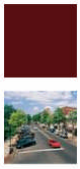
Transportation Analysis

Proposed Panola Road Multi-Use Development
Development of Regional Impact #1447
DeKalb County, Georgia

July 12, 2007



MARC R. ACAMPORA, PE, LLC

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Proposed Panola Road Multi-Use Development
Development of Regional Impact #1447
DeKalb County, Georgia

study prepared for:

Panola Covington Investments, LLC

July 12, 2007

MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING

858 Myrtle Street, NE
Atlanta, Georgia 30308
p (404) 885-9154
f (404) 885-9156
acamporatraffic@comcast.net

Summary

This Transportation Analysis was prepared for the Panola Road DRI #1447, in compliance with the requirements of the Georgia Regional Transportation Authority. The subject development will include 68,900 ft² of retail/restaurants, 14,300 ft² of office, 156 condominiums, 90 townhouse-style condominiums, and 84 single family houses. The project will encompass approximately 35.9 acres in DeKalb County, Georgia. Two accesses will be provided on Covington Highway, west of Panola Road, and three accesses will be provided on Panola Road, north of Covington Highway.

The study network extends along Covington Highway from Panola Road to South Hairston Road, and along Panola Road from Covington Highway to Minola Drive, south of Interstate 20.

The following is a summary of the mitigation developed for the existing condition:

1) Signalize the Covington Highway / Park Central Boulevard intersection, subject to the satisfaction of appropriate warrants in a signal needs study. Add a second northbound lane on Park Central Boulevard.

2) Widen Covington Highway to six lanes in the vicinity of South Hairston Road. Add second exclusive left turn lanes on the eastbound and westbound approaches of Covington Highway at South Hairston Road.

3) At the Panola / Snapfinger Woods intersection add a second northbound exclusive left turn lane. The construction of this lane would require a second westbound lane on Snapfinger Woods to receive the traffic from this lane. Add a southbound exclusive right turn lane on Panola Road.

4) At the Panola Road / Hillandale Drive intersection provide dual left turn lanes, a through lane, and a right turn lane on the westbound approach. On the eastbound approach provide separate left, through, and right-turn lanes, so the split phasing can be eliminated. Right turn overlap phases should be provided on both side street approaches. The northbound left turn should be served by dual left turn lanes. This second left turn lane would require a second westbound lane on Panola Industrial Boulevard. Widen Panola Road to six lanes in the vicinity of this intersection.

The following is a summary of the mitigation developed for the no-build condition:

1) At Covington Highway / Panola Road widen Panola Road to six lanes in the vicinity of this intersection. A second northbound left turn lane and a northbound right turn lane should be added. In addition, a second westbound left turn lane should be built.

2) Add a second southbound right turn lane, including a right turn overlap phase, on southbound Young Road at Covington Highway. Provide a westbound exclusive right turn lane on Covington Highway at Young Road. Widen Covington Highway to six lanes in the vicinity of Young Road.

3) At the Covington Highway / South Hairston Road intersection add a second southbound exclusive right turn lane and a right turn overlap phase.

4) Additional lanes will be needed at the Panola Road / Snapfinger Woods Drive / Panola Road Connector intersection (in addition to those recommended for the existing analysis). Widen the new westbound approach of the Panola Road Connector to include dual left turn lanes, a through lane, and a right turn lane. The eastbound approach should widened to also include dual lefts, a through, and a right turn lane, eliminating the need for split phasing on the side streets. Add a right turn lane on the northbound approach on Panola Road. Add a second exclusive right turn lane for the southbound approach, with a right turn overlap phase. Panola Road will need to be widened to six lanes in the vicinity of Snapfinger Woods Drive by the no-build condition.

5) The I-20 eastbound off-ramp should be widened to include two left and two right lanes. Additionally, a second southbound left turn lane should be added on Panola Road.

6) Provide dual left turn lanes on eastbound Minola Drive at Panola Road. Add a westbound right turn overlap phase on Fairington Road. Add northbound and southbound exclusive right turn lanes on Panola Road at Minola/Fairington.

No mitigation is required for the build condition.

The following is a summary of the site access, pedestrian, and bicycle recommendations:

1) At Access A provide an eastbound left turn lane and a westbound right turn lane on Covington Highway. Provide one inbound and two outbound lanes. Signalize the intersection subject to satisfaction of applicable warrants.

2) At Access B, provide one exiting lane, restricted to right turns only. Control with side street stop sign.

3) At Access C, no decel lane will be provided. The existing two way left turn lane on Panola Road will serve as the left turn lane. One entering and one exiting lane will be sufficient. Control with side street stop sign.

4) At both Access D and Access E, a decel lane will be provided on Panola Road. The two way left turn lane will serve as the left turn lane for both driveways. One entering and one exiting lane will suffice at both accesses. Both should be controlled with side street stop signs.

5) Sidewalks will be provided along both sides of all internal roadways and connecting to Panola and Covington Roads. Sidewalks will be provided along Panola and Covington Road frontages (note programmed projects which will add sidewalks).

6) Bicycle lanes are not necessary within the site, but bicycle racks should be provided near commercial uses and the amenity.

Contents

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1. Project Description

This Transportation Analysis was performed for the proposed Development of Regional Impact #1447 – Panola Road Multi-Use Development. The site is located northwest of the intersection of Covington Highway and Panola Road in DeKalb County. An area map is presented in Figure 1. The total square footage of the multi-use development will exceed 400,000 square feet, which is a DRI threshold for a multi-use development in a metropolitan region. This study was performed to meet the Georgia Regional Transportation Authority (GRTA) Development of Regional Impact (DRI) non-expedited review requirements, according to the GRTA DRI Review Package Technical Guidelines.

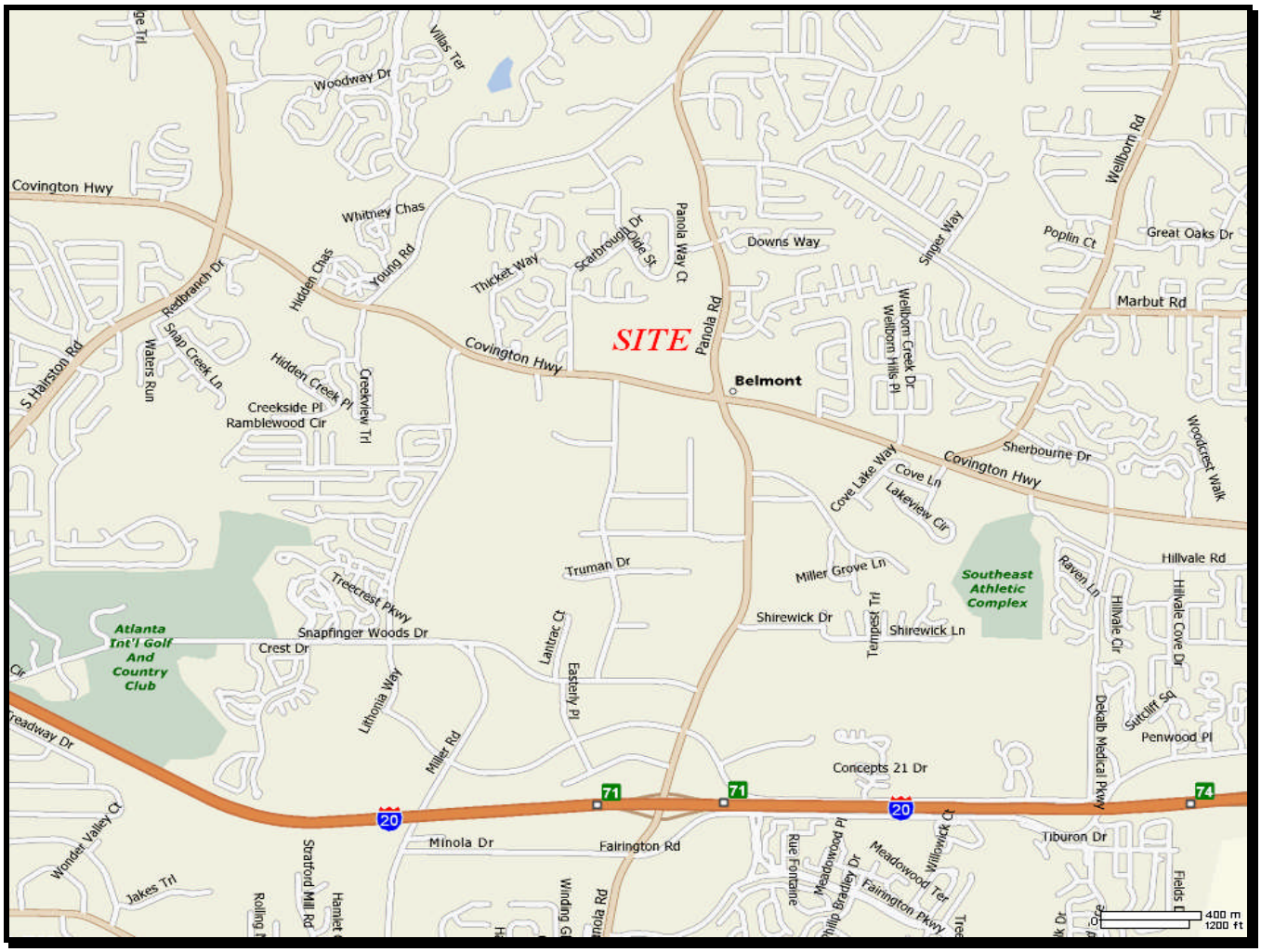


Figure 1 – Area Map

1.1 Project Phasing, Pods, and Land Uses

The total site acreage is approximately 35.9 acres. The site is located entirely within unincorporated DeKalb County. The current zoning is C-1 and R-100 and the proposed zoning is PC-2. The project will be built in one continuous phase, with build-out expected in 2011. Table 1 presents the land uses and sizes of the subject DRI.

Table 1 – Detail of Proposed Land Uses and Sizes for Panola Road DRI

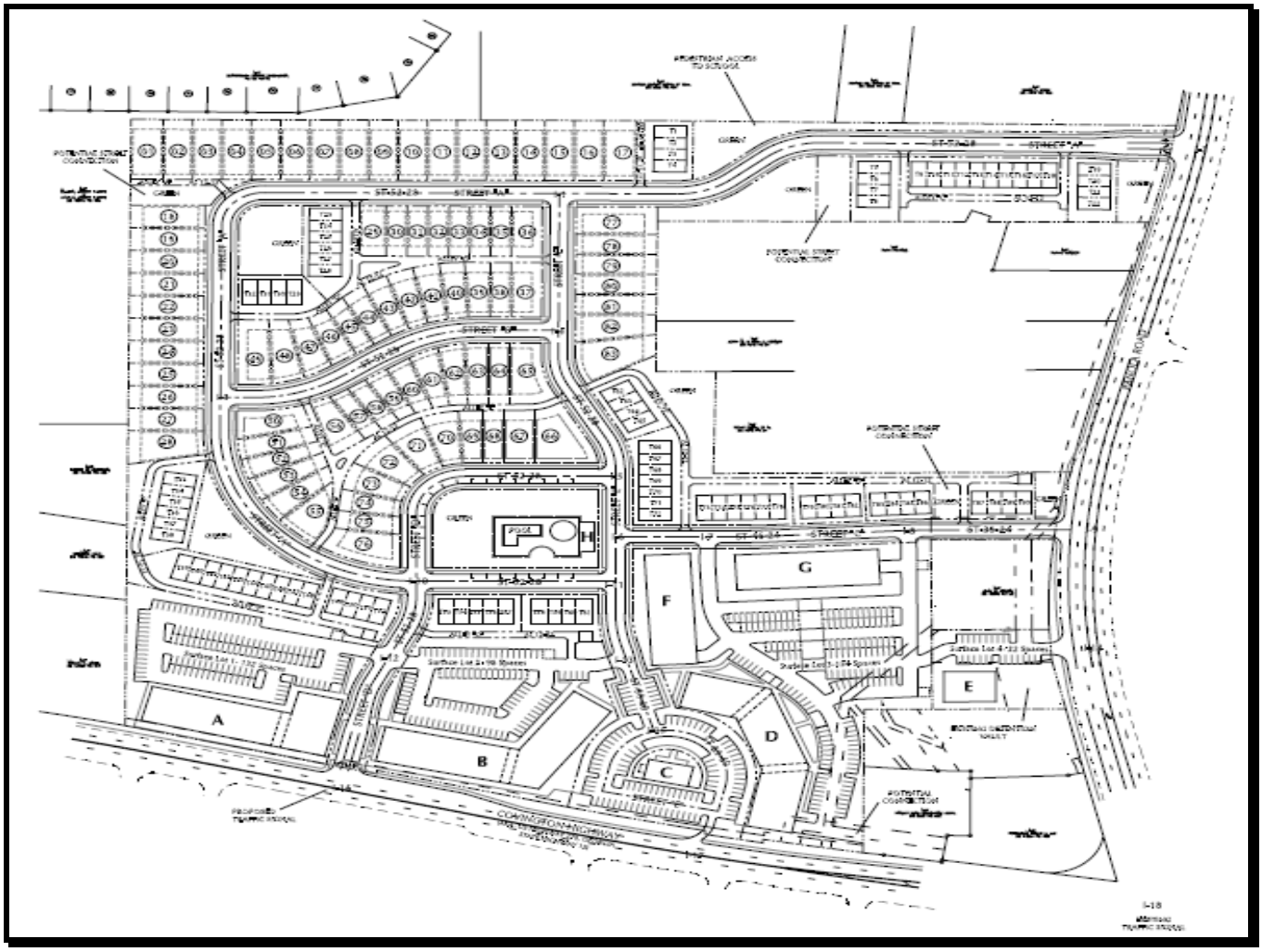
Building	Land Use	Size
A	Office / Service Commercial	14,300 ft²
	Condominium	19 units
B	Retail	26,900 ft²
	Condominium	23 units
C	Restaurant	5,600 ft²
D	Retail	23,600 ft²
	Condominium	42 units
E	Restaurant	4,800 ft²
F	Condominium	36 units
G	Condominium	36 units
H	Amenity	3,000 ft²
Condominium – Townhouse Style		90 units
Single Family		84 units

1.2 Site Plan

This study is based on the site plan called Master Plan for Panola Road prepared by Tunnell-Spangler-Walsh & Associates, dated June 20, 2007. The site plan is presented in Figure 2.

