	28.8	33.6	4.6	39.0	42.8	
Level of Service	C	C	A	C	A	A	C	C	A	D	D	
Approach Delay (s)		28.8			15.0			7.0			40.2	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	65.0%	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												
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	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1723		3433	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.75	1.00		0.95	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1398	1723		3433	5085	1583	290	5085	1583
Volume (vph)	200	10	350	10	10	10	670	1460	20	20	630	150
Peak-hour factor, PHF	0.90	0.90	0.90	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	222	11	389	12	12	12	705	1537	21	21	663	158
RTOR Reduction (vph)	0	0	11	0	11	0	0	0	7	0	0	70
Lane Group Flow (vph)	222	11	378	12	13	0	705	1537	14	21	663	88
Turn Type	Prot		pm+ov	Perm			Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5		8		5	2		1	6	7
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	12.5	21.9	52.3	4.4	4.4		30.4	79.1	79.1	52.7	52.7	65.2
Effective Green, g (s)	13.5	22.9	54.3	5.4	5.4		31.4	80.1	80.1	53.7	53.7	67.2
Actuated g/C Ratio	0.11	0.19	0.45	0.05	0.05		0.26	0.67	0.67	0.45	0.45	0.56
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	386	356	769	63	78		898	3394	1057	191	2276	886
v/s Ratio Prot	0.06	0.01	c0.13		0.01		c0.21	c0.30		0.00	c0.13	0.01
v/s Ratio Perm			0.11	0.01					0.01	0.04		0.04
v/c Ratio	0.58	0.03	0.49	0.19	0.16		0.79	0.45	0.01	0.11	0.29	0.10
Uniform Delay, d1	50.5	39.5	23.1	55.2	55.1		41.2	9.5	6.7	19.7	21.1	12.3
Progression Factor	0.96	0.93	1.13	1.00	1.00		1.00	0.53	0.31	0.86	0.77	0.96
Incremental Delay, d2	2.1	0.0	0.5	1.5	1.0		2.4	0.2	0.0	0.2	0.3	0.0
Delay (s)	50.4	37.0	26.7	56.7	56.1		43.5	5.3	2.1	17.2	16.4	11.8
Level of Service	D	D	C	E	E		D	A	A	B	B	B
Approach Delay (s)		35.3			56.3			17.2			15.5	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.9%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1615		1770	5085	1583	1770	5085	1583
Flt Permitted	0.63	1.00		0.62	1.00		0.19	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1165	1650		1157	1615		363	5085	1583	144	5085	1583
Volume (vph)	30	10	30	300	20	160	30	1560	90	110	1090	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	38	353	24	188	32	1642	95	116	1147	11
RTOR Reduction (vph)	0	30	0	0	112	0	0	0	57	0	0	6
Lane Group Flow (vph)	38	20	0	353	100	0	32	1642	38	116	1147	5
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	25.4	23.0		48.4	41.0		49.1	46.7	46.7	61.6	54.2	54.2
Effective Green, g (s)	27.4	24.0		49.4	42.0		51.1	47.7	47.7	62.6	55.2	55.2
Actuated g/C Ratio	0.23	0.20		0.41	0.35		0.43	0.40	0.40	0.52	0.46	0.46
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	283	330		586	565		194	2021	629	223	2339	728
v/s Ratio Prot	0.00	0.01		c0.11	0.06		0.00	c0.32		c0.05	0.23	
v/s Ratio Perm	0.03			c0.14			0.07		0.02	0.22		0.00
v/c Ratio	0.13	0.06		0.60	0.18		0.16	0.81	0.06	0.52	0.49	0.01
Uniform Delay, d1	36.5	38.9		26.0	27.0		20.4	32.2	22.3	21.9	22.6	17.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.41	1.51	1.84
Incremental Delay, d2	0.2	0.3		1.8	0.7		0.4	2.6	0.0	1.8	0.1	0.0
Delay (s)	36.7	39.2		27.8	27.7		20.9	34.8	22.4	32.6	34.2	32.3
Level of Service	D	D		C	C		C	C	C	C	C	C
Approach Delay (s)		38.1			27.8			33.9			34.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
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												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3527		1681	1686	1583			
Flt Permitted	0.14	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	518	3539			3527		1681	1686	1583			
Volume (vph)	190	390	0	0	440	10	1870	10	420	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	200	411	0	0	463	11	1968	11	442	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	35	0	0	0
Lane Group Flow (vph)	200	411	0	0	473	0	984	995	407	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	34.9	34.9			22.9		105.1	105.1	105.1			
Effective Green, g (s)	35.9	35.9			23.9		106.1	106.1	106.1			
Actuated g/C Ratio	0.24	0.24			0.16		0.71	0.71	0.71			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	279	847			562		1189	1193	1120			
v/s Ratio Prot	c0.04	0.12			c0.13							
v/s Ratio Perm	0.13						0.59	0.59	0.26			
v/c Ratio	0.72	0.49			0.84		0.83	0.83	0.36			
Uniform Delay, d1	47.6	49.1			61.2		15.5	15.7	8.6			
Progression Factor	0.54	0.49			1.00		1.00	1.00	1.00			
Incremental Delay, d2	7.7	0.4			11.0		6.7	6.9	0.9			
Delay (s)	33.6	24.5			72.2		22.2	22.6	9.6			
Level of Service	C	C			E		C	C	A			
Approach Delay (s)		27.5			72.2			20.1			0.0	
Approach LOS		C			E			C			A	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	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		↑↑↑			↑↑↑			↑			↑	
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		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.86		1.00	0.88	
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	5085	1583	1770	5085	1583	1770	1605		1770	1637	
Flt Permitted	0.05	1.00	1.00	0.10	1.00	1.00	0.72	1.00		0.56	1.00	
Satd. Flow (perm)	84	5085	1583	190	5085	1583	1335	1605		1045	1637	
Volume (vph)	10	1500	140	90	2750	40	160	10	120	50	10	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	11	1579	147	95	2895	42	188	12	141	62	12	50
RTOR Reduction (vph)	0	0	50	0	0	12	0	58	0	0	34	0
Lane Group Flow (vph)	11	1579	97	95	2895	30	188	95	0	62	28	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	89.4	87.4	87.4	100.1	93.1	93.1	39.9	39.9		39.9	39.9	
Effective Green, g (s)	91.4	88.4	88.4	101.1	94.1	94.1	40.9	40.9		40.9	40.9	
Actuated g/C Ratio	0.61	0.59	0.59	0.67	0.63	0.63	0.27	0.27		0.27	0.27	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	85	2997	933	220	3190	993	364	438		285	446	
v/s Ratio Prot	0.00	0.31		c0.03	c0.57			0.06			0.02	
v/s Ratio Perm	0.08		0.06	0.27		0.02	c0.14			0.06		
v/c Ratio	0.13	0.53	0.10	0.43	0.91	0.03	0.52	0.22		0.22	0.06	
Uniform Delay, d1	28.5	18.3	13.5	12.7	24.2	10.6	46.2	42.2		42.2	40.4	
Progression Factor	1.08	0.76	1.60	0.90	1.08	1.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.0	1.0	3.2	0.0	5.2	1.1		1.7	0.3	
Delay (s)	31.4	14.1	21.6	12.4	29.2	11.6	51.3	43.3		43.9	40.6	
Level of Service	C	B	C	B	C	B	D	D		D	D	
Approach Delay (s)		14.9			28.5			47.7			42.3	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
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)	1770	5085	1583	1770	5085	1583	3433	1863	1583	1770	3336	
Flt Permitted	0.05	1.00	1.00	0.12	1.00	1.00	0.95	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	97	5085	1583	214	5085	1583	3433	1863	1583	1154	3336	
Volume (vph)	120	1330	300	170	2690	120	490	200	140	160	210	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	126	1400	316	179	2832	126	544	222	156	178	233	144
RTOR Reduction (vph)	0	0	0	0	0	41	0	0	123	0	59	0
Lane Group Flow (vph)	126	1400	316	179	2832	85	544	222	33	178	318	0
Turn Type	pm+pt		Free	pm+pt		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8			2	6		
Actuated Green, G (s)	81.7	75.7	150.0	94.0	83.0	83.0	23.0	31.0	31.0	28.0	18.0	
Effective Green, g (s)	83.7	76.7	150.0	95.0	84.0	84.0	24.0	32.0	32.0	30.0	19.0	
Actuated g/C Ratio	0.56	0.51	1.00	0.63	0.56	0.56	0.16	0.21	0.21	0.20	0.13	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	132	2600	1583	284	2848	886	549	397	338	276	423	
v/s Ratio Prot	c0.04	0.28		0.06	c0.56		c0.16	0.12		0.05	c0.10	
v/s Ratio Perm	0.49		0.20	0.34		0.05			0.02	0.08		
v/c Ratio	0.95	0.54	0.20	0.63	0.99	0.10	0.99	0.56	0.10	0.64	0.75	
Uniform Delay, d1	73.4	24.7	0.0	17.3	32.8	15.3	62.9	52.7	47.4	53.5	63.2	
Progression Factor	1.23	1.53	1.00	1.68	1.08	2.34	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	51.8	0.2	0.2	2.4	11.0	0.0	35.9	5.6	0.6	5.1	11.7	
Delay (s)	142.4	38.0	0.2	31.5	46.4	36.0	98.8	58.3	48.0	58.6	75.0	
Level of Service	F	D	A	C	D	D	F	E	D	E	E	
Approach Delay (s)		38.6			45.1			80.5			69.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM Average Control Delay	50.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.9%	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												
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	5027		1770	5082			1777	1583		1736	
Flt Permitted	0.05	1.00		0.04	1.00			0.70	1.00		0.70	
Satd. Flow (perm)	88	5027		84	5082			1304	1583		1236	
Volume (vph)	30	1830	150	100	2720	10	260	10	80	20	10	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	32	1926	158	105	2863	11	306	12	94	25	12	20
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	39	0	13	0
Lane Group Flow (vph)	32	2078	0	105	2874	0	0	318	55	0	44	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	87.3	84.1		99.0	90.8			41.0	41.0		41.0	
Effective Green, g (s)	89.3	85.1		100.0	91.8			42.0	42.0		42.0	
Actuated g/C Ratio	0.60	0.57		0.67	0.61			0.28	0.28		0.28	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	99	2852		179	3110			365	443		346	
v/s Ratio Prot	0.01	0.41		c0.04	c0.57							
v/s Ratio Perm	0.18			0.35				c0.24	0.03		0.04	
v/c Ratio	0.32	0.73		0.59	0.92			0.87	0.12		0.13	
Uniform Delay, d1	30.5	23.9		32.0	26.0			51.4	40.3		40.3	
Progression Factor	0.95	0.44		1.60	0.61			1.00	1.00		1.00	
Incremental Delay, d2	1.7	0.9		1.3	1.5			23.7	0.6		0.8	
Delay (s)	30.6	11.4		52.5	17.3			75.1	40.9		41.1	
Level of Service	C	B		D	B			E	D		D	
Approach Delay (s)		11.7			18.6			67.3			41.1	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	
Lane Util. Factor	1.00	0.86			0.91	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	0.90	
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.98	
Satd. Flow (prot)	1770	6408			5085	1583				1681	1566	
Flt Permitted	0.04	1.00			1.00	1.00				0.76	0.89	
Satd. Flow (perm)	77	6408			5085	1583				1340	1416	
Volume (vph)	180	2050	0	0	2680	180	0	0	0	250	0	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	189	2158	0	0	2680	189	0	0	0	312	0	188
RTOR Reduction (vph)	0	0	0	0	0	47	0	0	0	0	50	0
Lane Group Flow (vph)	189	2158	0	0	2680	142	0	0	0	219	231	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Actuated Green, G (s)	112.4	112.4			91.4	91.4				27.6	27.6	
Effective Green, g (s)	113.4	113.4			92.4	92.4				28.6	28.6	
Actuated g/C Ratio	0.76	0.76			0.62	0.62				0.19	0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	250	4844			3132	975				255	270	
v/s Ratio Prot	c0.09	0.34			c0.53							
v/s Ratio Perm	0.48					0.09				c0.16	0.16	
v/c Ratio	0.76	0.45			0.86	0.15				0.86	0.85	
Uniform Delay, d1	48.7	6.7			23.4	12.1				58.7	58.7	
Progression Factor	0.86	0.39			0.33	0.01				1.00	1.00	
Incremental Delay, d2	9.3	0.2			1.3	0.1				23.8	22.3	
Delay (s)	51.2	2.8			9.0	0.2				82.5	81.0	
Level of Service	D	A			A	A				F	F	
Approach Delay (s)		6.7			8.5			0.0			81.6	
Approach LOS		A			A			A			F	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	1770	3361	
Flt Permitted	0.16	1.00	1.00	0.95	1.00	1.00	0.48	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	305	5085	1583	3433	5085	1583	1734	3539	2000	1770	3361	
Volume (vph)	10	870	180	1550	1330	20	330	20	1090	70	60	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	11	916	189	1632	1400	21	347	21	1147	88	75	38
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	35	0
Lane Group Flow (vph)	11	916	189	1632	1400	15	347	21	1147	88	78	0
Turn Type	pm+pt		Free	Prot		Perm	pm+pt		Free	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		Free			6	8		Free			
Actuated Green, G (s)	26.0	26.0	150.0	79.0	103.4	103.4	30.0	16.0	150.0	9.0	11.0	
Effective Green, g (s)	27.0	27.0	150.0	80.0	104.4	104.4	31.0	17.0	150.0	10.0	12.0	
Actuated g/C Ratio	0.18	0.18	1.00	0.53	0.70	0.70	0.21	0.11	1.00	0.07	0.08	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	80	915	1583	1831	3539	1102	528	401	2000	118	269	
v/s Ratio Prot	0.00	c0.18		c0.48	0.28		0.07	0.01		0.05	0.02	
v/s Ratio Perm	0.02		0.12			0.01	c0.07		c0.57			
v/c Ratio	0.14	1.00	0.12	0.89	0.40	0.01	0.66	0.05	0.57	0.75	0.29	
Uniform Delay, d1	51.9	61.5	0.0	31.1	9.6	7.0	52.6	59.3	0.0	68.8	65.0	
Progression Factor	0.78	0.79	1.00	0.78	0.19	0.00	0.76	0.78	1.00	1.00	1.00	
Incremental Delay, d2	0.7	27.4	0.1	4.3	0.0	0.0	2.7	0.2	1.1	34.4	2.7	
Delay (s)	41.3	76.0	0.1	28.4	1.9	0.0	42.6	46.5	1.1	103.2	67.7	
Level of Service	D	E	A	C	A	A	D	D	A	F	E	
Approach Delay (s)		62.8			16.1			11.2			83.2	
Approach LOS		E			B			B			F	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.1%	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												
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	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1704		3433	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.74	1.00		0.95	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1372	1704		3433	5085	1583	473	5085	1583
Volume (vph)	370	30	660	60	30	40	570	1020	10	20	1470	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	389	32	695	75	38	50	600	1074	11	21	1547	74
RTOR Reduction (vph)	0	0	2	0	32	0	0	0	4	0	0	31
Lane Group Flow (vph)	389	32	693	75	56	0	600	1074	7	21	1547	43
Turn Type	Prot		pm+ov	Perm			Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5		8		5	2		1	6	7
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	19.9	36.5	68.8	11.6	11.6		32.3	96.1	96.1	68.6	66.2	86.1
Effective Green, g (s)	20.9	37.5	70.8	12.6	12.6		33.3	97.1	97.1	70.6	67.2	88.1
Actuated g/C Ratio	0.14	0.25	0.47	0.08	0.08		0.22	0.65	0.65	0.47	0.45	0.59
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	478	466	789	115	143		762	3292	1025	252	2278	972
v/s Ratio Prot	0.11	0.02	c0.19		0.03		0.17	0.21		0.00	c0.30	0.01
v/s Ratio Perm			0.24	0.05					0.00	0.04		0.02
v/c Ratio	0.81	0.07	0.88	0.65	0.39		0.79	0.33	0.01	0.08	0.68	0.04
Uniform Delay, d1	62.7	42.9	35.7	66.6	65.1		55.0	11.8	9.4	21.3	32.8	13.1
Progression Factor	0.98	0.87	1.35	1.00	1.00		1.14	0.37	0.30	0.38	0.28	0.20
Incremental Delay, d2	9.3	0.1	10.0	12.5	1.8		4.9	0.2	0.0	0.1	0.9	0.0
Delay (s)	70.6	37.2	58.2	79.1	66.8		67.9	4.6	2.8	8.2	10.1	2.7
Level of Service	E	D	E	E	E		E	A	A	A	B	A
Approach Delay (s)		61.9			72.5			27.2			9.8	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.90		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1676		1770	1616		1770	5085	1583	1770	5085	1583
Flt Permitted	0.64	1.00		0.57	1.00		0.08	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1189	1676		1066	1616		145	5085	1583	118	5085	1583
Volume (vph)	30	20	40	380	20	150	60	1640	230	190	1590	30
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	25	50	422	22	167	63	1726	242	200	1674	32
RTOR Reduction (vph)	0	42	0	0	109	0	0	0	146	0	0	14
Lane Group Flow (vph)	38	33	0	422	80	0	63	1726	96	200	1674	18
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	26.6	23.4		59.3	51.1		63.9	58.3	58.3	80.7	70.1	70.1
Effective Green, g (s)	28.6	24.4		60.3	52.1		65.9	59.3	59.3	81.7	71.1	71.1
Actuated g/C Ratio	0.19	0.16		0.40	0.35		0.44	0.40	0.40	0.54	0.47	0.47
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	243	273		578	561		135	2010	626	267	2410	750
v/s Ratio Prot	0.00	0.02		c0.16	0.05		0.02	c0.34		c0.09	0.33	
v/s Ratio Perm	0.03			c0.14			0.18		0.06	0.32		0.01
v/c Ratio	0.16	0.12		0.73	0.14		0.47	0.86	0.15	0.75	0.69	0.02
Uniform Delay, d1	50.2	53.6		35.4	33.6		27.2	41.5	29.2	42.8	30.9	21.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.21	1.07	1.61
Incremental Delay, d2	0.3	0.9		4.7	0.5		2.5	3.9	0.1	7.7	0.6	0.0
Delay (s)	50.5	54.6		40.1	34.1		29.8	45.4	29.3	59.5	33.6	33.8
Level of Service	D	D		D	C		C	D	C	E	C	C
Approach Delay (s)		53.2			38.2			43.0			36.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	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												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3521		1681	1687	1583			
Flt Permitted	0.09	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	321	3539			3521		1681	1687	1583			
Volume (vph)	890	130	0	0	1100	40	940	10	120	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	937	137	0	0	1158	42	989	11	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	53	0	0	0
Lane Group Flow (vph)	937	137	0	0	1198	0	495	505	73	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	73.0	73.0			40.0		37.0	37.0	37.0			
Effective Green, g (s)	74.0	74.0			41.0		38.0	38.0	38.0			
Actuated g/C Ratio	0.62	0.62			0.34		0.32	0.32	0.32			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	950	2182			1203		532	534	501			
v/s Ratio Prot	c0.24	0.04			0.34							
v/s Ratio Perm	c0.37						0.29	0.30	0.05			
v/c Ratio	0.99	0.06			1.00		0.93	0.95	0.15			
Uniform Delay, d1	37.4	9.2			39.4		39.7	40.0	29.4			
Progression Factor	1.14	0.57			1.00		1.00	1.00	1.00			
Incremental Delay, d2	18.8	0.0			24.8		25.1	27.6	0.6			
Delay (s)	61.4	5.2			64.2		64.8	67.6	30.0			
Level of Service	E	A			E		E	E	C			
Approach Delay (s)		54.3			64.2			62.2			0.0	
Approach LOS		D			E			E			A	