1.3 Site Access

The Panola Road DRI will have two accesses on Covington Highway and three onto Panola Road. On Covington Highway, the western main access will allow full movements and is expected to be signalized. The eastern access will operate as a right-turn exit only. All three site accesses on Panola Road will allow full movements. The northern access will serve primarily the single family and townhouse-style condominium land uses. The central access will connect into the center of the site and will serve all land uses. The southern access on Panola Road will feed directly into the parking area by the restaurant in Building E and then connect to the larger surface lot between buildings D, F, and G.



site plan provided by Tunnell-Spangler-Walsh & Associates

Figure 2 – Panola Road DRI Site Plan

1.4 On-Site Bicycle and Pedestrian Facilities

This site is being developed with a grid of streets, with sidewalks on both sides of all streets. New sidewalks will also be built along the site frontages on Covington Highway and Panola Road. Currently there is no continuous sidewalk along either roadway adjacent to this site. There is a short section of sidewalk along Panola Road by the Waffle House entrance, and a short stretch of sidewalk on Covington Highway near the Church's Fried Chicken entrance. It is noted that DeKalb County has programmed projects that will add sidewalks along these stretches of Covington Highway (DK-031B, 2011) and Panola Road (DK-065E, 2011).

No specific bicycle lanes are being built within the subject DRI. The aforementioned County projects will include bicycle lanes adjacent to the site. It is recommended that bicycle racks be provided near retail and amenity buildings.

1.5 Transit Access

MARTA provides several bus routes in this area, including routes 86, 111, 115, 116, and 117. Route 115 runs along Covington Highway and has bus stops adjacent to the DRI site. Route 117 runs along Panola Road with stops adjacent to the DRI site. Route 117 connects with the Kensington MARTA rail station and with the GRTA park/ride lot on Panola Road just south of I-20.

1.6 Parking

Parking will be provided on-site by a combination of parking decks, surface lots, and on-street parking. All parking is shown on the site plan submitted with this report. The on-site parking is summarized in Table 2.

Table 2 – Panola Road DRI On-Site Parking

Parking Area	Location	Spaces
Surface Lot 1	north of Building A	132
Surface Lot 2	north of Building B	98
Surface Lot 3	between Buildings D, F, and G	157
Surface Lot 4	north of Building E	22
Deck under Building D		76
Deck under Building F		40
Deck under Building G		40
On-Street Spaces	various locations	123
Total On-Site Parking		688

note: excludes single family and townhouse-style condominiums, which have their own parking

2. Study Network

The study network for this project was determined in an analysis performed according to the GRTA Technical Guidelines, Section 4-109. The methodology employed in that analysis included the following steps:

- The twenty-four gross trip generation (unadjusted for mix of land uses, mode split, or pass-by trips) was determined for the DRI, and assigned to the major roadways in the vicinity of the site.
- Adjusted, two-way generalized roadway service volumes were determined according to GRTA requirements at the appropriate level of service standard for DeKalb County (LOS D).
- The DRI trips were compared with the roadway service volumes. Where the total trips generated by the proposed DRI exceeded 7% of the roadway service volumes, that segment, and the major included and adjacent intersections, were identified for inclusion in the study network.

Using the results of that analysis, GRTA and Marc R. Acampora, PE, LLC identified the intersections that would be analyzed in this study. The following sections document the study network determination process for the Panola Road DRI.

2.1 Gross Trip Generation

Standard ITE trip equations and rates were used to determine the site-generated 24-hour two-way trips. According to GRTA requirements, no adjustments were made to the gross trip numbers for the purpose of determining the scope of the study network. Table 3 presents the gross, unadjusted 24-hour trip generation for the DRI that was used in the network determination analysis.

Table 3 – Twenty-Four Hour Gross Trips Used for Study Network Determination

Building	Land Use	Size	24-Hour Trips
Building A	Office	21,000 ft²	402
Building B	Retail	7,800 ft²	1,294
	Office	7,800 ft²	188
Building C + F1 + F2 + G	Retail	48,900 ft²	4,266
	Condominiums	59 units	410
Building D	Amenity	2,400 ft²	54
Building E1 + E2	Condominiums	81 units	536
Building H	Sit Down Restaurant	4,800 ft²	610
Townhouses	Townhouses	99 units	954
Single Family	Single Family	91 homes	954
Retail Totals (including amenity)		63,900 ft²	6,224
Office Totals		28,800 ft²	590
Residential Totals		330 units	2,854
Project Unadjusted Totals			9,668

Twenty-four hour two-way unadjusted volumes of 6,814 retail / office trips and 2,854 residential trips were used for study network determination. It is noted that, subsequent to the pre-application conference, the site plan was adjusted slightly. The trip generation numbers used for this Transportation Analysis reflect the current site plan, shown in Figure 2, and are slightly lower than those used to determine the study network.

2.2 Trip Distribution and Assignment

Trip distribution percentages were developed, to determine where project traffic would travel. Two distributions were developed for the study network determination, one for the retail and office uses and one for the residential uses. The directional trip distribution to and from the site was developed based primarily on the following:

- the location and distance of surrounding residential areas for the retail and office distributions
- the location and distance of employment opportunities, schools, and retail nodes for the residential distribution
- the location of major highways and interstates
- current travel patterns on the area roadways
- the proposed project access locations

For the Transportation Analysis, it was decided to separate the retail from the office distribution, and all three distributions (retail, office, and residential) were fine-tuned based on a more thorough review of field conditions. Figure 3, presented later in this report, depicts the trip distribution percentages used in the Transportation Analysis. Appendix B of this report includes the spreadsheet used for the original study network determination calculations, based on the very similar distributions developed initially. The percentages of project traffic assigned to each roadway segment in the network determination analysis can be found in that spreadsheet.

2.3 Study Network Determination

Field review was performed to ascertain the existing lane configurations and other infrastructure in the vicinity of the proposed DRI. This data was used, in conjunction with level of service tables developed by the Florida Department of Transportation, to determine the service volume of each major roadway segment in the area, according to GRTA requirements. The gross 24-hour trip generation of the proposed DRI was assigned, by the trip distribution percentages discussed above, in order to obtain site-generated volumes on each major roadway segment in the vicinity of the project. The site traffic was compared with the service volumes on each roadway segment. Those segments on which the proposed DRI will add 7% or more trips to the service volume, must be included in the study network. Appendix B of this report includes the spreadsheet used to perform the study network calculations and a graphic depicting the limits of the study network. The following sections of this report present the components of the study network, as determined through the above-described process, and agreed upon with GRTA. *It is noted that the study network components presented below and included in this analysis were agreed upon with GRTA and do not necessarily exactly match those components identified in the network determination analysis. Some intersections were added and removed from the original study network, based on discussions with GRTA.*

2.4 Study Elements

Ten existing intersections were identified for analysis, as presented in Table 4. The numbering scheme is used throughout this report for convenient reference. In addition to the listed intersections, in the build condition all site accesses are analyzed.

Table 4 – Existing Intersections Included in the Transportation Analysis

1) Covington Highway at Panola Road
2) Covington Highway at Park Central Boulevard
3) Covington Highway at Miller Road
4) Covington Highway at Young Road / Hidden Creek Drive
5) Covington Highway at South Hairston Road
6) Panola Road at Snapfinger Woods Drive
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard
8) I-20 westbound ramp at Panola Road
9) I-20 eastbound ramp at Panola Road
10) Panola Road at Minola Drive / Fairington Road

2.5 Peak Time Periods And Analysis Conditions

All analyses are performed for the weekday a.m. peak hour and the weekday p.m. peak hour. The existing, 2011 no-build, and 2011 build conditions are evaluated. Appendix A provides more detail about the determination of peak hour volumes.

2.6 Level of Service Standard

The level of service standard is that level of service considered to be the minimum that provides acceptable operating conditions. A level of service (LOS) standard of C is typically used for rural areas, while LOS D is used for suburban and urban areas. For this study, a LOS D standard was applied to all facilities, as agreed upon with GRTA. In the facilities needs analyses, mitigation is developed with LOS D as the minimum goal. However, should the existing LOS be worse than the standard, the existing LOS is taken to be the standard (but not to exceed LOS E) as set forth by GRTA procedures. Appendix A includes a description of the methodology used for the intersection analysis.

3. Existing Transportation Facilities

This section provides a description of the existing transportation infrastructure that will serve the proposed DRI. An inventory was performed of the geometrics and control at the existing traffic facilities in the vicinity of the site. The availability of transit, bicycle, and pedestrian facilities adjacent to the site was also reviewed. Figure 5, in the Existing Traffic Analysis section of this report, depicts the existing lane configurations for the roadway and intersection facilities in the study network and includes the locations of signals in the study area. The following is a brief description of each of these facilities.

3.0.1 Covington Highway

Covington Highway (US 278, SR 12) is an east-west major arterial that begins west of Interstate 285 and continues east, past the site to Turner Hill Road, where its US and state route designations drop. The road then continues east into Conyers, while the US and state routes are continued on Interstate 20. Covington Highway currently has two through travel lanes in each direction, with exclusive turn lanes at major intersections. The posted speed limit is 45 mph and the terrain is gently rolling. In 2005 (the latest year for which counts have been published), the Georgia Department of Transportation DOT recorded an Annual Average Daily Traffic (AADT) volume of 29,070 vehicles per day (vpd) on Covington Highway just west of Panola Road. The following photographs document existing conditions along Covington Highway in the study network.

Photograph 1 – Covington Highway Facing East Toward Panola Road

Photograph 2 – Covington Highway Facing West Along Site Frontage

Photograph 3 – Covington Highway Facing West at Park Central Boulevard

Photograph 4 – Covington Highway Facing East at Miller Road

Photograph 5 – Covington Highway Facing East at Young Road

Photograph 6 – Covington Highway Facing East From South Hairston Road

3.0.2 Panola Road

Panola Road is a north / south arterial that begins to the north at South Stone Mountain – Lithonia Road, passes the DRI site, has an interchange with Interstate 20, then continues to the south. Through the study area, Panola Road has two travel lanes per direction and a center two-way left turn lane. The terrain is gently rolling near in the study network. In 2005, the Georgia DOT recorded an AADT of 20,840 vpd on Panola Road north of Covington Highway and 29,060 vpd south of Covington Highway. DeKalb County has several roadway improvements programmed for Panola Road, which are documented in the Programmed Infrastructure Improvements section later in this report. The following photographs show Panola Road adjacent to the site and through the study network.

Photograph 7 – Panola Road Facing South Near Proposed Northern Site Access

Photograph 8 – Panola Road Facing North Near Proposed Southern Site Access

Photograph 9 – Panola Road Facing South Toward Covington Highway

Photograph 10 – Panola Road Facing North Toward Panola Industrial Boulevard

Photograph 11 – Panola Road Facing North Toward I-20 Eastbound Ramps

Photograph 12 – Panola Road Facing South Toward Minola Drive

3.0.3 Transit Service

MARTA provides several bus routes in this area, including routes 86, 111, 115, 116, and 117. Route 115 runs along Covington Highway and has bus stops adjacent to the DRI site. Route 117 runs along Panola Road with stops adjacent to the DRI site. Route 117 connects with the Kensington MARTA rail station and with the GRTA park / ride lot on Panola Road just south of I-20.

3.0.4 Pedestrian and Bicycle Facilities

Currently there is no continuous sidewalk along either roadway adjacent to this site. There is a short section of sidewalk along Panola Road by the Waffle House entrance, and a short stretch of sidewalk on Covington Highway near the Church's Fried Chicken entrance. It is noted that DeKalb County has programmed projects that will add sidewalks along these stretches of Covington Highway (DK-031B, 2011) and Panola Road (DK-065E, 2011). There are currently no bicycle lanes in the vicinity of the DRI site. The aforementioned County projects will include bicycle lanes adjacent to the site.

4. Project Traffic Characteristics

This section provides a description of the traffic characteristics of the proposed development, including the number of trips that will be generated, and where that traffic will travel.

4.1 Trip Generation

The trip generation for the subject site was calculated for the weekday a.m. and p.m. peak hours, and a weekday 24-hour period. A discussion of the trip generation methodology is presented in Appendix A. This includes a discussion of the multi-use adjustments, transit adjustments, and pass-by reductions. Table 5 presents the trip generation for the project, including all adjustments.

4.2 Trip Distribution and Assignment

Trip distribution percentages were developed, as discussed in the Study Network section of this report. The trip distribution percentages for this project are shown in Figure 3. The project traffic, shown in Table 5, was distributed to the roadway network based on these percentages. The traffic was assigned to each study intersection based on expected routes of travel. The total traffic expected to be generated solely by the DRI is shown in Figure 4 for the weekday a.m. and p.m. peak hours.

Table 5 – Panola Road DRI Trip Generation

Land Use	Building	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hr.
				Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way
Retail	A	820	8,000 ft²							
	B	820	26,900 ft²							
	D	820	23,600 ft²							
	Subtotal		58,500 ft²	69	44	113	211	228	439	4,792
Restaurants	C	932	5,600 ft²	34	31	65	37	24	61	712
	E	932	4,800 ft²	29	26	55	32	20	52	610
	Subtotal		10,400 ft²	63	57	120	69	44	113	1,322
Retail/Rest. Subtotals			68,900 ft²	132	101	233	280	272	552	6,114
Retail/Rest. Multi-Use				-18	-11	-29	-31	-38	-69	-666
Retail/Rest. Transit			5%	-7	-5	-12	-14	-14	-28	-306
Subtotal				107	85	192	235	220	455	5,142
Pass-By			30%,40%,20%	-32	-25	-58	-94	-88	-182	-1,028
Retail New Trips				*75*	*59*	*135*	*141*	*132*	*273*	*4,114*
Condominiums	A	230	19							
	B	230	23							
	D	230	42							
	F	230	36							
	G	230	36							
	Subtotal		156	13	61	74	58	29	87	936
Townhouse Style Condo		230	90	8	39	47	37	18	55	586
Single Family Housing		210	84	17	51	68	58	34	92	886
Residential Subtotals			330	38	151	189	153	81	234	2,408
Residential Multi-Use				-9	-17	-26	-35	-25	-60	-617
Residential Transit			5%	-2	-8	-9	-8	-4	-12	-120
Residential New Trips				*27*	*126*	*154*	*110*	*52*	*162*	*1,671*
Office	A	710	14,300 ft²	35	5	40	16	79	95	298
Office Multi-Use				-3	-2	-5	-5	-8	-13	-61
Office Transit			5%	-2	0	-2	-1	-4	-5	-15
Office New Trips				*30*	*3*	*33*	*10*	*67*	*77*	*222*

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Project Total Raw Trip Generation	205	257	462	449	432	881	8,820
Total Multi Use Adjustments	-30	-30	-60	-71	-71	-142	-1,344
Multi-Use Adjustment Percentages	-14.6%	-11.7%	-13.0%	-15.8%	-16.4%	-16.1%	-15.2%
Total Transit Adjustments	-10	-13	-23	-22	-22	-44	-441
Total Pass By Trips	-32	-25	-58	-94	-88	-182	-1,028
Total New External Trips	*133*	*189*	*321*	*262*	*251*	*513*	*6,007*

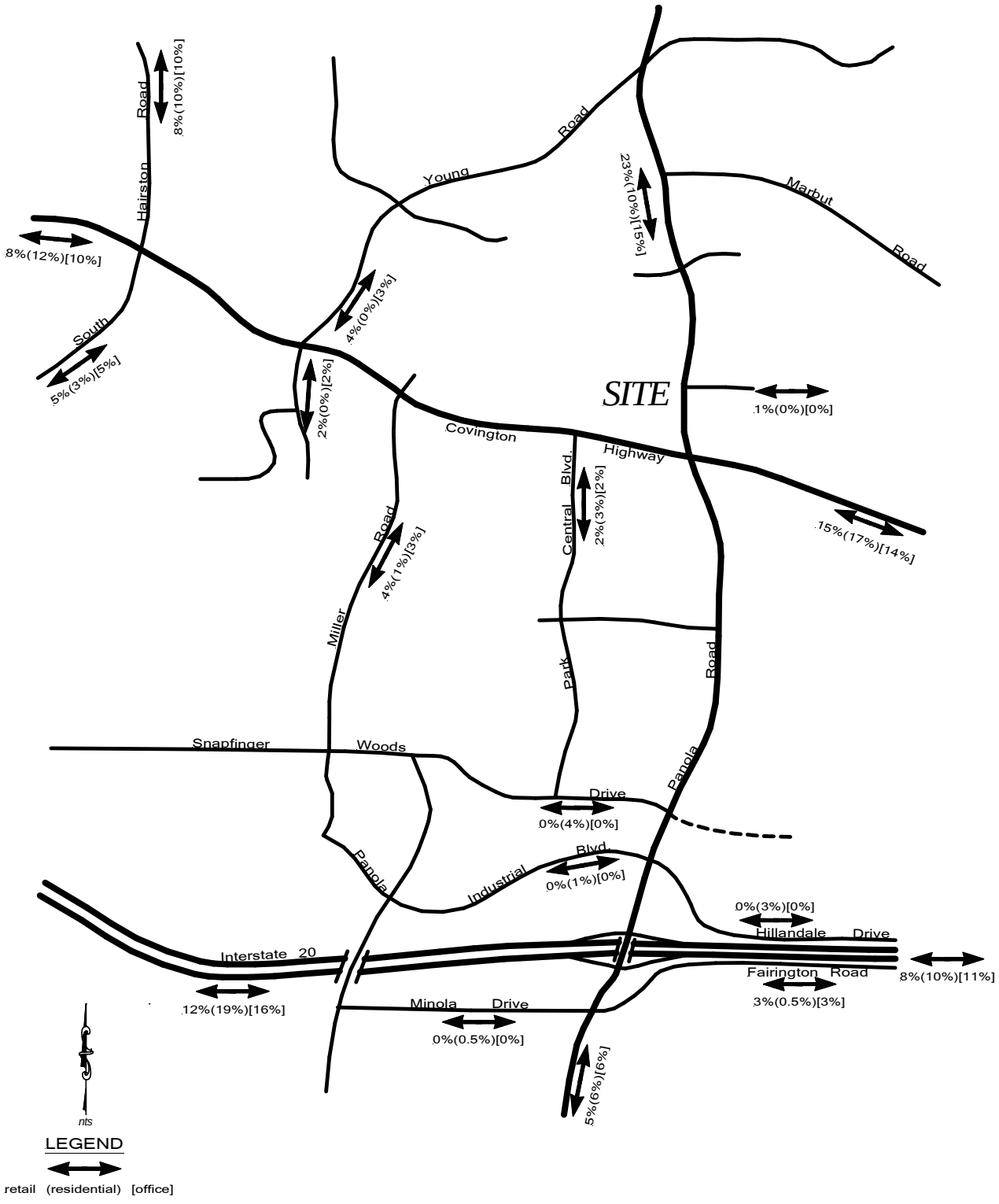


Figure 3 – Trip Distribution Percentages

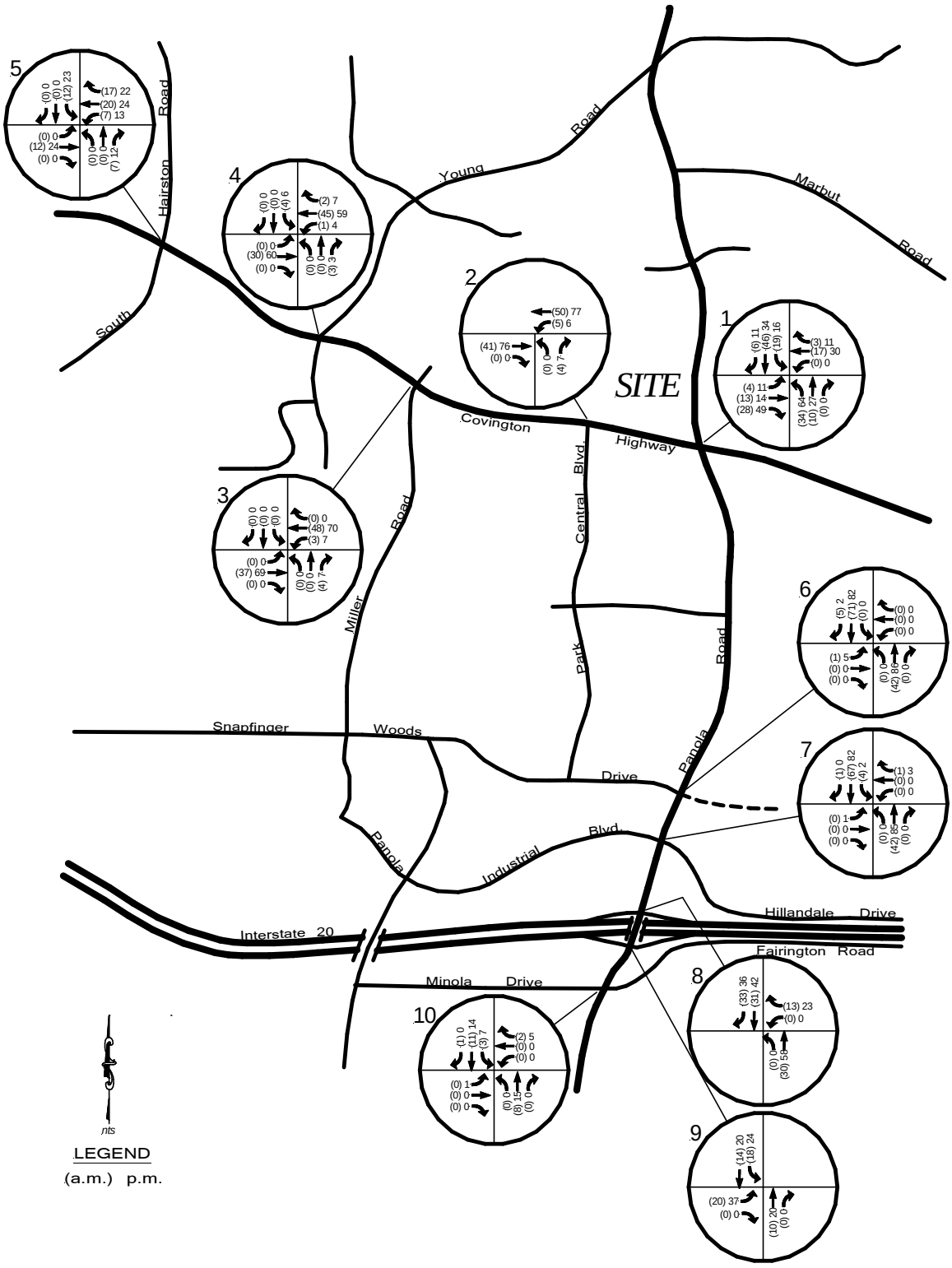


Figure 4 – DRI-Generated Peak Hour Traffic Volumes

5. Existing Traffic Analysis

This chapter presents the results of the capacity analysis and facilities needs analysis for the existing condition.

5.1 Existing Lane Configuration

A detailed description, along with photographs documenting the existing conditions, was provided previously in this report. Figure 5 presents the existing lane configuration at each study intersection.

5.2 Existing Traffic Volumes

Traffic counts were obtained at each of the existing study intersections on Tuesday, Wednesday, and Thursday, May 8, 9, and 10, and Wednesday and Thursday, May 16 and 17, 2007. School was in session when these counts were collected. A count was added at the intersection of Panola Road and Minola Drive / Fairington Road on Wednesday, June 13, 2007. Since school was not in session for this June count, the volumes were balanced with the May count at the adjacent I-20 eastbound ramp / Panola Road intersection. The methodology for collecting the count data is presented in Appendix A and the raw count data is located in Appendix C. The seasonal adjustments to the Minola/Fairington intersection count are shown in the intersection volume worksheet for that intersection, in Appendix D. The existing a.m. and p.m. peak hour volumes are presented in Figure 6.

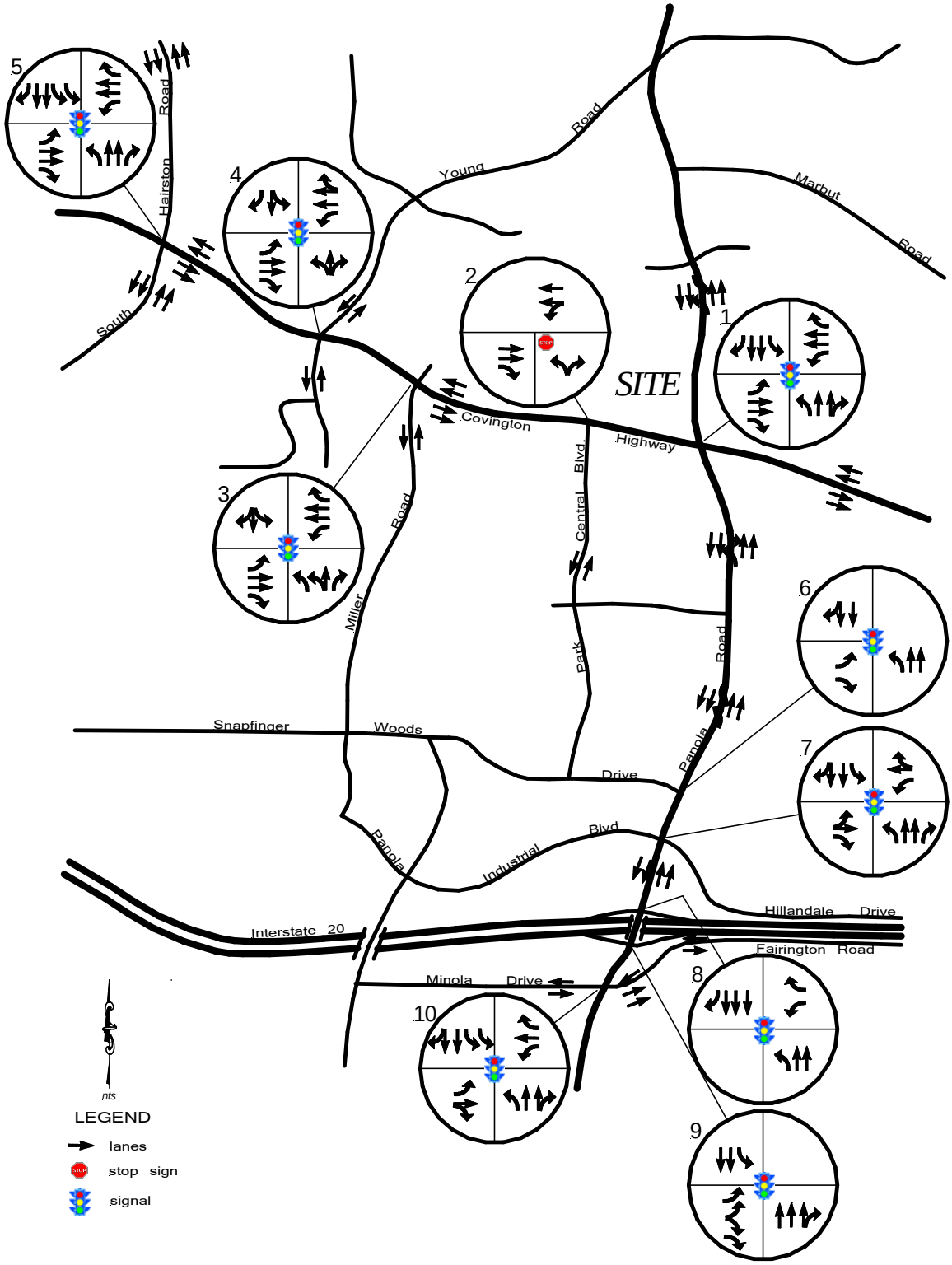


Figure 5 – Existing Lanes

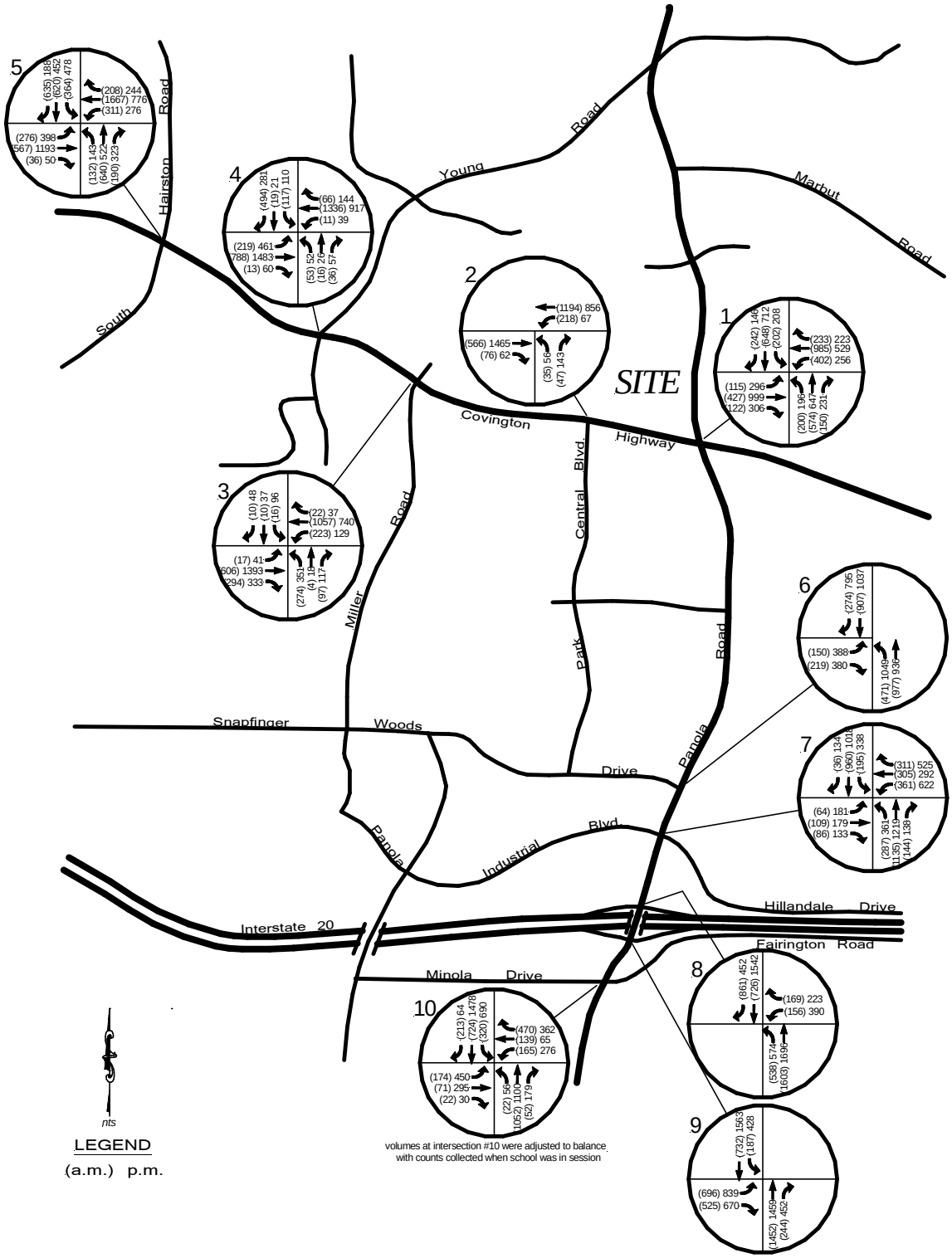


Figure 6 – Existing Peak Hour Traffic Volumes

5.3 Existing Intersection Operations

Analyses were performed for each study intersection, based on the existing traffic volumes, lane configurations, and method of traffic control (lanes and method of control shown previously in Figure 5). Current signal timing data was obtained from DeKalb County and/or timed in the field. The results of the analyses are shown in Table 6. The Synchro computer printouts, which provide detailed analysis information, are included in Appendix E.