Intersection Summary			
HCM Average Control Delay	60.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.4%	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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.87		1.00	0.89	
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	5085	1583	1770	5085	1583	1770	1622		1770	1650	
Flt Permitted	0.11	1.00	1.00	0.05	1.00	1.00	0.72	1.00		0.68	1.00	
Satd. Flow (perm)	197	5085	1583	96	5085	1583	1349	1622		1263	1650	
Volume (vph)	30	2710	120	60	1600	70	60	10	60	40	10	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	32	2853	126	63	1684	74	75	12	75	50	12	38
RTOR Reduction (vph)	0	0	30	0	0	26	0	59	0	0	30	0
Lane Group Flow (vph)	32	2853	96	63	1684	48	75	28	0	50	20	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	78.5	74.7	74.7	82.9	76.9	76.9	24.3	24.3		24.3	24.3	
Effective Green, g (s)	80.5	75.7	75.7	84.9	77.9	77.9	25.3	25.3		25.3	25.3	
Actuated g/C Ratio	0.67	0.63	0.63	0.71	0.65	0.65	0.21	0.21		0.21	0.21	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	195	3208	999	166	3301	1028	284	342		266	348	
v/s Ratio Prot	0.01	c0.56		c0.02	0.33			0.02			0.01	
v/s Ratio Perm	0.10		0.06	0.25		0.03	c0.06			0.04		
v/c Ratio	0.16	0.89	0.10	0.38	0.51	0.05	0.26	0.08		0.19	0.06	
Uniform Delay, d1	7.8	18.6	8.7	22.8	11.0	7.6	39.6	38.0		38.9	37.8	
Progression Factor	1.74	1.81	3.01	1.28	1.64	2.97	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.9	0.0	0.4	0.0	0.0	2.3	0.5		1.6	0.3	
Delay (s)	13.7	34.7	26.2	29.6	18.1	22.6	41.8	38.5		40.5	38.1	
Level of Service	B	C	C	C	B	C	D	D		D	D	
Approach Delay (s)		34.1			18.7			40.0			39.3	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
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)	1770	5085	1583	1770	5085	1583	3433	1863	1583	1770	3392	
Flt Permitted	0.07	1.00	1.00	0.07	1.00	1.00	0.95	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	128	5085	1583	137	5085	1583	3433	1863	1583	355	3392	
Volume (vph)	210	2590	330	160	1590	160	290	290	80	190	260	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	221	2726	347	168	1674	168	322	322	89	211	289	111
RTOR Reduction (vph)	0	0	0	0	0	92	0	0	72	0	33	0
Lane Group Flow (vph)	221	2726	347	168	1674	76	322	322	17	211	367	0
Turn Type	pm+pt		Free	pm+pt		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8			2	6		
Actuated Green, G (s)	74.0	63.0	120.0	59.2	53.2	53.2	11.0	22.0	22.0	29.0	20.0	
Effective Green, g (s)	75.0	64.0	120.0	61.2	54.2	54.2	12.0	23.0	23.0	31.0	21.0	
Actuated g/C Ratio	0.62	0.53	1.00	0.51	0.45	0.45	0.10	0.19	0.19	0.26	0.18	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	310	2712	1583	165	2297	715	343	357	303	210	594	
v/s Ratio Prot	0.10	c0.54		c0.06	0.33		c0.09	0.17		0.08	0.11	
v/s Ratio Perm	0.35		c0.22	0.46		0.05			0.01	c0.18		
v/c Ratio	0.71	1.01	0.22	1.02	0.73	0.11	0.94	0.90	0.06	1.00	0.62	
Uniform Delay, d1	31.2	28.0	0.0	58.7	26.9	18.9	53.6	47.4	39.6	40.9	45.8	
Progression Factor	1.50	0.93	1.00	1.40	0.47	0.70	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.5	11.1	0.1	72.3	1.1	0.1	32.7	28.3	0.4	63.3	4.8	
Delay (s)	49.3	37.2	0.1	154.7	13.7	13.3	86.3	75.7	40.0	104.2	50.6	
Level of Service	D	D	A	F	B	B	F	E	D	F	D	
Approach Delay (s)		34.1			25.4			76.0			69.1	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	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												
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1770	5041		1770	5081			1780	1583		1758	
Flt Permitted	0.10	1.00		0.04	1.00			0.79	1.00		0.66	
Satd. Flow (perm)	195	5041		81	5081			1475	1583		1181	
Volume (vph)	10	3110	190	80	1710	10	140	10	120	10	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	1.00
Adj. Flow (vph)	11	3274	200	84	1800	11	165	12	141	12	12	10
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	45	0	9	0
Lane Group Flow (vph)	11	3469	0	84	1811	0	0	177	96	0	25	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	88.8	88.0		95.2	91.2			13.0	13.0		13.0	
Effective Green, g (s)	90.8	89.0		97.2	92.2			14.0	14.0		14.0	
Actuated g/C Ratio	0.76	0.74		0.81	0.77			0.12	0.12		0.12	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	171	3739		136	3904			172	185		138	
v/s Ratio Prot	0.00	c0.69		c0.03	0.36							
v/s Ratio Perm	0.05			0.48				c0.12	0.06		0.02	
v/c Ratio	0.06	0.93		0.62	0.46			1.03	0.52		0.18	
Uniform Delay, d1	3.9	12.8		31.7	5.0			53.0	49.8		47.8	
Progression Factor	1.37	1.01		1.18	2.77			1.00	1.00		1.00	
Incremental Delay, d2	0.1	3.7		5.2	0.1			76.5	10.0		2.9	
Delay (s)	5.5	16.7		42.5	13.9			129.5	59.9		50.7	
Level of Service	A	B		D	B			F	E		D	
Approach Delay (s)		16.7			15.2			98.6			50.7	
Approach LOS		B			B			F			D	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.1%	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												
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	
Lane Util. Factor	1.00	0.86			0.91	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	6408			5085	1583				1681	1504	
Flt Permitted	0.10	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	185	6408			5085	1583				1340	1504	
Volume (vph)	60	3450	0	0	1800	80	0	0	0	30	0	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	1.00	0.95	0.90	0.90	0.90	0.80	0.80	0.80
Adj. Flow (vph)	63	3632	0	0	1800	84	0	0	0	38	0	38
RTOR Reduction (vph)	0	0	0	0	0	19	0	0	0	0	35	0
Lane Group Flow (vph)	63	3632	0	0	1800	65	0	0	0	38	3	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Actuated Green, G (s)	102.4	102.4			92.5	92.5				7.6	7.6	
Effective Green, g (s)	103.4	103.4			93.5	93.5				8.6	8.6	
Actuated g/C Ratio	0.86	0.86			0.78	0.78				0.07	0.07	
Clearance Time (s)	5.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	237	5522			3962	1233				96	108	
v/s Ratio Prot	0.01	c0.57			0.35						0.00	
v/s Ratio Perm	0.22					0.04				c0.03		
v/c Ratio	0.27	0.66			0.45	0.05				0.40	0.03	
Uniform Delay, d1	2.6	2.7			4.5	3.1				53.2	51.8	
Progression Factor	1.65	0.78			1.67	1.21				1.00	1.00	
Incremental Delay, d2	0.3	0.3			0.3	0.1				2.7	0.1	
Delay (s)	4.5	2.4			7.9	3.8				55.9	51.9	
Level of Service	A	A			A	A				E	D	
Approach Delay (s)		2.4			7.7			0.0			53.9	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.94	0.91	1.00	0.97	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	5085	1583	4990	5085	1583	3433	3539	1583	1770	3274	
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.72	1.00	1.00	0.71	1.00	
Satd. Flow (perm)	606	5085	1583	4990	5085	1583	2597	3539	2000	1330	3274	
Volume (vph)	10	1430	130	820	610	50	110	60	1960	40	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.80	0.80	0.80
Adj. Flow (vph)	11	1505	137	863	642	53	116	63	1960	50	12	12
RTOR Reduction (vph)	0	0	80	0	0	20	0	0	0	0	10	0
Lane Group Flow (vph)	11	1505	57	863	642	33	116	63	1960	50	14	0
Turn Type	pm+pt		pm+ov	Prot		Perm	pm+pt		Free	pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2			6	8		Free	4		
Actuated Green, G (s)	40.0	40.0	47.6	34.0	72.6	72.6	26.6	19.0	120.0	25.4	18.4	
Effective Green, g (s)	41.0	41.0	49.6	35.0	73.6	73.6	28.6	20.0	120.0	27.4	19.4	
Actuated g/C Ratio	0.34	0.34	0.41	0.29	0.61	0.61	0.24	0.17	1.00	0.23	0.16	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	1737	654	1455	3119	971	679	590	2000	333	529	
v/s Ratio Prot	0.00	0.30	0.01	0.17	0.13		0.01	0.02		0.01	0.00	
v/s Ratio Perm	0.02		0.03			0.02	0.03		c0.98	0.02		
v/c Ratio	0.05	0.87	0.09	0.59	0.21	0.03	0.17	0.11	0.98	0.15	0.03	
Uniform Delay, d1	26.4	36.9	21.4	36.4	10.3	9.2	36.0	42.4	0.0	36.8	42.3	
Progression Factor	0.86	0.78	1.56	0.62	0.49	0.59	1.23	1.23	1.00	1.00	1.00	
Incremental Delay, d2	0.0	1.9	0.0	1.6	0.0	0.0	0.1	0.3	14.4	1.0	0.1	
Delay (s)	22.7	30.7	33.4	24.4	5.1	5.4	44.6	52.4	14.4	37.7	42.4	
Level of Service	C	C	C	C	A	A	D	D	B	D	D	
Approach Delay (s)		30.8			15.8			17.2			39.3	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	63.0%	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												
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	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1772		3433	5085	1583	1770	5085	1583
Flt Permitted	0.44	1.00	1.00	0.75	1.00		0.95	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	1589	1863	1583	1398	1772		3433	5085	1583	290	5085	1583
Volume (vph)	540	10	370	10	20	10	700	1460	20	20	630	330
Peak-hour factor, PHF	0.90	0.90	0.90	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	11	411	12	25	12	737	1537	21	21	663	347
RTOR Reduction (vph)	0	0	7	0	11	0	0	0	9	0	0	110
Lane Group Flow (vph)	600	11	404	12	26	0	737	1537	12	21	663	237
Turn Type	pm+pt		pm+ov	Perm			Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5		8		5	2		1	6	7
Permitted Phases	4		4	8					2	6		6
Actuated Green, G (s)	33.7	33.7	66.8	5.0	5.0		33.1	68.1	68.1	38.2	38.2	61.9
Effective Green, g (s)	34.7	34.7	68.8	6.0	6.0		34.1	69.1	69.1	39.2	39.2	63.9
Actuated g/C Ratio	0.29	0.29	0.57	0.05	0.05		0.28	0.58	0.58	0.33	0.33	0.53
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	839	539	960	70	89		976	2928	912	147	1661	896
v/s Ratio Prot	c0.15	0.01	0.12		0.01		c0.21	c0.30		0.01	c0.13	0.05
v/s Ratio Perm	c0.06		0.14	0.01					0.01	0.04		0.10
v/c Ratio	0.72	0.02	0.42	0.17	0.29		0.76	0.52	0.01	0.14	0.40	0.26
Uniform Delay, d1	36.8	30.5	14.4	54.6	54.9		39.1	15.5	10.9	29.3	31.3	15.3
Progression Factor	0.99	0.92	0.87	1.00	1.00		0.81	1.16	1.07	0.46	0.45	1.93
Incremental Delay, d2	2.7	0.0	0.3	1.2	1.8		1.9	0.4	0.0	0.4	0.6	0.1
Delay (s)	39.3	28.1	12.7	55.8	56.7		33.7	18.3	11.6	14.0	14.5	29.7
Level of Service	D	C	B	E	E		C	B	B	B	B	C
Approach Delay (s)		28.5			56.5			23.2			19.6	
Approach LOS		C			E			C			B	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.2%	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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.89		1.00	0.87		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1650		1770	1613		1770	5085	1583	1770	5085	1583
Flt Permitted	0.62	1.00		0.61	1.00		0.15	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1152	1650		1130	1613		270	5085	1583	1770	5085	1583
Volume (vph)	30	10	30	300	20	170	30	1690	90	130	1330	10
Peak-hour factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	12	38	353	24	200	32	1779	95	137	1400	11
RTOR Reduction (vph)	0	31	0	0	138	0	0	0	56	0	0	6
Lane Group Flow (vph)	38	19	0	353	86	0	32	1779	39	137	1400	6
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4			8
Actuated Green, G (s)	22.0	19.6		43.6	36.2		51.2	48.8	48.8	12.6	59.0	59.0
Effective Green, g (s)	24.0	20.6		44.6	37.2		53.2	49.8	49.8	13.6	60.0	60.0
Actuated g/C Ratio	0.20	0.17		0.37	0.31		0.44	0.42	0.42	0.11	0.50	0.50
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	248	283		527	500		162	2110	657	201	2543	792
v/s Ratio Prot	0.00	0.01		c0.11	0.05		0.01	c0.35		c0.08	0.28	
v/s Ratio Perm	0.03			c0.14			0.08		0.02			0.00
v/c Ratio	0.15	0.07		0.67	0.17		0.20	0.84	0.06	0.68	0.55	0.01
Uniform Delay, d1	39.2	41.6		29.7	30.2		19.4	31.6	21.1	51.1	20.7	15.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.97	1.01	1.29
Incremental Delay, d2	0.3	0.4		3.2	0.7		0.6	3.3	0.0	6.7	0.2	0.0
Delay (s)	39.5	42.1		32.9	30.9		20.0	34.8	21.1	56.0	21.1	19.5
Level of Service	D	D		C	C		B	C	C	E	C	B
Approach Delay (s)		41.0			32.1			33.9			24.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	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												
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			
Lane Util. Factor	0.97	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			1.00		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3529		1681	1686	1583			
Flt Permitted	0.13	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	459	3539			3529		1681	1686	1583			
Volume (vph)	210	430	0	0	520	10	2010	10	420	0	0	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	233	478	0	0	578	11	2116	11	442	0	0	0
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	29	0	0	0
Lane Group Flow (vph)	233	478	0	0	588	0	1058	1069	413	0	0	0
Turn Type	pm+pt						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)	37.5	37.5			26.5		102.5	102.5	102.5			
Effective Green, g (s)	38.5	38.5			27.5		103.5	103.5	103.5			
Actuated g/C Ratio	0.26	0.26			0.18		0.69	0.69	0.69			
Clearance Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	257	908			647		1160	1163	1092			
v/s Ratio Prot	c0.04	0.14			0.17							
v/s Ratio Perm	c0.19						0.63	0.63	0.26			
v/c Ratio	0.91	0.53			0.91		0.91	0.92	0.38			
Uniform Delay, d1	49.8	47.9			60.0		19.4	19.7	9.7			
Progression Factor	0.85	0.78			1.00		1.00	1.00	1.00			
Incremental Delay, d2	29.2	0.5			16.6		12.3	13.0	1.0			
Delay (s)	71.7	37.9			76.6		31.7	32.7	10.7			
Level of Service	E	D			E		C	C	B			
Approach Delay (s)		49.0			76.6			28.5			0.0	
Approach LOS		D			E			C			A	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	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												
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		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	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	0.86		1.00	0.88	
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	5085	1583	1770	5085	1583	1770	1605		1770	1637	
Flt Permitted	0.04	1.00	1.00	0.08	1.00	1.00	0.71	1.00		0.53	1.00	
Satd. Flow (perm)	79	5085	1583	155	5085	1583	1330	1605		990	1637	
Volume (vph)	10	1680	170	100	3020	40	180	10	120	50	10	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	11	1768	179	105	3179	42	212	12	141	62	12	50
RTOR Reduction (vph)	0	0	51	0	0	10	0	53	0	0	35	0
Lane Group Flow (vph)	11	1768	128	105	3179	32	212	100	0	62	27	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	94.9	93.3	93.3	106.4	99.8	99.8	33.6	33.6		33.6	33.6	
Effective Green, g (s)	96.9	94.3	94.3	107.4	100.8	100.8	34.6	34.6		34.6	34.6	
Actuated g/C Ratio	0.65	0.63	0.63	0.72	0.67	0.67	0.23	0.23		0.23	0.23	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	80	3197	995	209	3417	1064	307	370		228	378	
v/s Ratio Prot	0.00	0.35		c0.03	c0.63			0.06			0.02	
v/s Ratio Perm	0.09		0.08	0.33		0.02	c0.16			0.06		
v/c Ratio	0.14	0.55	0.13	0.50	0.93	0.03	0.69	0.27		0.27	0.07	
Uniform Delay, d1	31.1	15.9	11.3	12.5	21.5	8.2	52.8	47.3		47.4	45.1	
Progression Factor	1.31	1.15	2.00	1.07	1.19	1.10	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2	0.0	1.2	3.7	0.0	12.0	1.8		2.9	0.4	
Delay (s)	41.2	18.4	22.6	14.7	29.3	9.0	64.8	49.1		50.3	45.5	
Level of Service	D	B	C	B	C	A	E	D		D	D	
Approach Delay (s)		18.9			28.6			58.3			47.9	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.3%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	0.95	
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)	1770	5085	1583	1770	5085	1583	3433	1863	1583	1770	3326	
Flt Permitted	0.05	1.00	1.00	0.07	1.00	1.00	0.95	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	99	5085	1583	138	5085	1583	3433	1863	1583	1054	3326	
Volume (vph)	130	1550	370	170	2980	120	550	200	140	160	210	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1632	389	179	3137	126	611	222	156	178	233	156
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	125	0	57	0
Lane Group Flow (vph)	137	1632	389	179	3137	89	611	222	31	178	332	0
Turn Type	pm+pt		Free	pm+pt		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8			2	6		
Actuated Green, G (s)	79.9	73.9	150.0	94.0	83.0	83.0	24.0	28.4	28.4	29.6	17.0	
Effective Green, g (s)	81.9	74.9	150.0	95.0	84.0	84.0	25.0	29.4	29.4	31.6	18.0	
Actuated g/C Ratio	0.55	0.50	1.00	0.63	0.56	0.56	0.17	0.20	0.20	0.21	0.12	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	132	2539	1583	263	2848	886	572	365	310	287	399	
v/s Ratio Prot	c0.05	0.32		0.07	c0.62		c0.18	0.12		0.06	c0.10	
v/s Ratio Perm	0.52		0.25	0.36		0.06			0.02	0.07		
v/c Ratio	1.04	0.64	0.25	0.68	1.10	0.10	1.07	0.61	0.10	0.62	0.83	
Uniform Delay, d1	73.7	27.7	0.0	31.0	33.0	15.4	62.5	55.0	49.4	52.0	64.5	
Progression Factor	1.28	1.24	1.00	1.35	0.84	1.67	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	69.2	0.3	0.2	3.1	48.5	0.0	57.1	7.3	0.6	4.1	18.0	
Delay (s)	163.6	34.6	0.2	44.9	76.1	25.7	119.6	62.4	50.1	56.1	82.5	
Level of Service	F	C	A	D	E	C	F	E	D	E	F	
Approach Delay (s)		36.6			72.6			95.8			74.2	
Approach LOS		D			E			F			E	