Table 6 – Existing Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour
1) Covington Highway at Panola Road (signal)	D	D
2) Covington Highway at Park Central Boulevard (side street stop)	C	***E***
westbound left turn	A	A
northbound approach	***F***	***F***
3) Covington Highway at Miller Road (signal)	C	C
4) Covington Highway at Young Road / Hidden Creek Drive (signal)	***E***	D
5) Covington Highway at South Hairston Road (signal)	***F***	***E***
6) Panola Road at Snapfinger Woods Drive (signal)	C	***F***
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard (signal)	***F***	***F***
8) I-20 westbound ramp at Panola Road (signal)	B	C
9) I-20 eastbound ramp at Panola Road (signal)	C	***E***
10) Panola Road at Minola Drive / Fairington Road (signal)	D	***E***

note: capital letters denote intersection LOS, lowercase letters denote approach or movement LOS

5.4 Existing Facilities Needs Analysis

The following locations do not meet the LOS D standard in the existing condition:

2) Covington Highway at Park Central Boulevard
4) Covington Highway at Young Road / Hidden Creek Drive
5) Covington Highway at South Hairston Road
6) Panola Road at Snapfinger Woods Drive
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard
9) I-20 eastbound ramp at Panola Road
10) Panola Road at Minola Drive / Fairington Road

In assessing the need for mitigation, in instances where the existing level of service (LOS) is worse than the LOS standard (in this case LOS D), but not LOS F, the GRTA standards only require mitigation to that existing LOS. In this case, this means if the existing LOS is D or better, no mitigation is required. If the existing LOS is E, then

that becomes the standard for that intersection. If the existing LOS is F, then mitigation must be developed to achieve the LOS D standard. Based on this methodology, intersections 4) Covington Highway at Young Road, 9) I-20 eastbound ramp at Panola Road, and 10) Panola Road at Minola Drive do not require mitigation since they currently operates at LOS E. At these locations, LOS E becomes the level of service standard.

2) At the Covington Highway / Park Central Boulevard intersection, the overall intersection level of service is LOS E in the p.m.. However, the side street approach operates at LOS F. This is not unusual on side street stop controlled approaches at major thoroughfares such as Covington Highway. The addition of a second northbound lane at the intersection would reduce delays on the approach by preventing right turners from being blocked by the more difficult left turn. However, the approach would still operate at LOS F. In order to eliminate the LOS F, this intersection would require signalization. It is noted that the side street volumes are moderate and a high proportion of the vehicles turning from the side street are right turners. Conversely, the volumes and speeds on this section of Covington Highway are notable. A signal needs study (warrant analysis) should be performed to determine if signalization of this intersection meets engineering standards.

5) The intersection of Covington Highway at South Hairston Road operates at LOS F in the a.m. and LOS E in the p.m.. The left turn volumes are heavy on all approaches and all left turns are operating with protected-only phasing even though only the southbound approach on South Hairston has dual left turn lanes. The westbound and eastbound through movements on Covington Highway are very heavy in the a.m. and p.m., respectively. The addition of second left turn lanes on the remaining three approaches would reduce delays, but the intersection would still operate at LOS F in the a.m.. The addition of a third through lane in each direction on Covington Highway, with no additional second left turn lanes added, would result in LOS E in the a.m. and LOS D in the p.m. In order to meet the LOS D standard in both time periods, Covington Highway would need to be widened to three through lanes per direction, with a second left turn lane added to both the eastbound and westbound approaches. This mitigation will be assumed as necessary for the existing condition. However, it is advised that improvements in the magnitude of widening of Covington Highway require a more comprehensive corridor analysis before definitive recommendations can be made. Finally, this improvement is only required at this study intersection, in the existing condition, and will not be assumed at the other intersections along Covington Highway.

6) The poor p.m. level of service at the Panola / Snapfinger Woods intersection is attributed to the enormous northbound left turn volume in the p.m. peak hour (1049), which is the single highest movement volume during that time period. This volume calls for the addition of a second northbound exclusive left turn lane. The construction of this lane would require a second westbound lane on Snapfinger Woods to receive the traffic from this second northbound left turn lane. Additionally, the southbound right turn volume of 795 in the p.m. is turning from a shared through/right-turn lane. This right turn volume justifies the addition of at least one exclusive right turn lane. In the short term, the addition of these turn lanes will allow this intersection to meet the LOS D standard. Exclusive of this mitigation, this intersection will experience substantial changes in the near future, including the under-construction Panola Road Connector, which will become the fourth leg of this intersection, and the programmed widening of Panola Road in this area to six lanes. These changes will be discussed in the no-build section of this report.

7) The Panola Road / Hillandale Drive intersection operates with inefficient side-street split phasing, which is necessitated by the side-street lane geometry. The above-mentioned and later-discussed widening of Panola Road will not allow the LOS D standard to be met at this intersection without additional lane modifications. The westbound approach volumes call for dual left turn lanes, a through lane, and a right turn lane. By providing the

eastbound approach with separate left, through, and right-turn lanes, the split phasing can be eliminated. Right turn overlap phases should be provided on both side street approaches. Additionally, the northbound left turn should be served by two left turn lanes. This second left turn lane would require a second westbound lane on Panola Industrial Boulevard. With all of these improvements, the LOS D standard will still not be met, which will, therefore, necessitate the planned widening of Panola Road. The lane recommendations for the existing condition will include the third through lanes on Panola at this intersection, as necessitated to achieve the LOS D standard, but these through lanes will not be carried through to the adjacent intersections for the existing recommendations.

The mitigation discussed above was modeled with the existing volumes. Table 7 shows the results of this analysis. Figure 7 presents the recommended mitigation, graphically. It is noted that, in order to best accommodate the network with the mitigation, the signal timings were optimized. As an aside, in addition to the results reported previously, in Table 6, an existing analysis was performed, with no mitigation, but with the signal timings optimized. There were some subtle changes in delays from the existing field conditions. This indicates that some improvement in operations may be achieved by fine-tuning the signals, but, generally, given the current conditions, the signal timing is reasonable during the peak times.

Table 7 – Existing Intersection Levels of Service with Mitigation

Intersection	A.M. Peak Hour	P.M. Peak Hour
1) Covington Highway at Panola Road (signal)	C	D
2) Covington Highway at Park Central Boulevard (signal)	A	A
3) Covington Highway at Miller Road (signal)	B	C
4) Covington Highway at Young Road / Hidden Creek Drive (signal)	D	C
5) Covington Highway at South Hairston Road (signal)	D	D
6) Panola Road at Snapfinger Woods Drive (signal)	B	D
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard (signal)	C	D
8) I-20 westbound ramp at Panola Road (signal)	B	C
9) I-20 eastbound ramp at Panola Road (signal)	B	D
10) Panola Road at Minola Drive / Fairington Road (signal)	D	E

It is noted here that no specific mitigation was incorporated at intersections 1, 3, 4, 8, 9, and 10. However, some levels of service improved at these intersections simply due to the combination of improvements at adjacent intersections and the optimization of system signal timings. It is also reiterated that the LOS E at intersection 10 is the existing level of service and, therefore, the standard, which requires no mitigation.

5.5 Summary of Existing Mitigation

1) Signalize the Covington Highway / Park Central Boulevard intersection, subject to the satisfaction of appropriate warrants in a signal needs study. Add a second northbound lane on Park Central Boulevard.

2) Widen Covington Highway to six lanes in the vicinity of South Hairston Road. Add second exclusive left turn lanes on the eastbound and westbound approaches of Covington Highway at South Hairston Road.

3) At the Panola / Snapfinger Woods intersection add a second northbound exclusive left turn lane. The construction of this lane would require a second westbound lane on Snapfinger Woods to receive the traffic from this lane. Add a southbound exclusive right turn lane on Panola Road.

4) At the Panola Road / Hillandale Drive intersection provide dual left turn lanes, a through lane, and a right turn lane on the westbound approach. On the eastbound approach provide separate left, through, and right-turn lanes, so the split phasing can be eliminated. Right turn overlap phases should be provided on both side street approaches. The northbound left turn should be served by dual left turn lanes. This second left turn lane would require a second westbound lane on Panola Industrial Boulevard. Widen Panola Road to six lanes in the vicinity of this intersection.

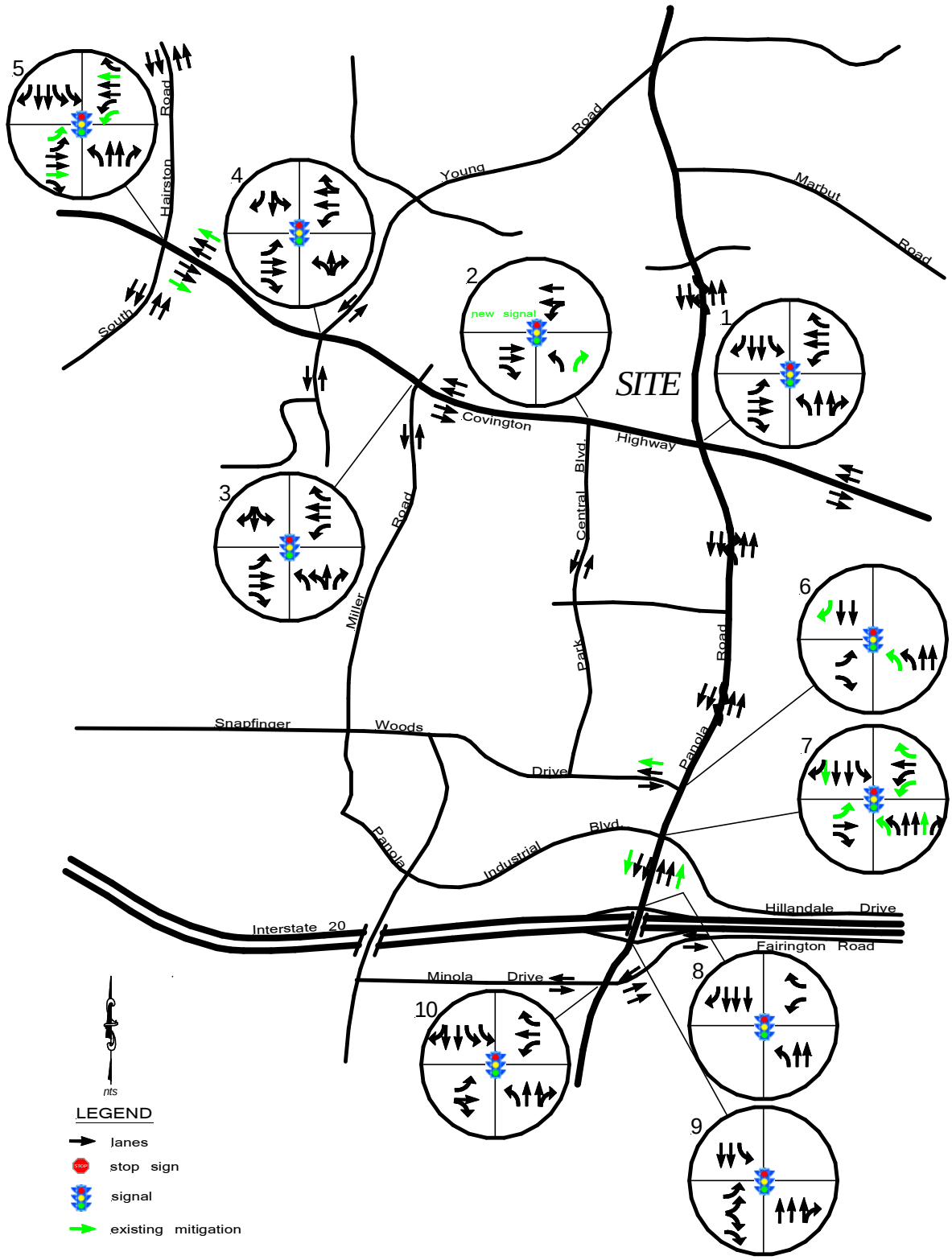


Figure 7 – Existing Mitigation

6. Base (No-Build) Traffic Analysis

A base, or no-build analysis condition was developed for the DRI's build-out year of 2011. This analysis provides a reference by which to measure the traffic impact of the proposed DRI. The no-build infrastructure assumes all of the mitigation identified in Figure 7. Two other infrastructure changes will occur by 2011: the Panola Road Connector and the widening of Panola Road between Covington Highway and Snapfinger Woods Drive. These are discussed below:

6.1 Panola Road Connector

The no-build analysis includes the Panola Road Connector, which is currently under construction. Information about this project was obtained from the project's consultant, Post Buckley Schuh and Jernigan (PBS&J), and included traffic volume projections and lane configurations. The new four lane roadway will begin as the fourth leg of the Panola Road / Snapfinger Woods Drive intersection, and will extend to DeKalb Medical Parkway. A southbound exclusive left turn lane will be provided on Panola Road. The new westbound approach will include an exclusive left turn lane, a through lane, and a shared through/right turn lane and this configuration was used in the no-build model. Figure 8 shows the lanes that will be added for the Panola Road Connector, and the lanes that are assumed for the no-build analysis. Traffic volume projections were made for this new roadway by PBS&J and are documented in their report of April 12, 2004, titled *Panola Road Connector Traffic Analysis*. The projections included anticipated new developments along the Connector including commercial uses, a high school, and a hospital. The projections from that study were incorporated into the DRI study network and extrapolated through the other study network intersections.