Intersection Summary			
HCM Average Control Delay	65.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.1%	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												
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	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	5026		1770	5083			1777	1583		1727	
Flt Permitted	0.05	1.00		0.04	1.00			0.69	1.00		0.60	
Satd. Flow (perm)	86	5026		82	5083			1286	1583		1058	
Volume (vph)	30	2120	180	100	3080	10	310	10	80	20	10	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	32	2232	189	105	3242	11	365	12	94	25	12	25
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	32	0	15	0
Lane Group Flow (vph)	32	2415	0	105	3253	0	0	377	62	0	47	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	89.3	86.1		98.7	90.8			41.0	41.0		41.0	
Effective Green, g (s)	91.3	87.1		100.0	91.8			42.0	42.0		42.0	
Actuated g/C Ratio	0.61	0.58		0.67	0.61			0.28	0.28		0.28	
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0		5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	99	2918		155	3111			360	443		296	
v/s Ratio Prot	0.01	0.48		c0.04	c0.64							
v/s Ratio Perm	0.19			0.41				c0.29	0.04		0.04	
v/c Ratio	0.32	0.83		0.68	1.05			1.05	0.14		0.16	
Uniform Delay, d1	72.2	25.4		36.6	29.1			54.0	40.5		40.7	
Progression Factor	1.49	0.44		1.16	1.02			1.00	1.00		1.00	
Incremental Delay, d2	1.6	1.8		1.1	21.6			60.3	0.7		1.1	
Delay (s)	109.2	13.0		43.6	51.4			114.3	41.1		41.8	
Level of Service	F	B		D	D			F	D		D	
Approach Delay (s)		14.2			51.1			99.7			41.8	
Approach LOS		B			D			F			D	

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.4%	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												
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	
Lane Util. Factor	1.00	0.86			0.91	1.00				0.95	0.95	
Frt	1.00	1.00			1.00	0.85				1.00	0.90	
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.98	
Satd. Flow (prot)	1770	6408			5085	1583				1681	1568	
Flt Permitted	0.04	1.00			1.00	1.00				0.76	0.89	
Satd. Flow (perm)	72	6408			5085	1583				1340	1413	
Volume (vph)	180	2380	0	0	3090	180	0	0	0	250	0	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	189	2505	0	0	3253	189	0	0	0	294	0	176
RTOR Reduction (vph)	0	0	0	0	0	41	0	0	0	0	46	0
Lane Group Flow (vph)	189	2505	0	0	3253	148	0	0	0	202	222	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Actuated Green, G (s)	116.6	116.6			98.6	98.6				23.4	23.4	
Effective Green, g (s)	117.6	117.6			99.6	99.6				24.4	24.4	
Actuated g/C Ratio	0.78	0.78			0.66	0.66				0.16	0.16	
Clearance Time (s)	5.0	5.0			5.0	5.0				5.0	5.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	215	5024			3376	1051				218	230	
v/s Ratio Prot	c0.08	0.39			c0.64							
v/s Ratio Perm	0.61					0.09				0.15	c0.16	
v/c Ratio	0.88	0.50			0.96	0.14				0.93	0.96	
Uniform Delay, d1	61.4	5.7			23.5	9.3				61.9	62.4	
Progression Factor	1.19	0.63			1.13	0.73				1.00	1.00	
Incremental Delay, d2	24.0	0.3			1.2	0.0				40.7	49.1	
Delay (s)	97.2	3.9			27.8	6.9				102.6	111.4	
Level of Service	F	A			C	A				F	F	
Approach Delay (s)		10.4			26.7			0.0			107.7	
Approach LOS		B			C			A			F	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	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												
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	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.94	0.91	1.00	0.97	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	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)	1770	5085	1583	4990	5085	1583	3433	3539	1583	1770	3361	
Flt Permitted	0.17	1.00	1.00	0.95	1.00	1.00	0.43	1.00	1.00	0.74	1.00	
Satd. Flow (perm)	321	5085	1583	4990	5085	1583	1555	3539	2000	1384	3361	
Volume (vph)	30	920	180	1950	1370	20	330	20	1380	70	60	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.80	0.80	0.80
Adj. Flow (vph)	32	968	189	2053	1442	21	347	21	1453	88	75	38
RTOR Reduction (vph)	0	0	17	0	0	6	0	0	0	0	36	0
Lane Group Flow (vph)	32	968	172	2053	1442	15	347	21	1453	88	77	0
Turn Type	pm+pt		pm+ov	Prot		Perm	pm+pt		Free	pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases	2		2			6	8		Free	4		
Actuated Green, G (s)	39.2	36.0	50.9	71.0	103.8	103.8	28.0	16.0	150.0	15.1	8.1	
Effective Green, g (s)	41.2	37.0	52.9	72.0	104.8	104.8	29.0	17.0	150.0	17.1	9.1	
Actuated g/C Ratio	0.27	0.25	0.35	0.48	0.70	0.70	0.19	0.11	1.00	0.11	0.06	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	129	1254	600	2395	3553	1106	500	401	2000	178	204	
v/s Ratio Prot	0.01	0.19	0.03	c0.41	0.28		0.07	0.01		0.03	0.02	
v/s Ratio Perm	0.06		0.08			0.01	0.06		c0.73	0.03		
v/c Ratio	0.25	0.77	0.29	0.86	0.41	0.01	0.69	0.05	0.73	0.49	0.38	
Uniform Delay, d1	43.8	52.6	35.0	34.5	9.5	6.9	54.4	59.3	0.0	62.0	67.7	
Progression Factor	1.21	0.83	0.89	0.51	1.40	1.55	0.88	0.88	1.00	1.00	1.00	
Incremental Delay, d2	0.8	3.8	0.2	1.5	0.0	0.0	3.5	0.2	2.0	9.5	5.3	
Delay (s)	53.9	47.6	31.5	19.2	13.4	10.7	51.5	52.4	2.0	71.4	73.0	
Level of Service	D	D	C	B	B	B	D	D	A	E	E	
Approach Delay (s)		45.2			16.8			12.0			72.3	
Approach LOS		D			B			B			E	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	80.9%	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												
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	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1583	1770	1723		3433	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00	1.00	0.72	1.00		0.95	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	3433	1863	1583	1346	1723		3433	5085	1583	473	5085	1583
Volume (vph)	660	50	700	60	40	40	600	1020	10	20	1470	440
Peak-hour factor, PHF	0.95	0.95	0.95	0.80	0.80	0.80	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	695	53	737	75	50	50	632	1074	11	21	1547	463
RTOR Reduction (vph)	0	0	1	0	24	0	0	0	5	0	0	71
Lane Group Flow (vph)	695	53	736	75	76	0	632	1074	6	21	1547	392
Turn Type	Prot		pm+ov	Perm			Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5		8		5	2		1	6	7
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	33.3	49.4	82.1	11.1	11.1		32.7	83.2	83.2	55.3	52.9	86.2
Effective Green, g (s)	34.3	50.4	84.1	12.1	12.1		33.7	84.2	84.2	57.3	53.9	88.2
Actuated g/C Ratio	0.23	0.34	0.56	0.08	0.08		0.22	0.56	0.56	0.38	0.36	0.59
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	785	626	930	109	139		771	2854	889	210	1827	931
v/s Ratio Prot	c0.20	0.03	c0.18		0.04		c0.18	0.21		0.00	c0.30	0.10
v/s Ratio Perm			0.29	0.06					0.00	0.04		0.15
v/c Ratio	0.89	0.08	0.79	0.69	0.55		0.82	0.38	0.01	0.10	0.85	0.42
Uniform Delay, d1	55.9	34.0	26.0	67.1	66.3		55.3	18.3	14.5	29.0	44.2	16.9
Progression Factor	1.15	1.22	0.72	1.00	1.00		0.92	0.70	0.57	0.64	0.55	2.26
Incremental Delay, d2	9.4	0.0	3.7	16.6	4.4		6.2	0.3	0.0	0.1	3.0	0.2
Delay (s)	73.7	41.6	22.4	83.7	70.7		56.8	13.2	8.3	18.5	27.5	38.4
Level of Service	E	D	C	F	E		E	B	A	B	C	D
Approach Delay (s)		47.1			76.2			29.2			29.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
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												
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	4.0	4.0
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.90		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1676		3433	1610		1770	3539	1583	3433	3539	1583
Flt Permitted	0.35	1.00		0.50	1.00		0.05	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	645	1676		1814	1610		90	3539	1583	3433	3539	1583
Volume (vph)	30	20	40	380	20	190	60	1950	230	220	1810	30
Peak-hour factor, PHF	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	25	50	422	22	211	63	2053	242	232	1905	32
RTOR Reduction (vph)	0	45	0	0	97	0	0	0	92	0	0	8
Lane Group Flow (vph)	38	30	0	422	136	0	63	2053	150	232	1905	24
Turn Type	pm+pt			pm+pt			pm+pt		Perm	Prot		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4		4			8
Actuated Green, G (s)	18.2	15.0		31.0	22.8		98.0	92.1	92.1	11.9	98.1	98.1
Effective Green, g (s)	20.2	16.0		32.0	23.8		100.0	93.1	93.1	12.9	99.1	99.1
Actuated g/C Ratio	0.13	0.11		0.21	0.16		0.67	0.62	0.62	0.09	0.66	0.66
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	179		517	255		137	2197	983	295	2338	1046
v/s Ratio Prot	0.01	0.02		c0.07	0.08		0.02	c0.58		c0.07	0.54	
v/s Ratio Perm	0.03			c0.11			0.29		0.09			0.02
v/c Ratio	0.32	0.17		0.82	0.53		0.46	0.93	0.15	0.79	0.81	0.02
Uniform Delay, d1	57.6	61.0		54.8	58.0		22.4	25.7	11.9	67.2	18.7	8.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.93	1.00	1.58
Incremental Delay, d2	1.6	2.0		9.6	7.8		2.4	8.1	0.1	7.6	1.3	0.0
Delay (s)	59.1	63.0		64.4	65.8		24.9	33.8	12.0	70.0	19.9	13.8
Level of Service	E	E		E	E		C	C	B	E	B	B
Approach Delay (s)		61.7			64.9			31.3			25.2	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Appendix J

Roadway Network Improvements (MTP)

Note that the river crossings are all still mostly red (e.g congested), but that most of the other facilities have excess capacity available during the p.m. peak period. This information is important because it illustrates a significant opportunity to get beyond the sea of congestion represented in Map V-5. The challenge lies in this region's ability to change travel behavior enough to shift a portion of the travel demand projected for the peak *hour* out of that hour so it occurs either before or after: during the peak period when there is excess capacity available to accommodate this demand (also see Section V Cf).

Table V-11 lists each roadway project shown in the above maps by time period, lead agency and project cost. Lead agencies have been identified for each project to indicate the agency most likely to take the lead in developing and constructing each project. This designation is not intended to place sole funding responsibility on that agency. Funding and local match decisions are made as part of the Transportation Improvement Program process.

Table V-11 **Roadway Projects by Time Period, Lead Agency, and Project Cost, 2003 – 2025**

2003-2005 – Roadway Network

Facility	Termini	Activity	Total Project Cost	Agency
Isleta	Bridge to Arenal	Recon. 2 to 3 lanes	$7,300,000	BCO
Golf Course	Irving to Paradise	Recon. 2 to 5 lanes	$3,130,000	BCO
		Total	$10,430,000	
2nd St./Montaño	Intersection	Recon.	$2,982,000	COA
Jefferson/Ellison	Intersection	Recon.	$1,100,000	COA
Wyoming	Paseo del Norte to Alameda	Recon. 2 to 4 lanes	$3,700,000	COA
Uptown Loop	S.E. Quadrant	New 4 lanes	$1,400,000	COA
Eubank	Montgomery to Juan Tabo	Recon. 4 to 6 lanes	$2,556,000	COA
Lead/Coal	Broadway to I-25	Lane reductions 4 to 3	$3,800,000	COA
Central	8th to Lomas	Lane reductions 4 to 3		COA
Downtown	2nd/3rd/5th/6th	Two way conversion	$4,500,000	COA
Gibson	I-25 to Carlisle	Recon.	$7,500,000	COA
Gibson Extension	Eubank to Juan Tabo	Recon. 2 to 4 lanes	$2,802,800	COA

2003-2005 – Roadway Network (continued)

Facility	Termini	Activity	Total Project Cost	Agency
Eubank	Central to KAFB	Recon. 4 to 6 lanes	$3,600,000	COA
Golf Course	Westside to Irving (Irving/Westside)	Recon. 2 to 4 lanes	$19,400,000	COA
McMahon	Coors Bypass to Golf Course	Recon.	$0	COA
McMahon	Golf Course to Unser	Recon. 2 to 4 lanes	$17,800,000	COA
Unser	Montaño to Atrisco	New 4 lanes	$12,070,000	COA
		Total	$83,210,800	
4th St.	City limits to Schulte	Recon.	$4,970,000	LR
		Total	$4,970,000	
I-40/N.M. 217	Bridge Replacement	Recon.	$1,500,000	NMSHTD
PDN/I-25	Eastside Ramps/Frontage	Recon.	$4,000,000	NMSHTD
Louisiana/I-25	Interchange	Recon.	$17,000,000	NMSHTD
I-40 EBD	Wyoming to Tramway	Recon. + auxiliary lanes	$15,000,000	NMSHTD
I-40 WBD	Wyoming to Tramway	Recon. + auxiliary lanes	$12,500,000	NMSHTD
I-40 EBD and WBD	Sedillo Hill	Recon.	$12,500,000	NMSHTD
I-25 NBD and SBD	Rio Bravo to Broadway	Recon.	$6,000,000	NMSHTD
I-25 NBD and SBD	Alameda to Tramway	Paving + auxiliary lanes	$710,000	NMSHTD
I-25	South Bernalillo Intch.	Recon.	$2,500,000	NMSHTD
N.M. 528	Coors Bypass to Sara	Recon. 4 to 8 lanes	$22,000,000	NMSHTD
N.M. 528	Sara to Southern	Recon. 4 to 6 lanes	$0	NMSHTD
		Total	$93,710,000	
Bluewater	90th – 98th	New 4 lanes	$4,274,768	Private
Eucariz	106th – 114th	Recon. 2 to 4 lanes	$1,234,264	Private
114th St.	Eucariz to Central	Recon. 2 to 4 lanes	$1,234,264	Private
Sage	Devargas to 118th	Recon. 2 to 4 lanes	$1,113,848	Private
106th St.	Eucariz to Central	New 2 lanes	$1,836,344	Private
Unser	Central to Sage	New 2 lanes	$3,973,728	Private
98th St.	Extension	New 4 lanes	$5,057,472	Private
Old 98th St.	End of Road to 98th	New 4 lanes	$2,950,192	Private
Universe	Ventana Way to Irving	New 2 lanes	$842,912	Private
Universe	Irving to TVI	New 2 lanes	$1,264,368	Private
Irving	Universe to Rainbow	New 2 lanes	$1,565,408	Private
Chayote	Enchanted Hills to U.S. 550	New 4 lanes	$1,420,000	Private
Unser	Paseo del Norte to Paradise	New 2 lanes	$3,672,688	Private
Paseo del Norte	Universe to Kimmick	New 2 lanes	$2,408,320	Private
		Total	$32,848,576	
Golf Course	Southern to Westside	Recon. 2 to 5 lanes	$3,500,000	RR
40th St.	Northern to Idalia	New 2 lanes	$468,600	RR
Idalia	40th to 30th/Northern	New 2 lanes	$1,888,600	RR
Unser	Abrazo to Cherry	Recon. 2 to 4 lanes	$3,124,000	RR
		Total	$8,981,200	

2006-2010 – Roadway Network

Facility	Termini	Activity	Total Project Cost	Agency
Isleta Phase II	Arenal to Rio Bravo	2 to 3 & 5 lanes	$19,880,000	BCO
		Total	$19,880,000	
2nd St./Menaul	Intersection	Recon.	$3,550,000	COA
Montaño	2nd St. to I-25	Recon. 4 to 6 lanes	$2,982,000	COA
Osuna	Vista Del Norte to Jefferson	Recon. 4 to 6 lanes	$1,562,000	COA
Pennsylvania	I-40 to Lomas	Restripe 4 to 3 lanes	$90,880	COA
Tingley Zoo Access	Recon. 2 lanes	Realign/Bridge Conn.	$20,590,000	COA
Lead/Coal	Broadway to 8th	Two way conversion	$1,420,000	COA
Gibson	KAFB Gate Recon.	Wyoming/Gibson	$8,094,000	COA
McMahon	Unser to Universe	New 4 lanes	$12,070,000	COA
McMahon	Universe to Rainbow	New 2 lanes	$3,976,000	COA
Unser	Atrisco to Paseo del Norte	New 4 lanes	$4,047,000	COA
Unser	Paseo del Norte to Paradise	Recon. 2 to 4 lanes	$7,060,240	COA
Unser	Dellyne to Montaño	Recon.	$2,130,000	COA
Unser	Bandelier to Westside	Recon. 2 to 4 lanes	$4,970,000	COA
Paseo del Norte	Golf Course to Unser	New 4 lanes	$12,780,000	COA
Double Eagle	Central to Double Eagle Airport	Recon. 2 to 4 lanes	$24,140,000	COA
		Total	$109,462,120	
4th St.	Osuna to Alameda	Restripe 4 to 3 lanes	$806,560	LR
		Total	$806,560	
Coors	Paseo del Norte to Coors Bypass	Additional NBD lane	$3,182,000	NMSHTD
I-40 EBD/WBD	San Mateo to Wyoming	Recon. + auxiliary lanes	$28,400,000	NMSHTD
I-40/Pennsylvania	Bridge Replacement	Recon.	$3,124,000	NMSHTD
I-40/West Central	Interchange	Recon.	$14,200,000	NMSHTD
I-40 WBD	MP 170-173	Recon.	$21,300,000	NMSHTD
I-40 WBD	MP 182-184	Recon.	$2,840,000	NMSHTD
I-40/Zuzak Intch.	Bridge Replacement	Recon.	$2,840,000	NMSHTD
		Total	$75,886,000	
19th	Golf Course to Unser	New 2 lanes	$5,789,000	Private
University Extension	Rio Bravo to Mesa Del Sol	New 4 lane	$21,300,000	Private
Gibson West	Unser to 118th	New 2 lanes	$6,561,252	Private
98th	EOP to Blake	New 2 lanes	$3,044,764	Private
Unser	Central to Sage	Recon. 2 to 4 lanes	$7,640,054	Private
Unser	End South to Blake	New 2 lanes	$3,044,764	Private
Ladera	90th St. to 98th St.	New 2 lanes	$3,902,444	Private
Old 98th	Middle Section	New 4 lanes	$3,259,184	Private
Rainbow	Irving to McMahon	New 2 lanes	$2,701,692	Private
Irving	Universe to Rainbow	Recon. 2 to 4 lanes	$3,009,718	Private
Irving	La Paz to Universe	Recon. 2 to 4 lanes	$3,762,148	Private
Universe	TVI to McMahon	New 2 lanes	$943,448	Private

2006-2010 – Roadway Network (continued)

Facility	Termini	Activity	Total Project Cost	Agency
Universe	Paradise to Irving	Recon. 2 to 4 lanes	$2,893,960	Private
Paseo del Norte	Rainbow to Kimmick	Recon. 2 to 4 lanes	$7,639,600	Private
		Total	$75,492,029	
Unser	Cherry Road to King Blvd.	Recon. 2 to 4 lanes	$5,680,000	RR
Northern	34th to Unser	Recon. 2 to 5 lanes	$4,970,000	RR
Southern	15th St. to 4th St.	Recon. 2/3 to 5 lanes	$5,680,000	RR
Westside Blvd.	Golf Course to Unser	New 2 lanes	$2,982,000	RR
Rainbow	Northern to King	New 2 lanes	$2,414,000	RR
Broadmoor	Northern to 28th Ave.	New 2 lanes	$2,840,000	RR
		Total	$24,566,000	

2011-2015 – Roadway Network

Facility	Termini	Activity	Total Project Cost	Agency
Arenal	Coors to Tapia	Recon. 3 lanes	$11,360,000	BCO
		Total	$11,360,000	
Irving	Rio Los Pinos to Unser	Recon. 2 to 4 lanes	$2,318,008	COA
2nd St.	I-40 to Candelaria	ROW/Design	$6,035,000	COA
		Total	$8,353,008	
N.M. 528	Southern to Northern	Recon. 4 to 6 lanes	$21,300,000	NMSHTD
I-40/San Mateo Intch.	Interchange	Recon.	$18,460,000	NMSHTD
I-40/Washington	Bridge Replacement	Recon.	$3,550,000	NMSHTD
I-40 EBD and WBD	Carlisle to San Mateo	Recon. + auxiliary lanes	$21,300,000	NMSHTD
I-40/Coors	Interchange	Recon. + additional lanes	$71,000,000	NMSHTD
		Total	$135,610,000	
Rainbow	Paseo del Norte to Unser	New 2 lanes	$7,846,920	Private
118th St.	Central to Gibson West	New 2 lanes	$5,749,864	Private
Blake	Unser to 98th	New 2 lanes	$1,384,784	Private
98th St.	Blake to Rio Bravo	New 2 lanes	$3,010,400	Private
Unser	Blake to Rio Bravo	New 2 lanes	$2,889,984	Private
Old 98th St.	98th to 118th	New 2 lanes	$2,438,424	Private
Ladera	98th to Lower St.	New 2 lanes	$4,154,352	Private
Cross St.	98th to Ladera	New 2 lanes	$2,137,384	Private
Arenal	Rayo Del Sol to Coors	Recon. 2 to 4 lanes	$3,371,080	Private
98th St.	Cross St. to Lower St.	New 4 lanes	$1,986,864	Private
Lower St.	Ladera to 98th St.	New 2 lanes	$2,920,088	Private
118th St.	Ladera to Lower St.	New 2 lanes	$1,896,552	Private
Alameda	San Pedro to Wyoming	Recon. 2 to 4 lanes	$17,040,000	Private
		Total	$56,826,696	

2011-2015 – Roadway Network (continued)

Facility	Termini	Activity	Total Project Cost	Agency
Chayote	Enchanted Hills to Idalia	New 2 lanes	$6,390,000	RR
Westside	Golf Course to Unser	Recon. 2 to 4 lanes	$14,200,000	RR
		Total	$20,590,000	
Unser Blvd.	Paradise to Irving	Recon. 2 to 4 lanes	$7,952,000	Unified
		Total	$7,952,000	

2016-2025 – Roadway Network

Facility	Termini	Activity	Total Project Cost	Agency
Edith	Candelaria to Montaño	Recon. 2 to 5 lanes	$14,200,000	BCO
Isleta	Rio Bravo to Gun Club	Recon.	$4,260,000	BCO
Alameda	Barstow to PDN	New 2 lane/recon.	$22,000,000	BCO
		Total	$40,460,000	
2nd St.	I-40 to Montaño	Recon. 4 to 6 lanes	$20,500,000	COA
Coors/Quail	Intersection	Improvements	$15,000,000	COA
MLK/Tijeras	2nd St. to 6th St.	Two way conversion	$1,615,960	COA
Gibson Extension	Louisiana to Eubank	New 6 lanes	$22,720,000	COA
Lead/Coal	University to Washington	Reduce lanes	$852,000	COA
Sunport	I-25 to Broadway	New 4 lanes	$5,030,000	NMSHTD
		Total	$65,717,960	
I-25 and I-40	Both Directions	Managed lanes	$15,000,000	NMSHTD
I-25/Rio Bravo	Interchange	Recon.	$20,000,000	NMSHTD
I-25/Tramway	Interchange	Recon.	$19,880,000	NMSHTD
I-25 NBD and SBD	Rio Bravo to Gibson	Recon./additional lane	$21,300,000	NMSHTD
I-25 NBD and SBD	Tramway to U.S. 550	Recon./additional lanes	$40,000,000	NMSHTD
I-40 WBD	MP 173 – 180.5 (Tijeras Can.)	Recon.	$38,340,000	NMSHTD
Jefferson/Paseo del Norte	Interchange	New interchange	$20,000,000	NMSHTD
Paseo del Volcan	I-40 to U.S. 550	Right-of-way	$10,000,000	NMSHTD
SW Transportation Corridor	I-25 to Sen. Dennis Chavez	New 2 lanes	$45,000,000	NMSHTD
		Total	$229,520,000	
Old 98th St.	Beginning of Project to Unser	Recon. 2 to 4 lanes	$7,523,160	Private
Ladera	Beginning of Project to 98th St.	Recon. 2 to 4 lanes	$5,266,780	Private
98th St.	Lower St. to Double Eagle	New 4 lanes	$17,495,820	Private
Ladera	Lower St. to Double Eagle	New 2 lanes	$6,989,240	Private
Middle St.	Ladera to 98th St.	New 2 lanes	$4,159,180	Private
Rio Bravo	98th to Coors	Recon. 2 to 4 lanes	$8,392,200	Private
118th St.	Gibson W. to Rio Bravo	New 2 lanes	$4,759,840	Private

2016-2025 – Roadway Network (continued)

Facility	Termini	Activity	Total Project Cost	Agency
Unser	Rio Bravo to Gun Club	New 2 lanes	$3,944,760	Private
Unser	Gibson W. to Rio Bravo	Recon. 2 to 4 lanes	$7,176,680	Private
Paseo del Norte	Double Eagle to Rainbow	Recon. 2 to 4 lanes	$24,482,220	Private
Rainbow	Irving to McMahon	Recon. 2 to 4 lanes	$3,645,140	Private
Rainbow	Paseo del Norte to Unser	Recon. 2 to 4 lanes	$10,591,780	Private
Universe	Irving to McMahon	Recon. 2 to 4 lanes	$3,704,780	Private
McMahon	Rainbow to Unser	Recon. 2 to 4 lanes	$12,789,940	Private
Irving	La Paz to Unser	Recon. 2 to 4 lanes	$4,340,940	Private
Paseo del Norte	Double Eagle West 1.3 Miles	New 4 lanes	$11,406,860	Private
Mesa Del Sol Interchange	Mesa Del Sol/I-25		$21,300,000	Private
Mesa Del Sol Parkway	I-25 to Loop Road		$8,008,800	Private
		Total	$165,978,120	
Paseo del Volcan	Chayote to U.S. 550	New 2 lanes	$4,828,000	RR
40th St.	Idalia to 28th/Paseo del Volcan	New 2 lanes	$2,130,000	RR
28th St./Paseo del Volcan	Unser to Chayote	New 2 lanes	$6,543,360	RR
Unser Blvd.	King Blvd. to U.S. 550	Recon. 2 to 4 lanes	$23,117,600	RR
		Total	$36,618,960	
Eubank	San Antonio to Paseo del Norte	Recon. 2 to 4 lanes	$14,200,000	Unified
		Total	$14,200,000	

Table V-12 illustrates that most of the funding in this MTP for roadway projects (72 percent) is for reconstructing and adding lanes to existing facilities. Construction of new roadways accounts for 28 percent, but 62 percent of this cost is projected to be borne by the private sector. For *all* roadway projects included in this MTP, the private share is projected to be 31 percent and the public share 69 percent.

Please note that the total costs in these tables do not match the project costs for roadway expenditures shown in Section VI C because these tables reflect total funding (including monies accumulated before 2003) whereas Section VI C only covers the life of the MTP (2003 - 2025). In addition, Tables V-11 and V-12 reflect total project costs, which include the provision of bike facilities (when applicable) and these facilities are accounted for separately in the financial worksheets in Section VI C.

Appendix K

Roadway Access Policies

NM 528

INITIAL CORRIDOR ANALYSIS

TPU-4020(7)05, CN3248

MAY 1998

PREPARED FOR NEW MEXICO STATE HIGHWAY

AND TRANSPORTATION DEPARTMENT

14. *Access*

a) Turnouts/Driveways

There are a large number of driveways and turnouts throughout the study area. The NMSH&TD Regulations for Driveways and Median Openings on Non-Access Controlled Highways states that driveways on urban arterial (primary) shall be allowed at major traffic generators and for arterial (secondary) shall be allowed one per 61 m (200 ft) of frontage. In the southern section of the corridor there are several examples of inadequate spacing between driveways and turnouts. One of these is the area between New Ellison and Old Ellison. There are two turnouts on the south side of the street and five turnouts on the north side of the street in a distance of 551 m (1,808 feet). Another example is the zone between Sara and Hilltop Plaza that has a length of only 305 m (1,001 feet). There are four turnouts on the west side of the road and two turnouts on the east side of the road. Both of these locations satisfy the regulations over the section, but some of the turnouts are grouped closely together and do not satisfy the minimum requirements or have more than one entrance per generator. The northern section of the corridor has larger distances between the intersections, but there are still some areas with inadequate spacing between driveways. Between Idalia and Enchanted Hills there are 4 turnouts and 10 driveways on the west side of the roadway and 1 turnout and 1 driveway on the east side of the roadway. This section has a length of 1,405 m (4,610 feet), but the driveways and turnouts are clustered in a small area of this zone. Another case of this can be seen between Rockaway and Obregon-Corrales. There are four turnouts and 1 driveway on the west side of the road and 7 turnouts on the east side of the road. The distance between these two intersections is 2,613 m (8,573 feet), but again the driveways and turnouts are concentrated in a small area. Consolidation of driveways and turnouts should be considered to eliminate unnecessary congestion on NM528. Following is a summary of driveways and turnouts along the corridor.