6.2 Widening of Panola Road

Programmed improvement DK-065E will widen Panola Road between Covington Highway and Snapfinger Woods Drive from four to six lanes. As is standard in the DRI analysis process, this improvement was not automatically modeled into the no-build condition. Rather, the no-build analysis will be used to identify any additional mitigation that may be necessary by 2011, in addition to that identified in the existing facilities needs analysis, plus the under-construction Panola Road Connector. DK-065E is documented in the Programmed Infrastructure Improvements section of this report and the project information sheet is included in the appendix.

6.3 No-Build Traffic Volumes

The no-build condition includes background increases in traffic volumes that will occur whether or not the subject Panola Road DRI is built. Georgia Department of Transportation historic daily traffic volumes were researched in the study area. The data was collected for five years from 2001 to 2005 (inclusive) and is presented in Table 8. The documented daily volumes did not suggest a definitive trend. Based on discussions with GRTA, a general background growth factor of 3% per year was applied to the existing volumes. Over the build-out period, this equates to an increase of 12.6%. In addition, the new trips that were projected for new developments along the Panola Road Connector, as discussed above, were added. The 2011 no-build volumes are presented in Figure 9 for the weekday a.m. and p.m. peak hours.

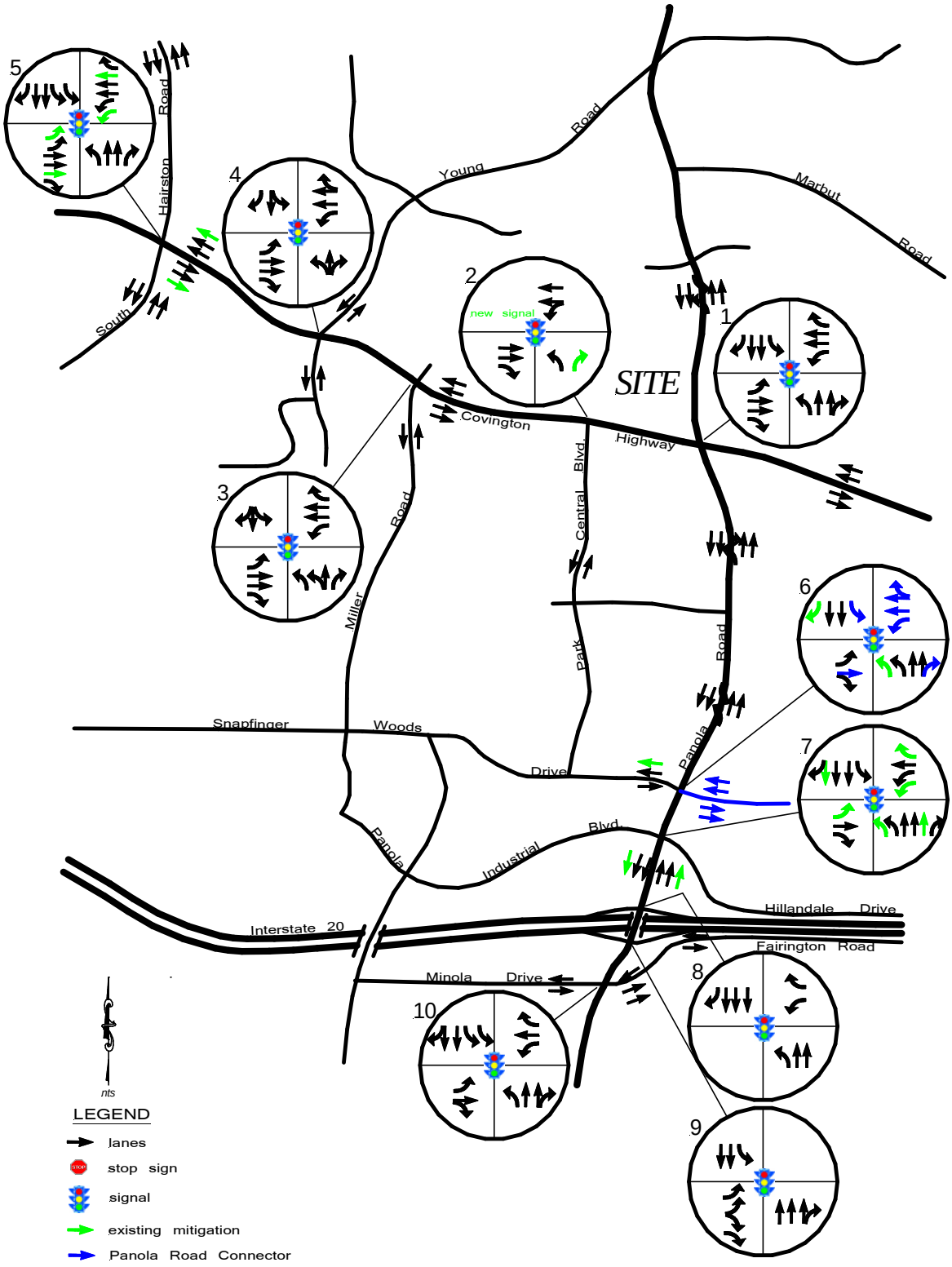


Figure 8 – No-Build Lanes

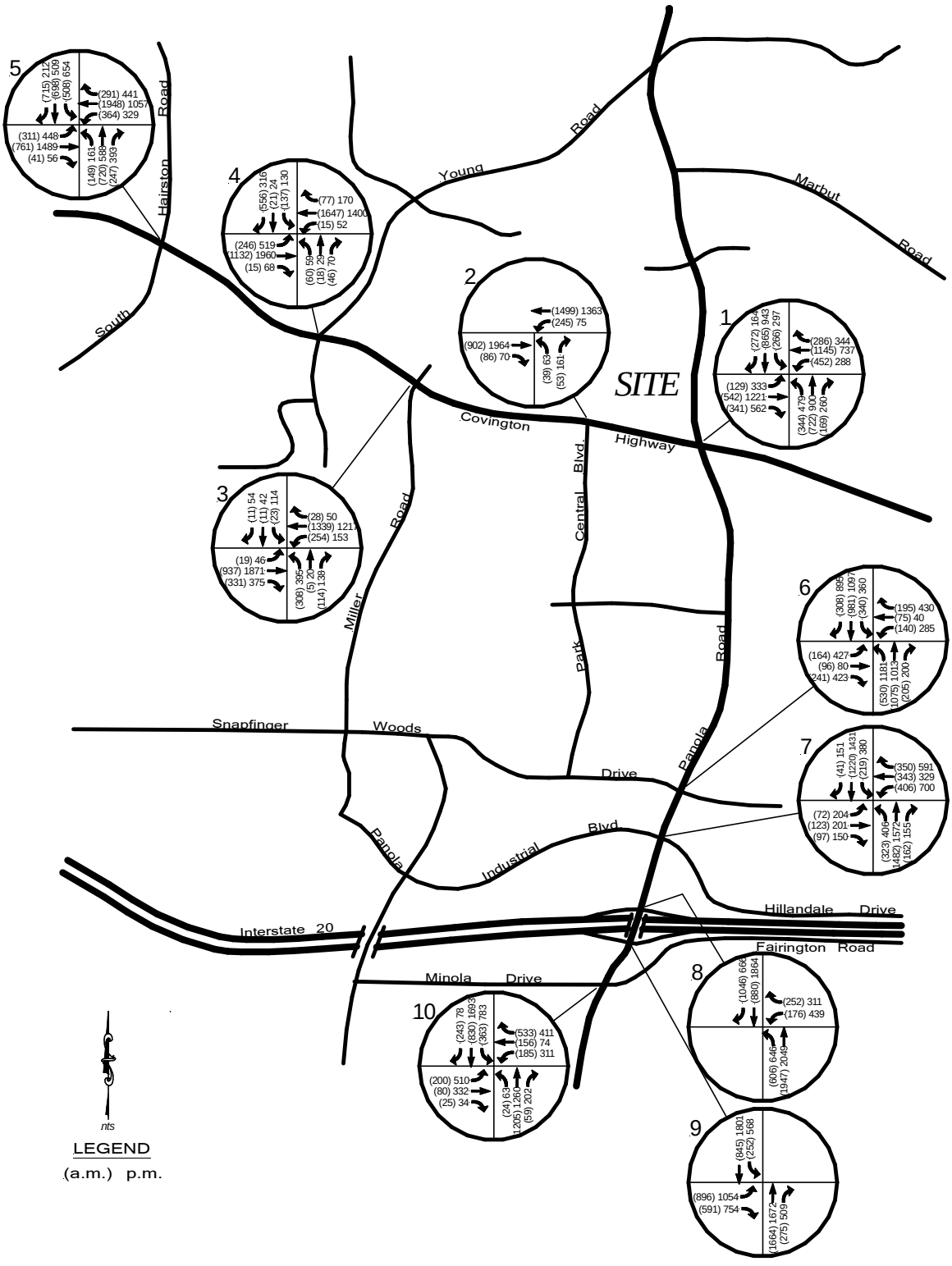


Figure 9 – No-Build Peak Hour Traffic Volumes

Table 8 – Georgia DOT Historic AADT Data

Location	2001	2002	%	2003	%	2004	%	2005	%	average %
Covington west of Panola	41,554	33,929	-18.35%	27,474	-19.03%	45,040	63.94%	29,070	-35.46%	-8.54%
Covington very east of Panola	17,848	19,056	6.77%	20,414	7.13%	23,185	13.57%	26,190	12.96%	10.06%
Panola north of Covington	22,800	22,011	-3.46%	21,790	-1.00%	23,111	6.06%	20,840	-9.83%	-2.22%
Panola south of Covington	30,000	31,031	3.44%	27,430	-11.60%	29,526	7.64%	29,060	-1.58%	-0.79%

6.4 No-Build Intersection Operations

Each study intersection was evaluated for the 2011 no-build condition. The no-build levels of service at each intersection are shown in Table 9. The Synchro computer printouts are included in Appendix F.

Table 9 – No-Build Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour
1) Covington Highway at Panola Road (signal)	D	***F***
2) Covington Highway at Park Central Boulevard (signal)	B	B
3) Covington Highway at Miller Road (signal)	B	D
4) Covington Highway at Young Road / Hidden Creek Drive (signal)	***F***	***E***
5) Covington Highway at South Hairston Road (signal)	***E***	***E***
6) Panola Road at Snapfinger Woods Drive / Panola Road Conn. (signal)	D	***F***
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard (signal)	C	***E***
8) I-20 westbound ramp at Panola Road (signal)	C	D
9) I-20 eastbound ramp at Panola Road (signal)	C	***F***
10) Panola Road at Minola Drive / Fairington Road (signal)	D	***F***

6.5 No-Build Facilities Needs Analysis

The following locations do not meet the LOS D standard (or LOS E at intersections 4, 9, and 10, see existing analysis) in the no-build condition:

1) Covington Highway at Panola Road
4) Covington Highway at Young Road / Hidden Creek Drive
5) Covington Highway at South Hairston Road
6) Panola Road at Snapfinger Woods Drive / Panola Road Connector
9) I-20 eastbound ramp at Panola Road
10) Panola Road at Minola Drive / Fairington Road

1) Several additional auxiliary lanes would benefit the intersection of Covington Highway at Panola Road including, in order of importance 1) a second westbound left turn lane, 2) a second northbound left turn lane, 3) a second eastbound left turn lane, and 4) a northbound right turn lane. However, even with the addition of all of these lanes, the intersection will still operate at LOS E in the p.m.. Therefore, it is concluded that additional through capacity is needed, with the need for this additional capacity on both Covington Highway and on Panola Road. The through volumes are a bit higher on Covington Highway. However, since Panola Road is programmed to be widened from four to six lanes, from Covington Highway south to Snapfinger Woods Drive, this widening was tested in the facilities needs analysis first. With the addition of a northbound and southbound through lane on Panola Road, the p.m. LOS will go from LOS F to LOS E. In conjunction with this widening, a second northbound left turn lane and a northbound right turn lane should be added. In addition, a second westbound left turn lane should be built. With these additional auxiliary lanes, and the additional through lanes on Panola Road, this intersection will operate at LOS D in the p.m..

4) The skewed alignment between the Young Road and Hidden Creek Drive approaches makes the existing split phasing the logical choice. However, to improve the efficiency of this phasing, a second southbound right turn lane would be beneficial (southbound right turn volume will be 556 a.m., 316 p.m.), including a right turn overlap phase. In addition, a westbound exclusive right turn lane on Covington Highway would improve operations. However, even with these improvements, the level of service standard will not be met. Therefore, it is concluded that, by the no-build condition, additional through capacity will be needed on Covington Highway. This through capacity was added to the model, but the aforementioned right turn lanes were also included due to the benefits they will provide.

5) At the Covington Highway / South Hairston Road intersection the southbound right turn volume of 715 in the a.m. calls for a second exclusive right turn lane and a right turn overlap phase. These additional improvements, beyond those identified for the existing analysis, will achieve the LOS standards at this intersection.

6) Based on the volume projections at the Panola Road / Snapfinger Woods Drive / Panola Road Connector intersection, additional lanes will be needed (in addition to those recommended for the existing analysis). The new westbound approach of the Panola Road Connector should be widened to include dual left turn lanes, a through lane, and a right turn lane. The eastbound approach should widened to also include dual lefts, a through, and a right turn lane. This will eliminate the need for split phasing on the side streets, dramatically improving the efficiency of the signal. Additionally, the northbound approach on Panola Road should include an exclusive right turn lane, which is not called for in the plans for the Panola Road Connector. A second exclusive right turn lane for the southbound approach should also be considered, with a right turn overlap phase, since its volume will approach 900 vehicles in the p.m. peak hour. However, with all of these improvements, the intersection will still not meet the LOS D standard. Therefore, it is concluded that by the no-build condition, Panola Road will need to be widened from two to three through lanes in each direction. The modeling of this intersection with mitigation includes the widening of Panola and all of the aforementioned additional lanes.