Wal-Mart/Home Base to New Ellison 394 m (1,292 ft)

South Side

- 2 turnouts

North Side

- 2 turnouts

New Ellison to Old Ellison 551 m (1,808 ft)

South Side

- 2 turnouts

North Side

- 5 turnouts

Old Ellison to Westside 1,930 m (6,332 ft)

North Side

- 2 turnouts

Westside to 19th

West Side

- 2 turnouts

East Side

- 1 turnout

19th to Sara 767 m (2,516 ft)

West Side

- 1 turnout

East Side

- 1 turnout

Sara to Hilltop Plaza 305 m (1,001 ft)

West Side

- 4 turnouts

East Side

- 2 turnouts

Hilltop Plaza to Barbara Loop 361 m (1,183 ft)

West Side

- 1 turnout

East Side

- 1 turnout

Barbara Loop to Southern 537 m (1,763 ft)

East Side

- 2 turnouts

Sabana Grande to High Resort 566 m (1,858 ft)

East Side

- 1 turnout

High Resort to Ridgecrest 815 m (2,675 ft)

West Side

- 2 turnouts

Ridgecrest to Sundt 954 m (3,129 ft)

West Side

- 1 turnout

East Side

- 2 turnout

Sundt to Rockaway 371 m (1,216 ft)

West Side

- 2 turnouts

Rockaway to Corrales 2,594 m (8,512 ft)

West Side

- 4 turnouts
- 1 driveway

East Side

- 7 turnouts

Iris to Idalia 1,926 m (6,320 ft)

West Side

- 1 turnout

Idalia to Enchanted Hills 1,405 m (4,610 ft)

West Side

- 4 turnouts
- 10 driveways

East side

- 1 turnout
- 1 driveway

Enchanted Hills to NM44 662 m (2,171 ft)

West Side

- 2 turnouts
- 3 driveways

East Side

- 1 driveway

b) Access Control Policy

As mentioned previously, consolidation of driveways and turnouts will be considered, where practicable, in order to eliminate unnecessary congestion on NM528. Sections with a large number of turnouts and driveways are from Corrales Road/NM448 to Ellison, from Sara Road to Hilltop Plaza, and from Idalia Road to NM44.

Raised medians will be used throughout the corridor as an access management device. A large portion of NM528, particularly through the middle section in Rio Rancho, already has raised medians for this purpose. These raised medians would provide median cuts every ¼ mile with left-in/right-in/right-out access to adjacent properties. Traffic signals should be limited to no less than ½ mile spacing to ensure reasonable progression on NM528 and prevent unnecessary delay and vehicle emissions. Locations that satisfy these criteria are noted on Figure 2, page 8.

These policies may be more difficult to implement in the southern and middle sections of the corridor due to existing development, but strict adherence to this policy, especially in the section of NM528 from Northern Boulevard to NM44, will allow more efficient operation of the facility.

15. Speed Limits

The speed limit varies throughout the corridor and by direction of travel. The posted speed limits for the various sections are shown below:

Northbound

Homebase/Wal-Mart to (Old) Ellison	35 mph
(Old) Ellison to High Resort	40 mph
High Resort to Northern	45 mph
Northern to NM44	55 mph

Southbound

Homebase/Wal-Mart to New Ellison/Calle Cuervo	35 mph
New Ellison/Calle Cuervo to Sabana Grande	40 mph
Northern to Sabana Grande	45 mph
NM44 to Northern	55 mph

Appendix L

Turning Movement Count Data Sheets

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: Fine
Comments: None
Machine: D-2389
Operator: CM

File Name : N.M. 165 and I-25 East Ramps
Site Code : 00015907
Start Date : 02/25/2004
Page No : 1

Groups Printed- Cars - Trucks

	I-25 East Ramps From North					N.M. 165 From East					I-25 East Ramps From South					N.M. 165 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	0	0	0	0	0	0	146	3	0	149	132	0	22	0	154	143	22	0	0	165	468
Total	0	0	0	0	0	0	146	3	0	149	132	0	22	0	154	143	22	0	0	165	468
07:00	0	0	0	0	0	0	143	4	0	147	120	2	16	0	138	142	15	0	0	157	442
07:15	0	0	0	0	0	0	195	15	0	210	136	0	20	0	156	131	17	0	0	148	514
07:30	0	0	0	0	0	0	187	7	0	194	140	2	24	0	166	122	24	0	0	146	506
07:45	0	0	0	0	0	0	169	5	0	174	145	0	24	0	169	97	26	0	0	123	466
Total	0	0	0	0	0	0	694	31	0	725	541	4	84	0	629	492	82	0	0	574	1926
08:00	0	0	0	0	0	0	152	5	0	157	86	0	18	0	104	94	28	0	0	122	383
08:15	0	0	0	0	0	0	80	2	0	82	80	0	22	0	102	94	15	0	0	109	293
08:30	0	0	0	0	0	0	109	4	0	113	129	0	19	0	148	73	30	0	0	103	364
08:45	0	0	0	0	0	0	110	6	0	116	121	1	21	0	143	71	27	0	0	98	357
Total	0	0	0	0	0	0	451	17	0	468	416	1	80	0	497	332	100	0	0	432	1397
09:00	0	0	0	0	0	0	94	4	0	98	92	0	20	0	112	62	29	0	0	91	301
09:15	0	0	0	0	0	0	80	0	0	80	102	9	27	0	138	70	24	0	0	94	312
09:30	0	0	0	0	0	0	81	2	0	83	125	0	29	0	154	52	28	0	0	80	317
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	255	6	0	261	319	9	76	0	404	184	81	0	0	265	930
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	94	5	0	99	87	0	31	0	118	46	31	0	0	77	294
11:15	0	0	0	0	0	0	84	2	0	86	124	0	23	0	147	39	34	0	0	73	306
11:30	0	0	0	0	0	0	79	1	0	80	101	0	25	0	126	33	39	0	0	72	278
11:45	0	0	0	0	0	0	73	0	0	73	102	0	25	0	127	45	22	0	0	67	267
Total	0	0	0	0	0	0	330	8	0	338	414	0	104	0	518	163	126	0	0	289	1145
12:00	0	0	0	0	0	0	79	3	0	82	96	0	23	0	119	35	42	0	0	77	278
12:15	0	0	0	0	0	0	68	2	0	70	104	0	29	0	133	53	35	0	0	88	291
12:30	0	0	0	0	0	0	80	1	0	81	113	1	21	0	135	45	43	0	0	88	304
12:45	0	0	0	0	0	0	72	0	0	72	97	0	34	0	131	35	52	0	0	87	290
Total	0	0	0	0	0	0	299	6	0	305	410	1	107	0	518	168	172	0	0	340	1163
13:00	0	0	0	0	0	0	52	0	0	52	89	0	30	0	119	40	30	0	0	70	241
13:15	0	0	0	0	0	0	65	0	0	65	110	0	28	0	138	50	40	0	0	90	293
13:30	0	0	0	0	0	0	67	0	0	67	118	0	34	0	152	48	42	0	0	90	309
13:45	0	0	0	0	0	0	65	1	0	66	146	0	32	0	178	32	46	0	0	78	322
Total	0	0	0	0	0	0	249	1	0	250	463	0	124	0	587	170	158	0	0	328	1165
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	63	3	0	66	150	0	41	0	191	59	47	0	0	106	363
15:15	0	0	0	0	0	0	57	0	0	57	166	1	61	0	228	45	34	0	0	79	364
15:30	0	0	0	0	0	0	76	0	0	76	193	0	50	0	243	47	40	0	0	87	406
15:45	0	0	0	0	0	0	55	2	0	57	233	0	60	0	293	37	57	0	0	94	444
Total	0	0	0	0	0	0	251	5	0	256	742	1	212	0	955	188	178	0	0	366	1577
16:00	0	0	0	0	0	0	64	2	0	66	197	0	57	0	254	55	52	0	0	107	427
16:15	0	0	0	0	0	0	64	0	0	64	217	0	55	0	272	80	43	0	0	123	459
16:30	0	0	0	0	0	0	67	0	0	67	235	1	72	0	308	45	54	0	0	99	474
16:45	0	0	0	0	0	0	52	1	0	53	245	0	66	0	311	51	42	0	0	93	457
Total	0	0	0	0	0	0	247	3	0	250	894	1	250	0	1145	231	191	0	0	422	1817
17:00	0	0	0	0	0	0	63	1	0	64	241	5	60	0	306	43	64	0	0	107	477
17:15	0	0	0	0	0	0	67	0	0	67	305	0	72	0	377	29	57	0	0	86	530
17:30	0	0	0	0	0	0	82	1	0	83	291	0	72	0	363	31	38	0	0	69	495
17:45	0	0	0	0	0	0	64	1	0	65	237	0	83	0	320	25	49	0	0	74	459
Total	0	0	0	0	0	0	256	3	0	259	1074	5	287	0	1366	128	208	0	0	336	1961
Grand Total	0	0	0	0	0	0	3178	83	0	3261	5405	22	1346	0	6773	2199	1318	0	0	3517	13551
Apprch %	0.0	0.0	0.0	0.0		0.0	97.5	2.5	0.0		79.8	0.3	19.9	0.0		62.5	37.5	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	23.5	0.6	0.0	24.1	39.9	0.2	9.9	0.0	50.0	16.2	9.7	0.0	0.0	26.0	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: Fine
Comments: None
Machine: D-2384, D-2387
Operator: MM, AH

File Name : U.S. 550 and Hill Rd.
Site Code : 00015904
Start Date : 02/26/2004
Page No : 1

Groups Printed- Cars - Trucks

	Hill Road From North					U.S. 550 From East					Hill Road From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	7	1	4	0	12	13	146	7	0	166	12	1	12	0	25	11	372	21	0	404	607
Total	7	1	4	0	12	13	146	7	0	166	12	1	12	0	25	11	372	21	0	404	607
07:00	8	0	6	0	14	17	188	11	0	216	5	0	22	0	27	6	386	16	0	410	667
07:15	9	0	8	0	17	8	178	10	0	196	6	0	8	0	14	6	458	13	0	477	704
07:30	6	0	5	0	11	5	237	13	0	255	15	0	6	0	21	6	388	9	0	403	690
07:45	5	1	4	0	10	7	276	13	0	296	5	0	3	0	8	1	285	13	0	309	625
Total	28	1	23	0	52	37	881	47	0	965	31	0	39	0	70	19	1529	51	0	1599	2686
08:00	8	0	3	0	11	4	201	8	0	213	10	0	6	0	16	3	312	9	0	324	564
08:15	10	0	0	0	10	5	201	13	0	219	7	0	4	0	11	4	236	4	0	244	484
08:30	13	1	4	0	18	1	189	11	0	201	7	0	9	0	16	8	244	11	0	263	498
08:45	12	0	5	0	17	6	187	5	0	198	5	0	8	0	13	5	215	9	0	229	457
Total	43	1	12	0	56	16	778	37	0	831	29	0	27	0	56	20	1007	33	0	1060	2003
09:00	8	3	4	0	15	7	169	8	0	184	8	0	7	0	15	0	188	6	0	194	408
09:15	11	0	5	0	16	5	176	12	0	193	5	2	3	0	10	2	223	7	0	232	451
09:30	15	1	5	0	21	1	212	18	0	231	5	1	2	0	8	3	179	9	0	191	451
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	34	4	14	0	52	13	557	38	0	608	18	3	12	0	33	5	590	22	0	617	1310
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	5	2	4	0	11	3	142	8	0	153	6	1	2	0	9	5	114	108	0	227	400
11:15	3	0	12	0	15	3	157	7	0	167	6	0	1	0	7	6	195	15	0	216	405
11:30	6	0	6	0	12	1	199	6	0	206	18	0	1	0	19	4	160	18	0	182	419
11:45	10	0	4	0	14	4	158	13	0	175	22	1	12	0	35	13	172	14	0	199	423
Total	24	2	26	0	52	11	656	34	0	701	52	2	16	0	70	28	641	155	0	824	1647
12:00	22	3	15	0	40	3	181	14	0	198	24	3	10	0	37	10	170	21	0	201	476
12:15	14	1	6	0	21	3	185	5	0	193	63	2	9	0	74	10	173	15	0	198	486
12:30	12	0	9	0	21	1	208	13	0	222	18	0	8	0	26	13	190	20	0	223	492
12:45	8	0	8	0	16	1	194	2	0	197	10	0	3	0	13	12	166	15	0	193	419
Total	56	4	38	0	98	8	768	34	0	810	115	5	30	0	150	45	699	71	0	815	1873
13:00	3	1	8	0	12	0	168	8	0	176	4	0	5	0	9	5	182	8	0	195	392
13:15	7	1	8	0	16	4	204	4	0	212	11	0	2	0	13	5	178	17	0	200	441
13:30	14	2	5	0	21	7	202	9	0	218	10	0	7	0	17	4	188	11	0	201	457
13:45	3	0	6	0	9	3	169	12	0	184	11	0	8	0	19	6	190	15	0	211	423
Total	27	4	27	0	58	14	743	33	0	790	36	0	22	0	58	20	738	51	0	807	1713
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	11	2	6	0	19	8	280	7	0	295	5	1	7	0	13	6	202	14	0	222	549
15:15	5	1	8	0	14	5	295	7	0	307	19	2	5	0	26	2	182	12	0	196	543
15:30	4	0	7	0	11	9	286	13	0	308	16	1	5	0	22	11	276	15	0	302	643
15:45	13	1	7	0	21	6	332	4	0	342	14	0	8	0	22	3	206	21	0	230	615
Total	33	4	28	0	65	28	1193	31	0	1252	54	4	25	0	83	22	866	62	0	950	2350
16:00	4	1	4	0	9	7	350	4	0	361	12	0	8	0	20	1	223	23	0	247	637
16:15	5	1	7	0	13	9	327	5	0	341	13	1	19	0	33	6	266	23	0	295	682
16:30	10	0	8	0	18	14	342	4	0	360	17	0	14	0	31	5	239	21	0	265	674
16:45	10	2	9	0	21	25	388	9	0	422	19	0	19	0	38	2	235	23	0	260	741
Total	29	4	28	0	61	55	1407	22	0	1484	61	1	60	0	122	14	963	90	0	1067	2734
17:00	7	1	8	0	16	15	427	9	0	451	35	0	25	0	60	2	216	21	0	239	766
17:15	14	0	6	0	20	7	397	3	0	407	21	0	12	0	33	1	232	33	0	266	726
17:30	5	0	3	1	9	17	401	8	0	426	15	0	25	0	40	4	215	18	0	237	712
17:45	7	0	4	0	11	12	389	5	0	406	18	1	17	0	36	4	181	12	0	197	650
Total	33	1	21	1	56	51	1614	25	0	1690	89	1	79	0	169	11	844	84	0	939	2854
Grand Total	314	26	221	1	562	246	8743	308	0	9297	497	17	322	0	836	195	6247	640	0	9082	19777
Apprch %	55.9	4.6	39.3	0.2		2.6	94.0	3.3	0.0		59.4	2.0	38.5	0.0		2.1	90.8	7.0	0.0		
Total %	1.6	0.1	1.1	0.0	2.8	1.2	44.2	1.6	0.0	47.0	2.5	0.1	1.6	0.0	4.2	1.0	41.7	3.2	0.0	45.9	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: All Day Rain
Comments: None
Machine: D-2384, D-2387
Operator: MM, AH

File Name : U.S. 550 and N.M. 313
Site Code : 00015910
Start Date : 03/02/2004
Page No : 1

Groups Printed- Cars - Trucks

	N.M. 313 From North					U.S. 550 From East					N.M. 313 From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	31	14	5	0	50	9	153	15	0	177	28	10	20	0	58	13	361	27	0	401	686
Total	31	14	5	0	50	9	153	15	0	177	28	10	20	0	58	13	361	27	0	401	686
07:00	31	18	5	0	54	13	166	18	0	197	45	16	14	0	75	7	412	30	0	449	775
07:15	36	13	13	0	62	9	225	11	3	248	40	22	12	0	74	18	453	45	0	516	900
07:30	40	33	23	0	96	27	254	21	2	304	45	30	14	0	89	22	350	37	0	409	898
07:45	23	63	14	0	100	51	208	36	0	295	43	50	17	4	114	52	260	56	5	373	882
Total	130	127	55	0	312	100	853	86	5	1044	173	118	57	4	352	99	1475	168	5	1747	3455
08:00	30	65	16	0	111	24	180	35	0	239	45	92	4	3	144	42	262	33	9	346	840
08:15	32	39	14	0	85	36	140	20	1	197	57	54	11	3	125	20	228	51	19	318	725
08:30	29	38	11	0	78	27	169	8	1	205	38	21	17	3	79	19	200	36	12	267	629
08:45	14	22	14	0	50	22	167	21	0	210	44	17	9	11	81	11	189	34	13	247	588
Total	105	164	55	0	324	109	656	84	2	851	184	184	41	20	429	92	879	154	53	1178	2782
09:00	21	19	10	0	50	18	134	14	0	166	44	14	7	8	73	13	171	31	12	227	516
09:15	9	19	10	0	38	21	170	6	0	197	34	19	21	7	81	7	146	32	11	196	512
09:30	15	22	7	0	44	18	153	8	0	179	42	22	3	10	77	11	166	44	19	240	540
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	45	60	27	0	132	57	457	28	0	542	120	55	31	25	231	31	483	107	42	663	1568
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	20	21	4	0	45	18	162	5	1	186	61	15	6	6	88	6	150	44	22	222	541
11:15	15	26	8	0	49	29	170	21	0	220	43	21	18	8	90	17	166	41	20	244	603
11:30	23	21	11	0	55	33	156	19	0	208	72	23	19	4	118	10	153	43	8	214	595
11:45	22	22	14	0	58	34	155	13	0	202	54	23	27	16	120	15	162	41	23	241	621
Total	80	90	37	0	207	114	643	58	1	816	230	82	70	34	416	48	631	169	73	921	2360
12:00	19	33	9	0	61	29	183	22	1	235	68	18	24	12	122	19	153	37	20	229	647
12:15	16	31	12	0	59	22	135	19	0	176	50	28	11	6	95	16	162	40	10	228	558
12:30	32	49	18	0	97	32	173	13	0	218	41	32	17	4	94	18	147	42	13	220	629
12:45	26	30	24	0	80	20	169	13	1	203	71	23	12	14	120	20	171	32	23	246	649
Total	93	143	61	0	297	103	660	67	2	832	230	101	64	36	431	73	633	151	66	923	2483
13:00	10	28	8	0	46	24	188	13	0	225	35	43	13	16	107	37	154	50	20	261	639
13:15	13	31	13	0	57	31	153	20	0	204	48	26	6	3	83	26	141	55	15	237	581
13:30	9	21	11	0	41	15	183	11	1	210	39	16	8	5	68	25	141	46	9	221	540
13:45	15	17	11	0	43	20	150	8	0	178	51	27	7	9	94	9	138	35	11	193	508
Total	47	97	43	0	187	90	674	52	1	817	173	112	34	33	352	97	574	186	55	912	2268
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	11	20	20	0	51	27	179	11	1	218	60	47	8	8	123	37	133	39	15	224	616
15:15	28	23	15	0	66	20	237	19	0	276	47	40	7	8	102	20	151	37	14	222	666
15:30	34	62	29	0	125	21	261	25	0	307	52	51	11	4	118	32	171	53	10	266	816
15:45	28	54	12	0	94	21	251	25	0	297	81	41	12	6	140	24	161	39	17	241	772
Total	101	159	76	0	336	89	928	80	1	1098	240	179	38	26	483	113	616	168	56	953	2870
16:00	21	28	14	0	63	36	316	21	0	373	60	33	19	13	125	22	184	60	11	277	838
16:15	20	44	21	0	85	31	255	22	2	310	66	40	16	5	127	27	152	27	9	215	737
16:30	44	38	16	0	98	40	365	27	0	433	53	26	12	7	98	18	275	49	9	351	980
16:45	25	36	21	0	84	19	368	20	0	407	82	37	11	13	143	20	167	39	17	243	877
Total	110	148	72	0	330	126	1305	90	2	1523	261	136	58	38	493	87	778	175	46	1086	3432
17:00	21	28	20	0	69	31	350	14	0	395	109	41	21	14	185	25	176	26	16	243	892
17:15	21	37	26	0	84	22	468	21	0	511	79	32	8	10	129	21	169	30	6	226	950
17:30	13	22	20	0	55	34	496	18	2	550	42	32	15	9	98	26	142	25	10	203	906
17:45	30	18	19	0	67	26	350	7	0	383	62	38	15	10	125	21	120	19	16	176	751
Total	85	105	85	0	275	113	1664	60	2	1839	292	143	59	43	537	93	607	100	48	848	3499
Grand Total	827	1107	516	0	2450	910	7993	620	16	9539	1931	1120	472	259	3782	746	7037	1405	444	9632	25403
Apprch %	33.8	45.2	21.1	0.0		9.5	83.8	6.5	0.2		51.1	29.6	12.5	6.8		7.7	73.1	14.6	4.6		
Total %	3.3	4.4	2.0	0.0	9.6	3.6	31.5	2.4	0.1	37.6	7.6	4.4	1.9	1.0	14.9	2.9	27.7	5.5	1.7	37.9	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: AM and Midday Rain
Comments: None
Machine: D-2387, D-2384
Operator: AH, MM

File Name : U.S. 550 and Camino Don Tomas
Site Code : 00015902
Start Date : 03/04/2004
Page No : 1

Groups Printed- Cars - Trucks

	Camino Don Tomas From North					U.S. 550 From East					Camino Don Tomas From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	0	1	0	0	1	16	152	0	0	168	21	0	5	2	28	1	450	10	0	461	658
Total	0	1	0	0	1	16	152	0	0	168	21	0	5	2	28	1	450	10	0	461	658
07:00	0	0	0	0	0	5	166	2	0	173	7	2	13	4	26	4	558	16	0	578	777
07:15	3	0	2	0	5	7	220	1	0	228	16	2	11	0	29	1	509	22	0	532	794
07:30	0	0	0	0	0	14	270	3	0	287	20	1	14	4	39	1	473	36	0	510	836
07:45	0	7	0	0	7	28	264	0	0	292	27	1	24	4	56	1	421	25	1	448	803
Total	3	7	2	0	12	54	920	6	0	980	70	6	62	12	150	7	1961	99	1	2068	3210
08:00	1	6	3	0	10	34	181	2	0	217	29	3	24	3	59	4	337	30	0	371	657
08:15	2	1	1	1	5	14	179	2	0	195	29	3	10	7	49	7	295	16	0	318	567
08:30	1	1	7	0	9	5	184	4	0	193	14	1	7	8	30	1	294	12	0	307	539
08:45	2	3	1	0	6	14	163	1	0	178	17	0	10	8	35	1	298	11	0	310	529
Total	6	11	12	1	30	67	707	9	0	783	89	7	51	26	173	13	1224	69	0	1306	2292
09:00	3	3	2	0	8	12	155	3	0	170	19	2	11	9	41	2	202	10	0	214	433
09:15	3	1	1	0	5	11	160	0	0	171	15	1	9	3	28	2	221	18	0	241	445
09:30	4	2	0	0	6	14	152	0	0	166	21	0	7	6	34	3	192	10	0	205	411
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10	6	3	0	19	37	467	3	0	507	55	3	27	18	103	7	615	38	0	660	1289
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3	4	0	1	8	14	142	0	0	156	18	3	5	7	33	2	167	15	0	184	381
11:15	6	2	4	1	13	11	194	2	0	207	10	2	11	1	24	3	166	8	0	177	421
11:30	7	5	1	0	13	16	181	4	0	201	33	4	16	5	58	2	240	15	0	257	529
11:45	9	1	3	1	14	14	176	2	0	192	23	5	7	6	41	3	211	20	0	234	481
Total	25	12	8	3	48	55	693	8	0	756	84	14	39	19	156	10	784	58	0	852	1812
12:00	5	4	3	0	12	14	183	0	0	197	22	2	12	5	41	5	240	12	0	257	507
12:15	6	3	2	0	11	10	190	0	0	200	25	1	10	0	36	7	245	10	0	262	509
12:30	9	4	9	1	23	8	208	3	0	219	21	5	19	6	51	7	268	16	0	291	584
12:45	8	1	1	0	10	20	157	2	0	179	23	0	7	10	40	6	244	12	0	262	491
Total	28	12	15	1	56	52	738	5	0	795	91	8	48	21	168	25	997	50	0	1072	2091
13:00	8	2	4	0	14	9	154	1	0	164	16	4	9	5	34	3	240	17	0	260	472
13:15	1	0	0	0	1	12	210	2	0	224	22	5	5	10	42	4	226	21	0	251	518
13:30	3	2	1	0	6	13	188	2	0	203	21	7	11	11	50	6	243	17	1	267	526
13:45	3	3	0	1	7	8	178	1	0	187	27	3	8	10	46	3	200	14	0	217	457
Total	15	7	5	1	28	42	730	6	0	778	86	19	31	36	172	16	909	69	1	995	1973
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	8	3	11	0	22	22	216	5	0	243	15	1	4	7	27	3	259	23	0	285	577
15:15	9	5	4	0	18	25	217	1	0	243	36	1	16	4	57	8	301	26	0	335	653
15:30	10	21	9	0	40	30	248	4	0	282	46	2	35	9	92	5	286	16	0	307	721
15:45	7	5	3	0	15	15	286	2	0	303	41	2	10	6	59	6	275	19	0	300	677
Total	34	34	27	0	95	92	967	12	0	1071	138	6	65	26	235	22	1121	84	0	1227	2628
16:00	4	5	3	1	13	22	326	1	0	349	21	1	6	9	37	4	295	20	1	320	719
16:15	5	2	2	0	9	16	308	8	0	332	27	3	17	7	54	2	299	27	0	328	723
16:30	6	4	0	0	10	21	344	0	0	365	25	4	10	0	39	4	330	28	0	362	776
16:45	7	2	6	0	15	12	304	0	0	316	39	4	7	1	51	8	276	14	0	298	680
Total	22	13	11	1	47	71	1282	9	0	1362	112	12	40	17	181	18	1200	89	1	1308	2898
17:00	3	5	4	1	13	24	403	0	0	427	45	1	10	4	60	1	317	31	1	350	850
17:15	3	1	1	0	5	15	407	0	0	422	51	3	10	8	72	2	273	25	1	301	800
17:30	3	1	2	0	6	16	451	1	0	468	37	0	7	6	50	6	235	21	0	262	786
17:45	1	1	2	0	4	11	277	2	0	290	24	1	9	10	44	1	215	24	0	240	578
Total	10	8	9	1	28	66	1538	3	0	1607	157	5	36	28	226	10	1040	101	2	1153	3014
Grand Total	153	111	92	8	364	552	8194	61	0	8807	903	80	404	205	1592	129	10301	667	5	11102	21865
Apprch %	42.0	30.5	25.3	2.2		6.3	93.0	0.7	0.0		56.7	5.0	25.4	12.9		1.2	92.8	6.0	0.0		
Total %	0.7	0.5	0.4	0.0	1.7	2.5	37.5	0.3	0.0	40.3	4.1	0.4	1.8	0.9	7.3	0.6	47.1	3.1	0.0	50.8	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: Fine
Comments: None
Machine: D-2387, D-2384
Operator: MM, AH

File Name : U.S. 550 and Jemez Dam Rd.
Site Code : 00015916
Start Date : 03/09/2004
Page No : 1

Groups Printed- Cars - Trucks

	Jemez Dam Road From North					U.S. 550 From East					Jemez Dam Road From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	7	1	2	1	11	0	163	7	0	170	0	0	0	0	0	5	447	0	0	452	633
Total	7	1	2	1	11	0	163	7	0	170	0	0	0	0	0	5	447	0	0	452	633
07:00	10	0	1	3	14	0	189	6	0	195	0	0	0	0	0	4	585	0	0	589	798
07:15	3	0	2	0	5	0	259	8	0	267	0	0	0	0	0	3	632	0	0	635	907
07:30	6	0	3	1	10	0	317	22	0	339	0	0	0	0	0	10	570	0	0	580	929
07:45	5	0	1	3	9	0	204	16	0	220	0	0	0	0	0	12	494	0	0	506	735
Total	24	0	7	7	38	0	969	52	0	1021	0	0	0	0	0	29	2281	0	0	2310	3369
08:00	8	0	2	1	11	0	170	17	0	187	0	0	0	0	0	6	429	0	0	435	633
08:15	10	0	1	1	12	0	191	12	0	203	0	0	0	0	0	10	331	0	0	341	556
08:30	5	0	3	1	9	0	233	21	1	255	0	0	0	0	0	16	319	0	0	335	599
08:45	7	0	1	2	10	0	164	21	0	185	0	0	0	0	0	5	302	0	0	307	502
Total	30	0	7	5	42	0	758	71	1	830	0	0	0	0	0	37	1381	0	0	1418	2290
09:00	10	0	3	0	13	0	152	22	0	174	0	0	0	0	0	18	272	0	0	290	477
09:15	8	0	1	1	10	0	151	26	0	177	0	0	0	0	0	18	245	0	0	263	450
09:30	12	0	6	2	20	0	183	29	0	212	0	0	0	0	0	17	237	0	0	254	486
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	30	0	10	3	43	0	486	77	0	563	0	0	0	0	0	53	754	0	0	807	1413
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	33	1	4	1	39	0	168	23	0	211	0	0	0	0	0	21	236	0	0	257	507
11:15	18	0	1	5	24	0	197	26	1	224	0	0	0	0	0	28	228	0	0	256	504
11:30	20	0	11	7	38	0	198	33	0	231	0	0	0	0	0	18	242	0	0	260	529
11:45	22	0	13	7	42	0	195	25	0	220	0	0	0	0	0	26	264	0	0	290	552
Total	93	1	29	20	143	0	778	107	1	886	0	0	0	0	0	93	970	0	0	1063	2092
12:00	26	0	11	3	40	0	178	26	0	204	0	0	0	0	0	23	267	0	0	290	534
12:15	40	0	12	2	54	0	222	20	0	242	0	0	0	0	0	25	247	0	0	272	568
12:30	34	0	8	2	44	0	190	21	0	211	0	0	0	0	0	15	286	0	0	301	556
12:45	28	0	10	2	40	0	205	17	1	223	0	0	0	0	0	21	239	0	0	260	523
Total	128	0	41	9	178	0	795	84	1	880	0	0	0	0	0	84	1039	0	0	1123	2181
13:00	20	0	10	3	33	0	209	27	1	237	0	0	0	0	0	18	247	0	0	265	535
13:15	23	0	14	0	37	0	213	21	1	235	0	0	0	0	0	20	236	0	0	256	528
13:30	24	0	12	3	39	0	190	29	1	220	0	0	0	0	0	16	237	0	0	253	512
13:45	28	0	11	4	43	0	188	23	0	211	0	0	0	0	0	19	226	0	0	245	499
Total	95	0	47	10	152	0	800	100	3	903	0	0	0	0	0	73	946	0	0	1019	2074
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	26	1	15	1	43	0	224	19	2	245	0	0	0	0	0	11	242	0	0	253	541
15:15	27	0	19	3	49	0	277	32	0	309	0	0	0	0	0	20	330	0	0	350	708
15:30	28	0	18	4	48	0	261	27	1	289	0	0	0	0	0	16	324	0	0	340	677
15:45	36	0	14	2	52	0	280	30	0	310	0	0	0	0	0	10	280	0	0	290	652
Total	117	1	64	10	192	0	1042	108	3	1153	0	0	0	0	0	57	1176	0	0	1233	2578
16:00	45	0	17	0	62	0	247	23	0	270	0	0	0	0	0	12	303	0	0	315	647
16:15	31	0	18	1	50	0	238	28	0	266	0	0	0	0	0	12	346	0	0	358	674
16:30	48	0	17	0	65	0	269	37	1	307	0	0	0	0	0	18	415	0	0	433	805
16:45	33	0	12	3	48	0	430	26	3	459	0	0	0	0	0	9	326	0	0	335	842
Total	157	0	64	4	225	0	1184	114	4	1302	0	0	0	0	0	51	1390	0	0	1441	2968
17:00	27	0	13	2	42	0	403	22	2	427	0	0	0	0	0	13	331	0	0	344	813
17:15	31	0	16	0	47	0	428	25	7	460	0	0	0	0	0	10	274	0	0	284	791
17:30	16	0	16	1	33	0	362	36	0	398	0	0	0	0	0	18	293	0	0	311	742
17:45	32	0	9	2	43	0	338	32	1	371	0	0	0	0	0	11	270	0	0	281	695
Total	106	0	54	5	165	0	1531	115	10	1656	0	0	0	0	0	52	1168	0	0	1220	3041
Grand Total	787	3	325	74	1189	0	8506	835	23	9364	0	0	0	0	0	534	1155 2	0	0	12086	22639
Apprch %	66.2	0.3	27.3	6.2		0.0	90.8	8.9	0.2		0.0	0.0	0.0	0.0		4.4	95.6	0.0	0.0		
Total %	3.5	0.0	1.4	0.3	5.3	0.0	37.6	3.7	0.1	41.4	0.0	0.0	0.0	0.0	0.0	2.4	51.0	0.0	0.0	53.4	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: Fine
Comments: None
Machine: D-2389
Operator: CM