9) At the I-20 eastbound ramps at Panola Road, two improvements would have great benefit. The eastbound approach of the off-ramp should be widened to include two left and two right lanes. Additionally, a second southbound left turn lane should be added. It is noted that this additional lane may require the widening of the bridge over the interstate. It is also noted that programmed improvement DK-AR-242 calls for the addition of a second northbound left turn lane on Panola at the I-20 westbound ramps. This widening is programmed for 2015, beyond the dates of this analysis. However, this project should be considered in conjunction with the mitigation identified here.

10) At the intersection of Panola Road at Minola / Fairington, the eastbound left turn volume will be 510 in the no-build p.m., which will justify dual left turn lanes. A westbound right turn overlap phase would improve the efficiency of that right turn movement. There would also be a benefit to adding northbound and southbound exclusive right turn lanes on Panola Road. With these improvements, the intersection will meet the LOS standards (in this case LOS E, due to the fact that LOS E is the existing p.m. LOS). However, it is noted that the northbound and southbound through volumes on Panola Road will begin to justify widening from two to three through lanes in each direction (northbound through will be 1,205 a.m. and 1,260 p.m., southbound through will be 830 a.m. and 1,693 p.m.).

The mitigation discussed above is shown graphically in Figure 10. The no-build analysis was re-run with this mitigation and the results are shown in Table 10.

Table 10 – No-Build Intersection Levels of Service with Mitigation

Intersection	A.M. Peak Hour	P.M. Peak Hour
1) Covington Highway at Panola Road (signal)	C	D
2) Covington Highway at Park Central Boulevard (signal)	B	B
3) Covington Highway at Miller Road (signal)	C	D
4) Covington Highway at Young Road / Hidden Creek Drive (signal)	C	C
5) Covington Highway at South Hairston Road (signal)	D	D
6) Panola Road at Snapfinger Woods Drive (signal)	C	D
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard (signal)	D	D
8) I-20 westbound ramp at Panola Road (signal)	C	D
9) I-20 eastbound ramp at Panola Road (signal)	C	D
10) Panola Road at Minola Drive / Fairington Road (signal)	C	E

These results reveal that, with the mitigation discussed above, all intersections will meet the LOS standards. It is again noted that intersections 4, 9, and 10 operate at LOS E in the existing, and, therefore, that is the level of service standard at those locations.

6.6 Summary of No-Build Mitigation

1) At Covington Highway / Panola Road widen Panola Road to six lanes in the vicinity of this intersection. A second northbound left turn lane and a northbound right turn lane should be added. In addition, a second westbound left turn lane should be built.

2) Add a second southbound right turn lane, including a right turn overlap phase, on southbound Young Road at Covington Highway. Provide a westbound exclusive right turn lane on Covington Highway at Young Road. Widen Covington Highway to six lanes in the vicinity of Young Road.

3) At the Covington Highway / South Hairston Road intersection add a second southbound exclusive right turn lane and a right turn overlap phase.

4) Additional lanes will be needed at the Panola Road / Snapfinger Woods Drive / Panola Road Connector intersection (in addition to those recommended for the existing analysis). Widen the new westbound approach of the Panola Road Connector to include dual left turn lanes, a through lane, and a right turn lane. The eastbound approach should widened to also include dual lefts, a through, and a right turn lane, eliminating the need for split phasing on the side streets. Add a right turn lane on the northbound approach on Panola Road. Add a second exclusive right turn lane for the southbound approach, with a right turn overlap phase. Panola Road will need to be widened to six lanes in the vicinity of Snapfinger Woods Drive by the no-build condition.

5) The I-20 eastbound off-ramp should be widened to include two left and two right lanes. Additionally, a second southbound left turn lane should be added on Panola Road.

6) Provide dual left turn lanes on eastbound Minola Drive at Panola Road. Add a westbound right turn overlap phase on Fairington Road. Add northbound and southbound exclusive right turn lanes on Panola Road at Minola/Fairington.

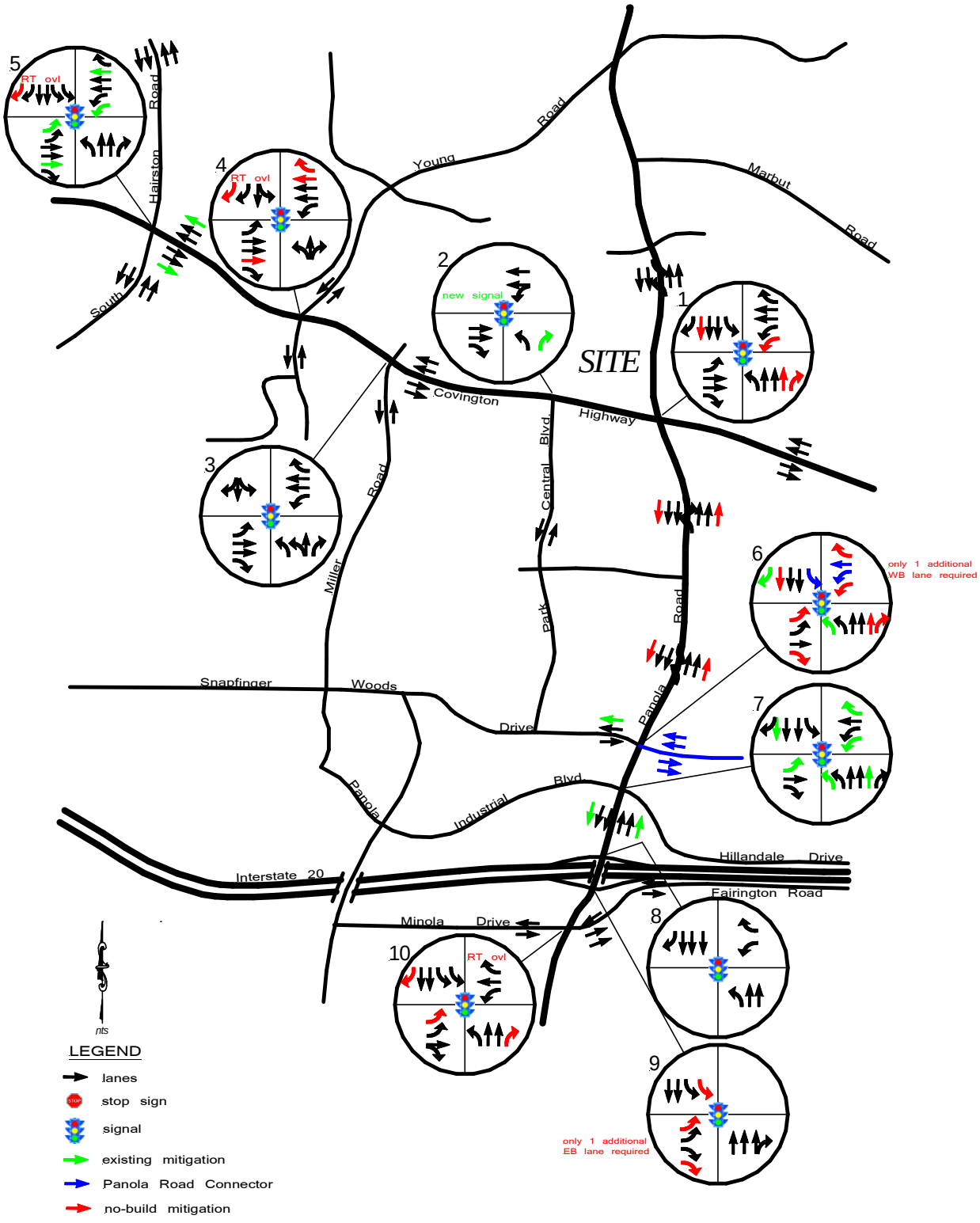


Figure 10 – No-Build Mitigation

7. Future (Build) Traffic Analysis

The analysis of the 2011 build scenario identifies the traffic impact of the proposed Panola Road DRI. This future condition includes all traffic from the 2011 no-build scenario, plus the specific traffic that will be added by the proposed DRI.

7.1 Build Traffic Volumes

The 2011 build volumes are the combined volumes from Figures 9 (the no-build volumes) and Figure 4 (the DRI-generated trips). These build volumes are depicted at each intersection in Figure 11. The spreadsheets showing the components of all intersection volumes, by movement, are located in Appendix D.

7.2 Build Intersection Operations

The build analysis uses the volumes from Figure 11 and assumes all mitigation shown in Figure 10 will be in place. The levels of service at each intersection are shown in Table 11. The Synchro computer printouts are included Appendix G.

Table 11 – Build Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour
1) Covington Highway at Panola Road (signal)	D	D
2) Covington Highway at Park Central Boulevard (signal)	B	B
3) Covington Highway at Miller Road (signal)	B	D
4) Covington Highway at Young Road / Hidden Creek Drive (signal)	C	C
5) Covington Highway at South Hairston Road (signal)	D	D
6) Panola Road at Snapfinger Woods Drive (signal)	C	D
7) Panola Road at Hillandale Drive / Panola Industrial Boulevard (signal)	D	D
8) I-20 westbound ramp at Panola Road (signal)	C	D
9) I-20 eastbound ramp at Panola Road (signal)	C	D
10) Panola Road at Minola Drive / Fairington Road (signal)	C	E

7.3 Build Facilities Needs Analysis

The build analysis reveals that all locations will operate within the established level of service goals. Therefore, no mitigation is required for the build condition. It is noted again here that intersections 4, 9, and 10 operate at LOS E in the existing, and, therefore, that is the level of service standard at those locations.

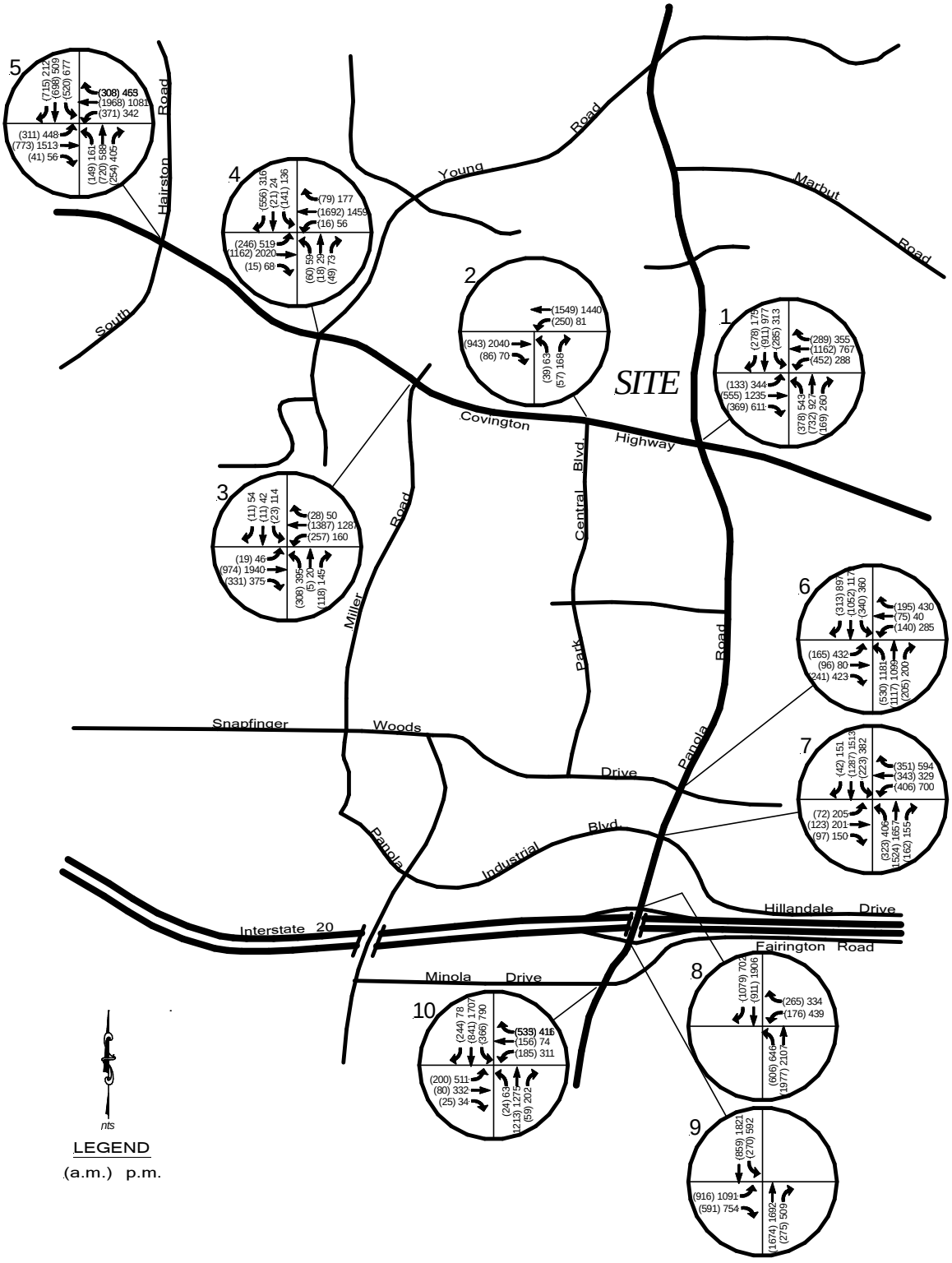


Figure 11 – Build Peak Hour Traffic Volumes

8. Site Access Analysis

An operational analysis was performed for the five site accesses. Figure 12 depicts the lane configuration assumed at each access. All site accesses were assumed to have one entering and one exiting lane except for the main access (Access A) on Covington Highway, which was modeled with a second outbound lane. A deceleration lane on Covington Highway will be provided at Access A, and this is shown on the site plan. On Panola Road no decel lane was assumed at the northernmost access (Access C). However, the site has a deceleration lane along some of its frontage in the vicinity of Accesses D and E. Therefore, these two driveways were modeled with decel lanes on Panola Road, and these decel lanes are shown on the site plan. The two way left turn lane on Panola Road will operate as a left turn lane for each Panola Road access. All accesses were initially modeled as side street stop sign controlled. This is discussed after the results of the analysis are presented. Figure 12 also shows the peak hour volumes at each access. The spreadsheets showing how all intersection volumes were developed, by movement, are located in Appendix D.

8.1 Site Access Operations

The build levels of service at each site access are presented in Table 12. The Synchro computer printouts are included Appendix G.

Table 12 – Build Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour
Access A	D	H
southbound left turn (exiting)	f	f
southbound right turn (exiting)	c	b
eastbound left turn (entering)	a	b
Access B (right turn exit only)	B	C
southbound right turn (exiting)	c	b
Access C	A	A
northbound left turn (entering)	b	b
eastbound approach (exiting)	f	f
Access D	A	A
northbound left turn (entering)	b	b
eastbound approach (exiting)	f	f
Access E	A	A
northbound left turn (entering)	b	b
eastbound approach (exiting)	f	f

note: capital letters denote intersection LOS, lowercase letters denote approach or movement LOS

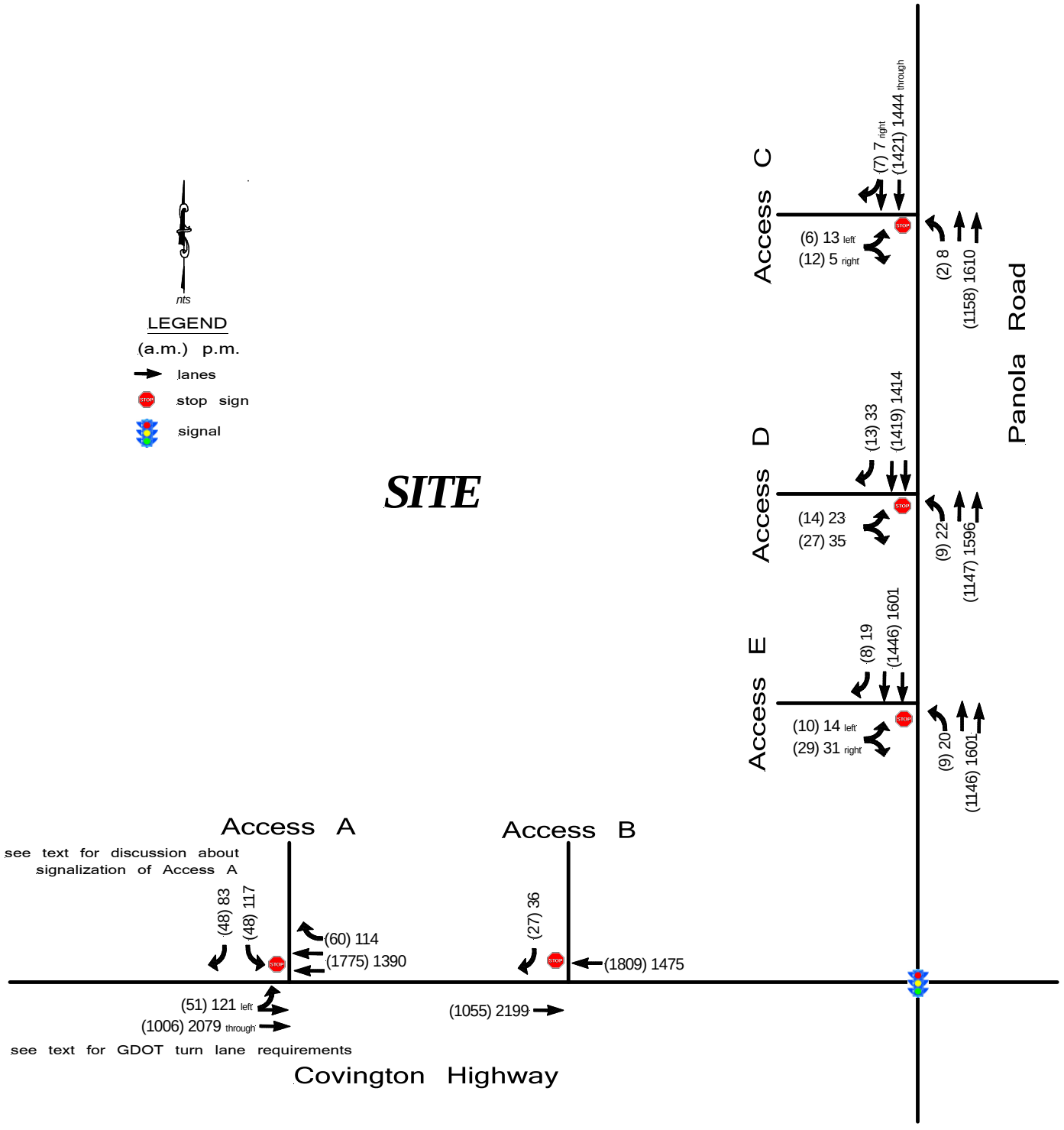


Figure 12 – Site Access Lanes and Peak Hour Volumes

All site accesses except Access B, which is right-out only, will have similar characteristics. The side street delays will be high, primarily due to the exiting left turns. The analysis included single exiting lanes at each access except Access A. Adding a second exiting lane at each Panola Road access would reduce delays slightly by preventing right turners from being blocked by the more difficult left turn. However, the volumes at each of these driveways is low to the point that the benefit of adding these second exiting lanes is minimal. Signalization of each access would reduce the delays further for the side street approaches, but would introduce delays to the major thoroughfares. Since the side street volumes at each of the Panola Road accesses is low, signalization of any of these driveways is not recommended at this time.

At Access A, two exiting lanes are recommended. Since there is already a right-turn lane extending westbound from Panola Road and along the adjacent retail frontages to the east of the site, it was assumed that Access A would be served by this lane, and this is recommended. The Georgia DOT standard for deceleration lanes, given the conditions of speeds, lanes, and volumes on Covington Highway, is 75 right turn vehicles per day. This will obviously be exceeded (the p.m. peak hour right turn volume is 114), and therefore, since Covington Highway is a state route, this right turn lane will be required. The Georgia DOT standard for left turn lanes, given the conditions at this location, is 250 left turn vehicles per day. The daily left turn volume at this location will be approximately 1,130, so a left turn lane will be required according to Georgia DOT standards, and is recommended.

Signalization of Access A will be necessary in order to achieve acceptable levels of service. A signal needs study based on the *Manual On Uniform Traffic Control Devices* (MUTCD) should be performed to determine if this signalization meets applicable engineering standards. A review of the volumes suggests that this signal would likely meet at least some of the volume-based warrants. Should this intersection be signalized, it should be interconnected and coordinated with adjacent signals, as appropriate.

8.2 Pedestrian and Bicycle Access

The Panola Road DRI is being developed with a grid of streets, with sidewalks on both sides of all streets. New sidewalks will connect to Panola Road and Covington Highway, and new sidewalks will be provided along the site frontages on Covington Highway and Panola Road. It is noted that programmed improvement DK-031B will provide a five foot wide ADA compliant sidewalk along both sides of Covington Highway from Margarette Drive (to the west) to Panola Road by 2013. Programmed improvement DK-AR-BP014 will add sidewalks and bicycle lanes on Panola Road between Redan Road to Covington Highway by 2011.

No specific bicycle lanes are being built within the site, and this is not inappropriate. However, it is recommended that bicycle racks be provided near commercial buildings and the on-site amenity.

8.3 Internal Circulation

The following is a summary of on-site circulation conditions:

1) Generally, internal circulation through the site is good. The site will include a general grid of streets.

2) Several locations, shown on the site plan, allow for the future ability to connect to adjacent tracts as they are developed or redeveloped.

3) Rear alleys will be built behind the townhouse-style condominiums and the central blocks of single-family homes. A few of the single-family homes in the northwest corner of the site will only be served by a front alley. Since this will be the only access for these few homes, appropriate DeKalb County standards, including those for emergency vehicle access, should be consulted.

4) The circulation from Access E (by Building E) into the site will effectively be through a parking lot into another parking lot. This design is a bit of a departure from the standard street grid through the rest of the project. Operationally, exiting and entering vehicles may conflict with the parking operations in the surface lot next to Building E.

5) There are a few locations where alleys are slightly offset from one another or from a street, across streets. Typically, streets should align when they intersect a cross-street in close proximity to one another. However, in the instances on this site plan, this is not considered a problem since the alleys will carry only minimal traffic.

8.4 Summary of Access, Pedestrian, and Bicycle Recommendations

1) At Access A provide an eastbound left turn lane and a westbound right turn lane on Covington Highway. Provide one inbound and two outbound lanes. Signalize the intersection subject to satisfaction of applicable warrants.

2) At Access B, provide one exiting lane, restricted to right turns only. Control with side street stop sign.

3) At Access C, no decel lane will be provided. The existing two way left turn lane on Panola Road will serve as the left turn lane. One entering and one exiting lane will be sufficient. Control with side street stop sign.

4) At both Access D and Access E, a decel lane will be provided on Panola Road. The two way left turn lane will serve as the left turn lane for both driveways. One entering and one exiting lane will suffice at both accesses. Both should be controlled with side street stop signs.

5) Sidewalks will be provided along both sides of all internal roadways and connecting to Panola and Covington Roads. Sidewalks will be provided along Panola and Covington Road frontages (note programmed projects which will add sidewalks).

6) Bicycle lanes are not necessary within the site, but bicycle racks should be provided near commercial uses and the amenity.

9. Programmed Infrastructure Improvements

There are several improvements programmed in the study network, as shown in Table 13.

Table 13 – Programmed Infrastructure Improvements

Project ID	Description	Sponsor	Completion Date	Included in Study
AR-305	I-20 East ITS – Communication and surveillance from I-285 to SR 138	GDOT	2020	No
AR-904A/B	I-20 East Bus Rapid Transit from Stonecrest Mall to downtown Atlanta	MARTA	2025	No
AR-H-250	I-20 East HOV Lanes from Columbia Drive to Evans Mill Road	GDOT	2012	No
DK-031B	Covington Highway addition of 5 foot ADA compliant sidewalks along both sides of road from Margarette Drive to Panola Road	DeKalb County	2013	No
DK-031C	Covington Highway addition of 5 foot ADA compliant sidewalks along both sides of road from Panola Road to Evans Mill Road and widening of Covington Highway from 4 to 5 lane section with bike lanes from DeKalb Medical Parkway to Wellington Circle	DeKalb County	2013	No
DK-065E	Panola Road widening from 4 to 6 lanes, intersection improvements, bicycle lanes, pedestrian improvements from Snapfinger Woods Drive to Covington Highway	DeKalb County	2011	Yes
DK-320A3	Sidewalks along South Hairston Road from Rockbridge Road to Wesley Chapel Road	DeKalb County	2010	Yes
DK-AR-009A	I-20 Collector-Distributor Lanes from Columbia Drive to Evans Mill Road	GDOT	2014	No
DK-AR-242	Panola Road at I-20 – single left turn from NB Panola to I-20 WB will be converted from 1 to 2 lanes	GDOT	2015	No
DK-AR-BP014	Panola Road from Redan Road to Covington Highway – sidewalks, bicycle lanes	DeKalb County	2011	Yes

Note: taken from Atlanta Region Mobility2030 Transportation Plan

For informational purposes, the project data sheets for the programmed improvements in Table 13, are located in Appendix H.

10. Compliance With GRTA Criteria

The following sections address the compliance of the Panola Road DRI #1447 with the eight criteria presented in Section 3-103 of *Procedures and Principles for GRTA Development of Regional Impact Review*.

1. The proposed DRI is likely to promote improved regional mobility in terms of the quality, character, convenience, and flexibility of transportation options;

> The project will be developed with the characteristics of a traditional neighborhood development, which include a mix of land uses, a grid of streets interconnecting the uses, the potential for connection to adjacent uses, sidewalks with pedestrian-friendly character, minimal large surface parking lots, and proximity to transit facilities. These qualities tend to minimize vehicular impacts and improve regional mobility by concentrating activities in nodes that reduce automobile dependency.

2. The proposed DRI is likely to promote improved regional mobility by reducing vehicle miles of travel;

> The mix of uses in the DRI will result in interaction between the uses, which will reduce vehicle miles when compared with similar levels of development built separately. Also, some residents of the surrounding areas may be employed at the site, which could reduce existing trips from this general area to other employment centers.

3. The proposed DRI is likely to promote improved regional mobility because it is located in an urban core, town center, an activity center previously designated by an RDC, a rail/transit station development, or is a part of a publicly sponsored redevelopment or infill initiative;

> This criterion, as worded, may not be applicable to the Panola Road DRI. However, the area is identified by the DeKalb County Comprehensive Plan as a "Neighborhood Center." This land use classification supports the creation of "a neighborhood focal point with a concentration of activities such as general retail, service commercial, professional office, higher-density housing, and appropriate public and open space." As such, this development is expected to promote regional mobility because it may become the core of an activity center.

4. The proposed DRI is located sufficiently close to existing or planned transit facilities to indicate a likelihood of significant use of transit by residents, employees, and visitors of the proposed DRI;

> MARTA bus stops are located adjacent to the site on both Covington Highway and Panola Road and several bus routes serve this area. Route 117 connects with the Kensington MARTA rail station and with the GRTA park/ride lot on Panola Road just south of I-20. These facilities will encourage and facilitate transit use from this DRI.

5. The proposed DRI is located within an established Transportation Management Area which creates a likelihood that the proposed DRI is reasonably anticipated to result in improved regional mobility as a result of the Transportation Management Area;

This DRI is not located in an established Transportation Management Area.

6. Offsite trip generation from the proposed DRI is reduced by at least fifteen percent (15%), or, in the event that a proposed DRI is unable to satisfy the trip reduction standard established in this subsection because of other conditions which are beyond the control of the developer or the affected local government, the proposed DRI implements all available trip reduction techniques which are reasonably practical.

Table 5 in this report summarizes the reductions that will occur in trip generation due to the multi-use nature of these projects. Over a 24-hour period, DRI #1447 will experience a 15.2% reduction in new vehicle trips due to the multi-use nature of the project. The proximity of transit facilities to the site is expected to account for an additional 5% reduction in vehicular trips generated by this DRI.

7. The proposed DRI:

a. Contains a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI, to be reasonably anticipated to have an opportunity to reside within the DRI; or

b. Is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to a balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons who are reasonably anticipated to be employed in the proposed DRI have the opportunity to live within the Area of Influence; or

c. Is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

The Area of Influence Study was performed by Tunnell-Spangler-Walsh & Associates. Their report of June 2007 concludes: “Because the DRI adds more than 200 jobs to the AOI and because the analysis estimates that 43.6% of the total households working in the DRI can afford to live in the DRI, the project satisfies the requirements of Section 3-103.A.7.a, and requires no further analysis.”

8. The proposed DRI is not located in any area where the existing level of development and availability of infrastructure within the Area of Influence of the proposed DRI is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available.

Answer provided by Tunnell-Spangler-Walsh & Associates: The proposed DRI is a mixed-use infill development located in an area identified by the DeKalb County Comprehensive Plan as a "Neighborhood Center." This land use classification supports the creation of, "A neighborhood focal

point with a concentration of activities such as general retail, service commercial, professional office, higher-density housing, and appropriate public and open space." This is consistent with the proposed development program, which is intended to establish a pedestrian-oriented center to serve surrounding residential uses.

Implicit in the "Neighborhood Center" classification is the ability of a site to adequately provide access and services, both internally and externally. Most "Neighborhood Centers," including this one, are located at the junction of major county thoroughfares. Additionally, most are in areas that are served by fire, schools, police, and similar public facilities. As such, the redevelopment of properties within a "Neighborhood Center" concentrates development into areas of the county most appropriate for it. In doing so, they are consistent with planning principles aimed at reducing suburban sprawl, providing goods and services within walking distances of existing and new homes, and strengthening nodal land use patterns.