File Name : U.S. 550 and Santa Fe Hills Rd.
Site Code : 00090110
Start Date : 03/01/2004
Page No : 1

Groups Printed- Cars - Trucks

	Santa Fe Hills Rd. From North					U.S. 550 From East					Santa Fe Hills Rd. From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	0	0	0	0	0	11	48	0	0	59	0	0	57	1	58	0	116	3	0	119	236
Total	0	0	0	0	0	11	48	0	0	59	0	0	57	1	58	0	116	3	0	119	236
07:00	0	0	0	0	0	4	57	0	0	61	3	0	47	0	50	0	105	2	0	107	218
07:15	0	0	0	0	0	11	65	0	0	76	2	0	53	0	55	0	129	2	0	131	262
07:30	0	0	0	0	0	8	44	0	0	52	4	0	43	0	47	0	123	4	0	127	226
07:45	0	0	0	0	0	16	46	0	0	62	0	0	37	0	37	0	86	1	0	87	186
Total	0	0	0	0	0	39	212	0	0	251	9	0	180	0	189	0	443	9	0	452	892
08:00	0	0	0	0	0	13	28	0	0	41	0	0	12	0	12	0	56	2	0	58	111
08:15	0	0	0	0	0	15	36	0	0	51	3	0	23	0	26	0	77	2	0	79	156
08:30	0	0	0	0	0	14	47	0	0	61	1	0	16	0	17	0	69	1	0	70	148
08:45	0	0	0	0	0	9	66	0	0	75	2	0	18	0	20	0	82	1	0	83	178
Total	0	0	0	0	0	51	177	0	0	228	6	0	69	0	75	0	284	6	0	290	593
09:00	0	0	0	0	0	9	24	0	0	33	1	0	10	0	11	0	49	1	0	50	94
09:15	0	0	0	0	0	10	49	0	0	59	2	0	4	0	6	0	64	1	0	65	130
09:30	0	0	0	0	0	5	38	0	0	43	3	0	19	0	22	0	71	3	0	74	139
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	24	111	0	0	135	6	0	33	0	39	0	184	5	0	189	363
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	9	59	0	0	68	4	0	13	0	17	0	87	1	0	88	173
11:15	0	0	0	0	0	9	28	0	0	37	1	0	9	0	10	0	54	1	0	55	102
11:30	0	0	0	0	0	5	52	0	0	57	1	0	12	0	13	0	85	5	0	90	160
11:45	0	0	0	0	0	13	30	0	0	43	0	0	14	0	14	0	70	1	0	71	128
Total	0	0	0	0	0	36	169	0	0	205	6	0	48	0	54	0	296	8	0	304	563
12:00	0	0	0	0	0	8	24	0	0	32	0	0	11	0	11	0	40	1	0	41	84
12:15	0	0	0	0	0	14	53	0	0	67	1	0	10	0	11	0	60	0	0	60	138
12:30	0	0	0	0	0	12	54	0	0	66	3	0	13	0	16	0	89	2	0	91	173
12:45	0	0	0	0	0	9	52	0	0	61	1	0	7	0	8	0	65	0	0	65	134
Total	0	0	0	0	0	43	183	0	0	226	5	0	41	0	46	0	254	3	0	257	529
13:00	0	0	0	0	0	10	35	0	0	45	4	0	11	0	15	0	67	1	0	68	128
13:15	0	0	0	0	0	9	60	0	0	69	1	0	5	0	6	0	61	2	0	63	138
13:30	0	0	0	0	0	9	61	0	0	70	2	0	13	0	15	0	73	2	0	75	160
13:45	0	0	0	0	0	10	57	0	0	67	2	0	13	0	15	0	55	2	0	57	139
Total	0	0	0	0	0	38	213	0	0	251	9	0	42	0	51	0	256	7	0	263	565
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	12	75	0	0	87	2	0	9	0	11	0	58	2	0	60	158
15:15	0	0	0	0	0	11	83	0	0	94	1	0	15	0	16	0	70	2	0	72	182
15:30	0	0	0	0	0	13	100	0	0	113	5	0	17	0	22	0	63	0	0	63	198
15:45	0	0	0	0	0	16	83	0	0	99	2	0	20	0	22	0	80	2	0	82	203
Total	0	0	0	0	0	52	341	0	0	393	10	0	61	0	71	0	271	6	0	277	741
16:00	0	0	0	0	0	19	87	0	0	106	2	0	27	0	29	0	86	6	0	92	227
16:15	0	0	0	0	0	17	80	0	0	97	4	0	11	0	15	0	65	0	0	65	177
16:30	0	0	0	0	0	18	72	0	0	90	4	0	18	0	22	0	72	3	0	75	187
16:45	0	0	0	0	0	27	100	0	0	127	5	0	11	0	16	0	63	2	0	65	208
Total	0	0	0	0	0	81	339	0	0	420	15	0	67	0	82	0	286	11	0	297	799
17:00	0	0	0	0	0	28	114	0	0	142	10	0	19	0	29	0	59	3	0	62	233
17:15	0	0	0	0	0	36	98	0	0	134	6	0	12	0	18	0	67	1	0	68	220
17:30	0	0	0	0	0	41	106	0	0	147	10	0	13	0	23	0	60	3	0	63	233
17:45	0	0	0	0	0	42	109	0	0	151	3	0	11	0	14	0	52	3	0	55	220
Total	0	0	0	0	0	147	427	0	0	574	29	0	55	0	84	0	238	10	0	248	906
Grand Total	0	0	0	0	0	522	2220	0	0	2742	95	0	653	1	749	0	2628	68	0	2696	6187
Apprch %	0.0	0.0	0.0	0.0		19.0	81.0	0.0	0.0		12.7	0.0	87.2	0.1		0.0	97.5	2.5	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	8.4	35.9	0.0	0.0	44.3	1.5	0.0	10.6	0.0	12.1	0.0	42.5	1.1	0.0	43.6	

Mid-Region Council of Governments
Intersection Turning Movement Analysis

Weather: Fine
Comments: None
Machine: D-2389
Operator: CM

File Name : U.S 550 and Chayote Rd.
Site Code : 00090111
Start Date : 03/08/2004
Page No : 1

Groups Printed- Cars - Trucks

	Chayote Rd. From North					U.S. 550 From East					Chayote Rd. From South					U.S. 550 From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:45	0	0	0	0	0	6	47	0	0	53	3	0	4	0	7	0	103	2	0	105	165
Total	0	0	0	0	0	6	47	0	0	53	3	0	4	0	7	0	103	2	0	105	165
07:00	0	0	0	0	0	4	39	0	0	43	1	0	5	0	6	0	111	2	0	113	162
07:15	0	0	0	0	0	4	47	0	0	51	2	0	2	0	4	0	126	0	0	126	181
07:30	0	0	0	0	0	3	52	0	0	55	0	0	8	0	8	0	110	4	0	114	177
07:45	0	0	0	0	0	2	30	0	0	32	0	0	1	0	1	0	73	0	0	73	106
Total	0	0	0	0	0	13	168	0	0	181	3	0	16	0	19	0	420	6	0	426	626
08:00	0	0	0	0	0	4	51	0	0	55	1	0	5	0	6	0	71	4	0	75	136
08:15	0	0	0	0	0	9	55	0	0	64	0	0	3	0	3	0	77	2	0	79	146
08:30	0	0	0	0	0	14	43	0	0	57	2	0	8	0	10	0	69	3	0	72	139
08:45	0	0	0	0	0	10	50	0	0	60	8	0	21	0	29	0	68	4	0	72	161
Total	0	0	0	0	0	37	199	0	0	236	11	0	37	0	48	0	285	13	0	298	582
09:00	0	0	0	0	0	3	52	0	0	55	2	0	1	0	3	0	54	0	0	54	112
09:15	0	0	0	0	0	3	48	0	0	51	0	0	3	0	3	0	62	1	0	63	117
09:30	0	0	0	0	0	2	56	0	0	58	1	0	4	0	5	0	79	0	0	79	142
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	8	156	0	0	164	3	0	8	0	11	0	195	1	0	196	371
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	33	0	0	33	3	0	1	0	4	0	78	0	0	78	115
11:15	0	0	0	0	0	1	43	0	0	44	2	0	1	0	3	0	73	1	0	74	121
11:30	0	0	0	0	0	2	40	0	0	42	1	0	1	0	2	0	71	0	0	71	115
11:45	0	0	0	0	0	3	45	0	0	48	2	0	10	0	12	0	67	4	0	71	131
Total	0	0	0	0	0	6	161	0	0	167	8	0	13	0	21	0	289	5	0	294	482
12:00	0	0	0	0	0	4	52	0	0	56	1	0	4	0	5	0	78	0	0	78	139
12:15	0	0	0	0	0	4	64	0	0	68	0	0	4	0	4	0	68	6	0	74	146
12:30	0	0	0	0	0	5	58	0	0	63	0	0	3	0	3	0	68	1	0	69	135
12:45	0	0	0	0	0	2	42	0	0	44	5	0	3	0	8	0	93	1	0	94	146
Total	0	0	0	0	0	15	216	0	0	231	6	0	14	0	20	0	307	8	0	315	566
13:00	0	0	0	0	0	4	51	0	0	55	3	0	4	0	7	0	77	2	0	79	141
13:15	0	0	0	0	0	3	55	0	0	58	2	0	1	0	3	0	67	1	0	68	129
13:30	0	0	0	0	0	2	79	0	0	81	2	0	5	0	7	0	59	1	0	60	148
13:45	0	0	0	0	0	2	67	0	0	69	0	0	1	0	1	0	65	5	0	70	140
Total	0	0	0	0	0	11	252	0	0	263	7	0	11	0	18	0	268	9	0	277	558
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	1	61	0	0	62	0	0	9	0	9	0	49	1	0	50	121
15:15	0	0	0	0	0	2	81	0	0	83	3	0	2	0	5	0	65	2	0	67	155
15:30	0	0	0	0	0	11	68	0	0	79	1	0	9	0	10	0	46	4	0	50	139
15:45	0	0	0	0	0	10	83	0	0	73	3	0	8	0	11	0	60	3	0	63	147
Total	0	0	0	0	0	24	273	0	0	297	7	0	28	0	35	0	220	10	0	230	562
16:00	0	0	0	0	0	4	99	0	0	103	13	0	5	0	18	0	54	5	0	59	180
16:15	0	0	0	0	0	4	98	0	0	102	4	0	4	0	8	0	54	3	0	57	167
16:30	0	0	0	0	0	3	76	0	0	79	7	0	4	0	11	0	73	4	0	77	167
16:45	0	0	0	0	0	5	75	0	0	80	4	0	5	0	9	0	62	3	0	65	154
Total	0	0	0	0	0	16	348	0	0	364	28	0	18	0	46	0	243	15	0	258	668
17:00	0	0	0	0	0	2	91	0	0	93	5	0	4	0	9	0	48	2	0	50	152
17:15	0	0	0	0	0	1	93	0	0	94	11	0	2	0	13	0	59	2	0	61	168
17:30	0	0	0	0	0	8	110	0	0	118	3	0	1	0	4	0	51	1	0	52	174
17:45	0	0	0	0	0	3	71	0	0	74	7	0	4	0	11	0	51	1	0	52	137
Total	0	0	0	0	0	14	365	0	0	379	26	0	11	0	37	0	209	6	0	215	631
Grand Total	0	0	0	0	0	150	2185	0	0	2335	102	0	160	0	262	0	2539	75	0	2614	5211
Apprch %	0.0	0.0	0.0	0.0		6.4	93.6	0.0	0.0		38.9	0.0	61.1	0.0		0.0	97.1	2.9	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	2.9	41.9	0.0	0.0	44.8	2.0	0.0	3.1	0.0	5.0	0.0	48.7	1.4	0.0	50.2	

Turning Movement Count Data

Date: 3/3/2004 **Day:** Wednesday

E-W Street: **Enchanted Hills Blvd** **N-S-Street:** **NM 528 (Rio Rancho Blvd)**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
6:30-6:45					0					0					0					0	**0**
6:45-7:00	21	0	25	37	83	1	0	2		3	61	225	3		289	1	100	7	0	108	**483**
7:00-7:15	24	0	35	39	98	6	0	5		11	55	218	3		276	1	66	3	0	70	**455**
7:15-7:30	21	1	14	21	57	1	0	0		1	132	246	5		383	1	91	14	1	107	**548**
7:30-7:45	28	0	18	39	85	1	0	5		6	114	247	3		364	2	94	36	11	143	**598**
7:45-8:00	44	1	13	41	99	1	0	3		4	141	252	4		397	8	110	31	19	168	**668**
8:00-8:15	41	1	35	37	114	1	0	1		2	126	201	2		329	5	86	9	2	102	**547**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	134	3	80	138	**355**	4	0	9	0	**13**	513	946	14	0	**1473**	16	381	90	33	**520**	**2361**
PHF	0.76	0.75	0.57	0.84	**0.78**	1.00	#####	0.45	#####	**0.54**	0.91	0.94	0.70	#####	**0.93**	0.50	0.87	0.63	0.43	**0.77**	**0.88**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	107	1	74	65	247	9	1	4		14	81	140	0		221	3	198	11	0	212	**694**
4:45-5:00	50	0	27	52	129	13	1	12		26	86	114	2		202	3	245	9	1	258	**615**
5:00-5:15	50	1	57	55	163	13	4	9		26	77	121	0		198	3	237	10	1	251	**638**
5:15-5:30	44	0	62	53	159	3	0	2		5	94	142	0		236	1	243	7	3	254	**654**
5:30-5:45	44	0	63	46	153	0	1	6		7	79	133	1		213	2	295	15	3	315	**688**
5:45-6:00	43	1	29	40	113	0	0	8		8	79	131	2		212	0	224	10	3	237	**570**
6:00-6:15	37	0	60	49	146	1	1	1		3	72	102	2		176	0	207	7	6	220	**545**
6:15-6:30					0					0					0					0	**0**
Peak Hour	251	2	220	225	**698**	38	6	27	0	**71**	338	517	2	0	**857**	10	923	37	5	**975**	**2601**
PHF	0.59	0.50	0.74	0.87	**0.71**	0.73	0.38	0.56	#####	**0.68**	0.90	0.91	0.25	#####	**0.91**	0.83	0.94	0.84	0.42	**0.94**	**0.94**

Turning Movement Count Data

Date: 3/4/2004 **Day:** Thursday

E-W Street: Idalia Rd **N-S-Street:** NM 528 (Rio Rancho Blvd)

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
6:30-6:45					0					0					0					0	**0**
6:45-7:00	24	1	3		28	3	0	14		17	6	217	0		223	2	103	31		136	**404**
7:00-7:15	30	0	11		41	9	2	24		35	13	254	0		267	5	107	35		147	**490**
7:15-7:30	42	0	7		49	0	0	14		14	5	294	2		301	1	90	19		110	**474**
7:30-7:45	34	0	6		40	3	1	25		29	7	327	2		336	3	122	17		142	**547**
7:45-8:00	33	1	5		39	4	0	25		29	18	348	0		366	5	152	17		174	**608**
8:00-8:15	17	1	7		25	6	1	12		19	19	241	1		261	6	139	25		170	**475**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	139	1	29	0	**169**	16	3	88	0	**107**	43	1223	4	0	**1270**	14	471	88	0	**573**	**2119**
PHF	0.83	0.25	0.66	#####	**0.86**	0.44	0.38	0.88	#####	**0.76**	0.60	0.88	0.50	#####	**0.87**	0.70	0.77	0.63	#####	**0.82**	**0.87**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	23	0	8		31	5	1	9		15	5	147	6		158	12	270	27		309	**513**
4:45-5:00	13	1	8		22	2	0	7		9	6	165	5		176	13	253	29		295	**502**
5:00-5:15	10	1	6		17	1	0	4		5	5	164	4		173	12	262	32		306	**501**
5:15-5:30	9	0	7		16	3	0	5		8	5	159	2		166	26	279	20		325	**515**
5:30-5:45	14	2	7		23	1	0	8		9	3	158	3		164	23	289	23		335	**531**
5:45-6:00	11	0	6		17	2	0	7		9	6	156	3		165	22	248	23		293	**484**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	46	4	28	0	**78**	7	0	24	0	**31**	19	646	14	0	**679**	74	1083	104	0	**1261**	**2049**
PHF	0.82	0.50	0.88	#####	**0.85**	0.58	#####	0.75	#####	**0.86**	0.79	0.98	0.70	#####	**0.96**	0.71	0.94	0.81	#####	**0.94**	**0.96**

Turning Movement Count Data

Date: 3/4/2004 **Day:** Thursday

E-W Street: Pasilla Rd **N-S-Street:** NM 528 (Rio Rancho Blvd)

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
6:30-6:45					0					0					0					0	**0**
6:45-7:00	1	0	1		2	4	2	17		23	5	194	1		200	2	127	5		134	**359**
7:00-7:15	2	0	3		5	12	0	16		28	1	233	1		235	2	130	2		134	**402**
7:15-7:30	5	0	2		7	8	0	16		24	5	254	2		261	3	122	0		125	**417**
7:30-7:45	7	1	4		12	11	0	6		17	1	305	3		309	3	138	0		141	**479**
7:45-8:00	3	0	3		6	17	0	8		25	2	320	8		330	4	150	1		155	**516**
8:00-8:15	1	0	2		3	4	0	11		15	5	199	4		208	6	131	0		137	**363**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	17	1	12	0	**30**	48	0	46	0	**94**	9	1112	14	0	**1135**	12	540	3	0	**555**	**1814**
PHF	0.61	0.25	0.75	#####	**0.63**	0.71	#####	0.72	#####	**0.84**	0.45	0.87	0.44	#####	**0.86**	0.75	0.90	0.38	#####	**0.90**	**0.88**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	1	2	5		8	8	0	5		13	7	205	10		222	8	264	1		273	**516**
4:45-5:00	0	0	8		8	3	0	2		5	4	186	12		202	18	239	3		260	**475**
5:00-5:15	3	0	1		4	6	1	1		8	3	191	7		201	12	280	5		297	**510**
5:15-5:30	4	0	5		9	7	0	4		11	6	181	11		198	18	278	5		301	**519**
5:30-5:45	5	1	5		11	12	1	8		21	7	171	7		185	19	286	4		309	**526**
5:45-6:00	3	0	2		5	4	0	2		6	2	174	9		185	13	224	4		241	**437**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	12	1	19	0	**32**	28	2	15	0	**45**	20	729	37	0	**786**	67	1083	17	0	**1167**	**2030**
PHF	0.60	0.25	0.59	#####	**0.73**	0.58	0.50	0.47	#####	**0.54**	0.71	0.95	0.77	#####	**0.97**	0.88	0.95	0.85	#####	**0.94**	**0.96**

Turning Movement Count Data

Date: 3/2/2004 **Day:** Tuesday

E-W Street: Iris Rd **N-S-Street:** NM 528 (Rio Rancho Blvd)

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
6:30-6:45					0					0					0					0	**0**
6:45-7:00	5	1	8		14	27	2	8		37	8	194	3		205	1	162	4		167	**423**
7:00-7:15	6	0	12		18	27	3	7		37	8	203	3		214	0	169	5		174	**443**
7:15-7:30	6	1	6		13	23	2	6		31	7	267	5		279	1	158	2		161	**484**
7:30-7:45	6	0	7		13	19	0	5		24	11	322	6		339	2	177	2		181	**557**
7:45-8:00	6	0	6		12	17	0	5		22	7	296	7		310	3	157	1		161	**505**
8:00-8:15	6	1	7		14	11	0	3		14	4	240	9		253	1	135	4		140	**421**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	24	1	31	0	**56**	86	5	23	0	**114**	33	1088	21	0	**1142**	6	661	10	0	**677**	**1989**
PHF	1.00	0.25	0.65	#####	**0.78**	0.80	0.42	0.82	#####	**0.77**	0.75	0.84	0.75	#####	**0.84**	0.50	0.93	0.50	#####	**0.94**	**0.89**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	3	1	15		19	13	1	1		15	10	168	11		189	3	240	5		248	**471**
4:45-5:00	2	0	9		11	9	2	1		12	12	191	19		222	1	270	2		273	**518**
5:00-5:15	1	0	5		6	9	0	1		10	19	208	15		242	1	288	6		295	**553**
5:15-5:30	1	0	5		6	14	0	2		16	16	190	24		230	5	296	4		305	**557**
5:30-5:45	0	0	11		11	9	0	2		11	8	215	12		235	5	272	12		289	**546**
5:45-6:00	1	0	3		4	13	0	1		14	6	175	15		196	4	259	9		272	**486**
6:00-6:15	2	0	4		6	18	0	1		19	14	181	12		207	3	231	4		238	**470**
6:15-6:30					0					0					0					0	**0**
Peak Hour	4	0	30	0	**34**	41	2	6	0	**49**	55	804	70	0	**929**	12	1126	24	0	**1162**	**2174**
PHF	0.50	#####	0.68	#####	**0.77**	0.73	0.25	0.75	#####	**0.77**	0.72	0.93	0.73	#####	**0.96**	0.60	0.95	0.50	#####	**0.95**	**0.98**

Turning Movement Count Data

Date: 3/9/2004 **Day:** Tuesday

E-W Street: **Corrales Rd (NM 448)** **N-S-Street:** **NM 528 (Rio Rancho Blvd)**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
6:30-6:45					0					0					0					0	**0**
6:45-7:00	4	3	3	3	13	71	3	5	8	87	4	201	17	14	236	10	159	1	2	172	**508**
7:00-7:15	8	4	3	5	20	55	5	8	12	80	1	234	10	3	248	15	181	7	0	203	**551**
7:15-7:30	3	1	1	5	10	37	4	4	11	56	3	244	10	3	260	22	152	1	0	175	**501**
7:30-7:45	8	2	2	1	13	46	1	10	25	82	6	284	17	3	310	12	182	0	1	195	**600**
7:45-8:00	4	1	1	3	9	65	6	15	16	102	11	267	8	5	291	16	187	1	1	205	**607**
8:00-8:15	3	1	2	6	12	36	2	1	10	49	11	199	20	7	237	15	149	4	1	169	**467**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	23	8	7	14	**52**	203	16	37	64	**320**	21	1029	45	14	**1109**	65	702	9	2	**778**	**2259**
PHF	0.72	0.50	0.58	0.70	**0.65**	0.78	0.67	0.62	0.64	**0.78**	0.48	0.91	0.66	0.70	**0.89**	0.74	0.94	0.32	0.50	**0.95**	**0.93**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	LT	TH	RT	RR	Sum	Sum
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	3	2	1	1	7	78	2	5	14	99	10	238	33	7	288	22	243	3	1	269	**663**
4:45-5:00	4	2	3	4	13	61	7	8	6	82	11	222	22	13	268	36	245	4	0	285	**648**
5:00-5:15	6	4	4	3	17	70	4	6	21	101	13	235	25	15	288	31	279	3	2	315	**721**
5:15-5:30	7	3	2	6	18	50	2	9	14	75	6	224	28	10	268	33	252	4	1	290	**651**
5:30-5:45	4	2	1	2	9	71	8	9	14	102	8	239	27	6	280	24	216	1	0	241	**632**
5:45-6:00	4	3	0	2	9	41	4	2	10	57	7	187	27	6	227	42	249	4	1	296	**589**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	20	11	10	14	**55**	259	15	28	55	**357**	40	919	108	45	**1112**	122	1019	14	4	**1159**	**2683**
PHF	0.71	0.69	0.63	0.58	**0.76**	0.83	0.54	0.78	0.65	**0.88**	0.77	0.97	0.82	0.75	**0.97**	0.85	0.91	0.88	0.50	**0.92**	**0.93**

Turning Movement Count Data

Date: 3/2/2004 **Day:** Tuesday

E-W Street: **Iris Rd** **N-S-Street:** **Idalia Rd**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
6:30-6:45					0					0					0					0	**0**
6:45-7:00	8	24	1		33	0	30	9		39	3	6	4		13	8	5	0		13	**98**
7:00-7:15	6	47	5		58	0	48	4		52	6	6	5		17	16	5	1		22	**149**
7:15-7:30	2	74	9		85	0	17	6		23	6	2	2		10	3	7	4		14	**132**
7:30-7:45	2	39	2		43	1	23	5		29	16	4	1		21	2	5	0		7	**100**
7:45-8:00	0	36	5		41	0	16	6		22	6	4	2		12	2	7	2		11	**86**
8:00-8:15	2	21	2		25	0	23	10		33	7	6	1		14	3	2	2		7	**79**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	18	184	17	0	**219**	1	118	24	0	**143**	31	18	12	0	**61**	29	22	5	0	**56**	**479**
PHF	0.56	0.62	0.47	#####	**0.64**	0.25	0.61	0.67	#####	**0.69**	0.48	0.75	0.60	#####	**0.73**	0.45	0.79	0.31	#####	**0.64**	**0.80**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	0	15	3		18	1	36	4		41	3	3	1		7	2	5	1		8	**74**
4:45-5:00	1	13	2		16	5	34	6		45	2	4	0		6	5	2	0		7	**74**
5:00-5:15	1	18	0		19	1	34	4		39	2	1	0		3	1	3	0		4	**65**
5:15-5:30	0	20	4		24	0	22	3		25	3	2	1		6	3	5	0		8	**63**
5:30-5:45	0	16	4		20	2	26	4		32	3	5	0		8	2	4	0		6	**66**
5:45-6:00	1	17	4		22	0	24	5		29	1	1	1		3	4	3	0		7	**61**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	2	66	9	0	**77**	7	126	17	0	**150**	10	10	2	0	**22**	11	15	1	0	**27**	**276**
PHF	0.50	0.83	0.56	#####	**0.80**	0.35	0.88	0.71	#####	**0.83**	0.83	0.63	0.50	#####	**0.79**	0.55	0.75	0.25	#####	**0.84**	**0.93**

Turning Movement Count Data

Date: 3/10/2004 **Day:** Wednesday

E-W Street: **Enchanted Hills Blvd** **N-S-Street:** **Chayote Rd**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
6:30-6:45					0					0					0					0	**0**
6:45-7:00	2	0	0		2	0	3	4		7	0	0	1		1	0	0	6		6	**16**
7:00-7:15	4	0	0		4	0	6	2		8	0	0	0		0	0	0	2		2	**14**
7:15-7:30	4	2	0		6	1	6	1		8	0	1	0		1	1	0	2		3	**18**
7:30-7:45	2	2	0		4	0	5	12		17	0	0	0		0	0	0	2		2	**23**
7:45-8:00	0	5	0		5	0	7	12		19	0	0	0		0	1	0	1		2	**26**
8:00-8:15	0	4	0		4	0	3	11		14	0	0	0		0	2	0	0		2	**20**
8:15-8:30					0					0					0					0	**0**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	6	13	0	0	**19**	1	21	36	0	**58**	0	1	0	0	**1**	4	0	5	0	**9**	**87**
PHF	0.38	0.65	#####	#####	**0.79**	0.25	0.75	0.75	#####	**0.76**	#####	0.25	#####	#####	**0.25**	0.50	#####	0.63	#####	**0.75**	**0.84**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	1	1	0		2	0	2	5		7	0	0	0		0	6	1	0		7	**16**
4:45-5:00	2	3	1		6	1	1	3		5	0	1	0		1	6	0	1		7	**19**
5:00-5:15	0	2	0		2	0	4	3		7	0	0	0		0	4	0	1		5	**14**
5:15-5:30	1	6	0		7	0	3	9		12	0	0	0		0	1	0	3		4	**23**
5:30-5:45	2	4	0		6	0	3	6		9	0	1	0		1	0	0	3		3	**19**
5:45-6:00	1	6	0		7	0	2	4		6	0	0	0		0	3	0	1		4	**17**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	5	15	1	0	**21**	1	11	21	0	**33**	0	2	0	0	**2**	11	0	8	0	**19**	**75**
PHF	0.63	0.63	0.25	#####	**0.75**	0.25	0.69	0.58	#####	**0.69**	#####	0.50	#####	#####	**0.50**	0.46	#####	0.67	#####	**0.68**	**0.82**

Turning Movement Count Data

Date: 2/17/2004 **Day:** Tuesday

E-W Street: **Enchanted Hills Blvd** **N-S-Street:** **Santa Fe Hills Blvd**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
6:30-6:45					0					0					0					0	**0**
6:45-7:00	2	19	0		21	0	13	4		17	0	6	4		10	16	1	2		19	**67**
7:00-7:15	2	12	1		15	0	5	7		12	2	11	1		14	14	1	2		17	**58**
7:15-7:30	1	14	0		15	1	7	3		11	0	6	5		11	13	0	0		13	**50**
7:30-7:45	2	13	0		15	1	12	12		25	0	4	3		7	8	1	1		10	**57**
7:45-8:00	2	16	0		18	1	20	5		26	0	2	1		3	11	0	1		12	**59**
8:00-8:15	2	14	0		16	3	16	19		38	1	1	3		5	16	0	0		16	**75**
8:15-8:30	3	12	0		15	0	20	11		31	0	2	0		2	14	2	5		21	**69**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	9	55	0	0	**64**	5	68	47	0	**120**	1	9	7	0	**17**	49	3	7	0	**59**	**260**
PHF	0.75	0.86	#####	#####	**0.89**	0.42	0.85	0.62	#####	**0.79**	0.25	0.56	0.58	#####	**0.61**	0.77	0.38	0.35	#####	**0.70**	**0.87**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
4:00-4:15	7	49	1		57	1	22	23		46	0	1	1		2	27	5	1		33	**138**
4:15-4:30	2	24	2		28	0	14	26		40	2	0	2		4	14	2	5		21	**93**
4:30-4:45	2	14	0		16	4	16	26		46	0	1	4		5	10	4	2		16	**83**
4:45-5:00	1	16	0		17	1	25	38		64	1	1	0		2	15	1	3		19	**102**
5:00-5:15	1	16	0		17	7	20	19		46	3	0	2		5	17	7	0		24	**92**
5:15-5:30	2	14	0		16	0	26	32		58	0	1	0		1	15	5	2		22	**97**
5:30-5:45	3	15	1		19	2	17	20		39	1	2	2		5	11	6	2		19	**82**
5:45-6:00	0	12	1		13	2	12	26		40	1	0	2		3	16	3	0		19	**75**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	12	103	3	0	**118**	6	77	113	0	**196**	3	3	7	0	**13**	66	12	11	0	**89**	**416**
PHF	0.43	0.53	0.38	#####	**0.52**	0.38	0.77	0.74	#####	**0.77**	0.38	0.75	0.44	#####	**0.65**	0.61	0.60	0.55	#####	**0.67**	**0.75**

Turning Movement Count Data

Date: 2/19/2004 **Day:** Thursday

E-W Street: **Enchanted Hills Blvd** **N-S-Street:** **Jager Rd**

AM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
6:30-6:45					0					0					0					0	**0**
6:45-7:00	8	85			93		58	20		78					0	4		5		9	**180**
7:00-7:15	3	74			77		68	14		82					0	7		0		7	**166**
7:15-7:30	4	61			65		75	15		90					0	6		5		11	**166**
7:30-7:45	11	63			74		91	20		111					0	3		2		5	**190**
7:45-8:00	19	87			106		124	18		142					0	8		7		15	**263**
8:00-8:15	20	93			113		104	13		117					0	12		3		15	**245**
8:15-8:30	9	58			67		60	10		70					0	10		5		15	**152**
8:30-8:45					0					0					0					0	**0**
8:45-9:00					0					0					0					0	**0**
Peak Hour	54	304	0	0	**358**	0	394	66	0	**460**	0	0	0	0	**0**	29	0	17	0	**46**	**864**
PHF	0.68	0.82	#####	#####	**0.79**	#####	0.79	0.83	#####	**0.81**	#####	#####	#####	#####	#####	0.60	#####	0.61	#####	**0.77**	**0.82**

PM Peak Period

	Eastbound					Westbound					Northbound					Southbound					
Time	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**LT**	**TH**	**RT**	**RR**	**Sum**	**Sum**
4:00-4:15					0					0					0					0	**0**
4:15-4:30					0					0					0					0	**0**
4:30-4:45	19	79			98		92	0		92					0	14		13		27	**217**
4:45-5:00	14	61			75		115	5		120					0	32		14		46	**241**
5:00-5:15	26	141			167		100	3		103					0	51		21		72	**342**
5:15-5:30	15	74			89		85	3		88					0	35		25		60	**237**
5:30-5:45	12	81			93		78	1		79					0	13		22		35	**207**
5:45-6:00	17	45			62		74	2		76					0	21		18		39	**177**
6:00-6:15					0					0					0					0	**0**
6:15-6:30					0					0					0					0	**0**
Peak Hour	74	355	0	0	**429**	0	392	11	0	**403**	0	0	0	0	**0**	132	0	73	0	**205**	**1037**
PHF	0.71	0.63	#####	#####	**0.64**	#####	0.85	0.55	#####	**0.84**	#####	#####	#####	#####	#####	0.65	#####	0.73	#####	**0.71**	**0.76**