As such, the proposed development is ideally suited towards becoming an important focal point for the southeast DeKalb area. At the same time, it will likely become a model for transforming under-utilized land in an already-developed area into a land use pattern that supports community-building, reduced vehicle dependence, improved facilities for transit riders, and improved public health, safety, and welfare.

Appendix A
Traffic Analysis Methodologies

Traffic Analysis Methodologies and Assumptions

This section provides background information and does not contain findings of the analysis, and, so, it has been included in the appendix to serve as a reference, while simplifying the presentation of findings in the body of the report. The following sections provide information on the analysis methodologies employed in this study.

Traffic Data Collection

Traffic counts used in the analyses in this study were collected during the weekday a.m. and p.m. peak periods. The morning counts were collected from 7:00 a.m. to 9:00 a.m., the evening counts were performed from 4:00 p.m. to 6:00 p.m.. From the count data, the highest four consecutive 15-minute interval volumes in each time period were determined. These volumes make up the typical peak hour traffic volumes at each intersection for each time period. All counts were performed by a data collection subconsultant and reviewed by Marc R. Acampora, PE, LLC. Specific details concerning the count times, dates, and locations are presented in the appropriate section of this report.

Detailed Intersection Analysis

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board's Highway Capacity Manual, 2000 edition (HCM 2000). Synchro software, version 6, which emulates the HCM 2000 methodology, was used for the analysis. The following is an overview of the methodology employed for the analysis of stop-sign controlled (unsignalized) and signalized intersections.

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. In the HCM 2000 methodology, levels of service are defined for each minor (controlled) movement at a two-way stop-controlled intersection, but not for the intersection as a whole. However, Synchro software includes a method for calculating the overall intersection LOS. This provides a useful indicator of overall intersection sufficiency and is, therefore, reported in this study, along with the movement levels of service. The level of service criteria for unsignalized intersections are given in Table A.

Table A – Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay (s/veh)
A	0 - 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual 2000

Signalized Intersections

The criterion for evaluating signalized intersections according to GRTA standards is level of service (LOS). Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in the following table.

Table B – Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (s/veh)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Source: Highway Capacity Manual 2000

Facilities Needs Analysis

A facilities needs analysis tests alternative combinations of roadway improvements that allow a facility to achieve the LOS D standard (see Level of Service Standards section of the Study Network Chapter). Facilities needs analyses are performed for the existing, no-build, and build conditions, where necessary. The existing facilities needs analysis identifies existing deficiencies, and the mitigation required to achieve the applicable LOS standard. The future no-build analyses allow for the identification of projects necessary to bring the roadways up to the proscribed LOS standard, after the inclusion of other planned levels of development, but before the introduction of project-generated traffic. The future build analyses identify those additional facilities improvements that will

be necessitated by the subject DRI. Later in the study, programmed transportation improvements are identified, and those improvements are compared with the results of the facilities needs analysis, where appropriate.

Trip Generation

Vehicle trip estimates are determined through a process called trip generation. Rates or equations are applied to size of the proposed land use to estimate the number of entering and exiting trips during specific time intervals. The standard rates and equations were employed from the 7th edition of the Institute of Transportation Engineers (ITE) *Trip Generation*. The trip generation is summarized in the Project Traffic Characteristics chapter of the report.

Multi-Use Trip Adjustments

Multi-use trip adjustments reflect the benefit that is realized by the sharing of compatible trips between land uses. The sharing of uses can occur in two ways. Trips between immediately adjacent uses which are interconnected will occur by either automobile or by foot or bicycle. These trips remain within the development and never appear in the analysis of intersections or site driveways. Other multi-use trips may occur between non-contiguous uses. These trips are likely to be made by automobile and may enter and exit site driveways and travel through some study intersections. The multi-use adjustments presented in the report are based on the *Trip Generation Handbook* and the GRTA methodologies.

Transit Adjustment

Transit adjustments are made to account for the reduction in automobile trip generation that is expected to be made due to the availability of transit. For the Panola Road DRI, a transit reduction of 5% was taken.

Pass By Adjustments

The retail/restaurant trip generation is adjusted to account for the effect of pass-by trips. These are trips that are already on the adjacent roadways and will divert into the site for shopping purposes enroute to their final destination. Pass-by percentages for the proposed amount of retail were calculated using the ITE *Trip Generation Handbook*. For the Panola Road DRI retail / restaurants, the following pass-by percentages were applied: 30% a.m., 40% p.m., 20% 24-hour.

Appendix B
Study Network Determination Calculations

Panola Road DRI
Transportation Analysis

Study Network Determination

May 2007

Name of Facility	Segment		Facility Type	LOS D Service Volume	Adjustment	Adjusted Service Volume	Site Residential Percentage	Site Residential Trips	Site Commercial Percentage	Site Commercial Trips	Total Site Number of Trips	Percent of Service Volume Consumed	Is Percent of Service Volume > than 7%?
	From	To											
Covington Highway	Panola Road	Miller Road	4L undivided 2-4.5	32,500	-5%	30875	31%	885	34%	2317	3202	10.4%	**Yes**
Covington Highway	Miller Road	South Hairston Road	4L undivided 2-4.5	32,500	-5%	30875	25%	714	27%	1840	2553	8.3%	**Yes**
Covington Highway	South Hairston Road	west	4L undivided <2	35,000	-5%	33250	12%	342	8%	545	888	2.7%	**No**
Covington Highway	Panola Road	Wellborn Road	4L undivided 2-4.5	32,500	-5%	30875	19%	542	18%	1227	1769	5.7%	**No**
Panola Road	Covington Highway	Young Road	4L TWLTL 2-4.5	31,700	0%	31700	11%	314	23%	1567	1881	5.9%	**No**
Panola Road	Covington Highway	I-20	4L TWLTL 2-4.5	31,700	0%	31700	39%	1113	25%	1704	2817	8.9%	**Yes**
Panola Road	I-20	south	4L TWLTL 2-4.5	31,700	0%	31700	7%	200	5%	341	540	1.7%	**No**
Miller Road	Covington Highway	south	2L undivided	10,900	0%	10900	3%	86	4%	273	358	3.3%	**No**
Park Central Boulevard	Covington Highway	south	2L undivided	10,900	0%	10900	3%	86	2%	136	222	2.0%	**No**
South Hairston Road	Covington Highway	north	4L median <2	32,500	0%	32500	10%	285	8%	545	831	2.6%	**No**
South Hairston Road	Covington Highway	south	4L median <2	32,500	0%	32500	3%	86	5%	341	426	1.3%	**No**
Wellborn Road	Covington Highway	Marbut Road	2L undivided	10,900	0%	10900	4%	114	7%	477	591	5.4%	**No**
Young Road	Panola Road	Redan Road	2L undivided	10,900	0%	10900	3%	86	5%	341	426	3.9%	**No**

LEGEND
(no.)L: number of lanes
M: median divided
EL: exclusive left turn lanes
CL: 2-way center left turn lane
<2, 2-4.5, >4.5: number of signals per mile
CBD: central business district

Raw Unadjusted 24-Hour Trip Generation:

Residential	2854
Retail / Office:	6814

Appendix C
Raw Traffic Count Data

Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430005
Site Code : 22430005
Start Date : 5/10/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	43	128	28	0	199	45	136	48	0	229	26	83	23	0	132	91	239	51	0	381	941
07:15 AM	46	134	36	0	216	53	149	54	0	256	31	96	26	0	153	94	247	54	0	395	1020
07:30 AM	49	141	43	0	233	58	162	62	0	282	28	102	29	0	159	105	251	59	0	415	1089
07:45 AM	54	152	38	0	244	49	173	67	0	289	29	117	32	0	178	97	256	62	0	415	1126
Total	192	555	145	0	892	205	620	231	0	1056	114	398	110	0	622	387	993	226	0	1606	4176
08:00 AM	51	147	33	0	231	42	164	59	0	265	27	112	35	0	174	106	231	58	0	395	1065
08:15 AM	53	141	37	0	231	48	157	55	0	260	29	105	31	0	165	89	226	49	0	364	1020
08:30 AM	55	136	29	0	220	44	146	51	0	241	26	96	34	0	156	84	219	44	0	347	964
08:45 AM	48	129	27	0	204	41	134	47	0	222	22	89	30	0	141	79	215	39	0	333	900
Total	207	553	126	0	886	175	601	212	0	988	104	402	130	0	636	358	891	190	0	1439	3949
*** BREAK ***																					
04:00 PM	35	141	51	0	227	47	148	32	0	227	69	227	58	0	354	67	133	38	0	238	1046
04:15 PM	44	148	55	0	247	49	157	36	0	242	75	238	65	0	378	78	137	43	0	258	1125
04:30 PM	41	156	58	0	255	56	175	39	0	270	71	243	72	0	386	65	142	48	0	255	1166
04:45 PM	58	174	54	0	286	51	186	35	0	272	74	259	87	0	420	59	129	57	0	245	1223
Total	178	619	218	0	1015	203	666	142	0	1011	289	967	282	0	1538	269	541	186	0	996	4560
05:00 PM	49	165	61	0	275	46	173	38	0	257	78	251	76	0	405	68	135	62	0	265	1202
05:15 PM	48	152	58	0	258	55	178	34	0	267	73	246	71	0	390	64	123	56	0	243	1158
05:30 PM	42	146	54	0	242	51	167	37	0	255	68	228	64	0	360	61	117	51	0	229	1086
05:45 PM	37	139	51	0	227	46	153	29	0	228	64	217	58	0	339	55	126	46	0	227	1021
Total	176	602	224	0	1002	198	671	138	0	1007	283	942	269	0	1494	248	501	215	0	964	4467
Grand Total	753	2329	713	0	3795	781	2558	723	0	4062	790	2709	791	0	4290	1262	2926	817	0	5005	17152
Apprch %	19.8	61.4	18.8	0		19.2	63	17.8	0		18.4	63.1	18.4	0		25.2	58.5	16.3	0		
Total %	4.4	13.6	4.2	0	22.1	4.6	14.9	4.2	0	23.7	4.6	15.8	4.6	0	25	7.4	17.1	4.8	0	29.2	

Reliable Traffic Data Services, LLC

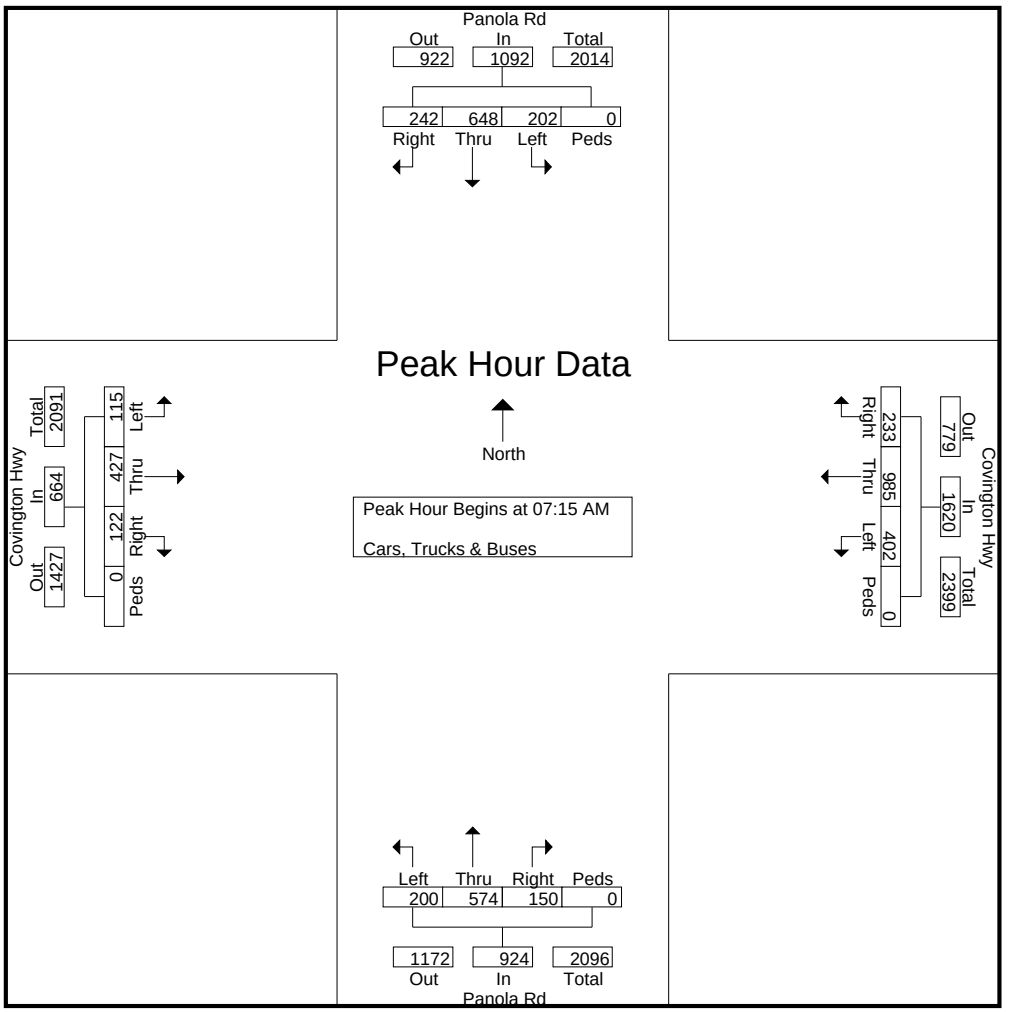
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430005
Site Code : 22430005
Start Date : 5/10/2007
Page No : 2

	Panola Rd Northbound					Panola Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	46	134	36	0	216	53	149	54	0	256	31	96	26	0	153	94	247	54	0	395	1020
07:30 AM	49	141	43	0	233	58	162	62	0	282	28	102	29	0	159	105	251	59	0	415	1089
07:45 AM	54	152	38	0	244	49	173	67	0	289	29	117	32	0	178	97	256	62	0	415	1126
08:00 AM	51	147	33	0	231	42	164	59	0	265	27	112	35	0	174	106	231	58	0	395	1065
Total Volume	200	574	150	0	924	202	648	242	0	1092	115	427	122	0	664	402	985	233	0	1620	4300
% App. Total	21.6	62.1	16.2	0		18.5	59.3	22.2	0		17.3	64.3	18.4	0		24.8	60.8	14.4	0		
PHF	.926	.944	.872	.000	.947	.871	.936	.903	.000	.945	.927	.912	.871	.000	.933	.948	.962	.940	.000	.976	.955



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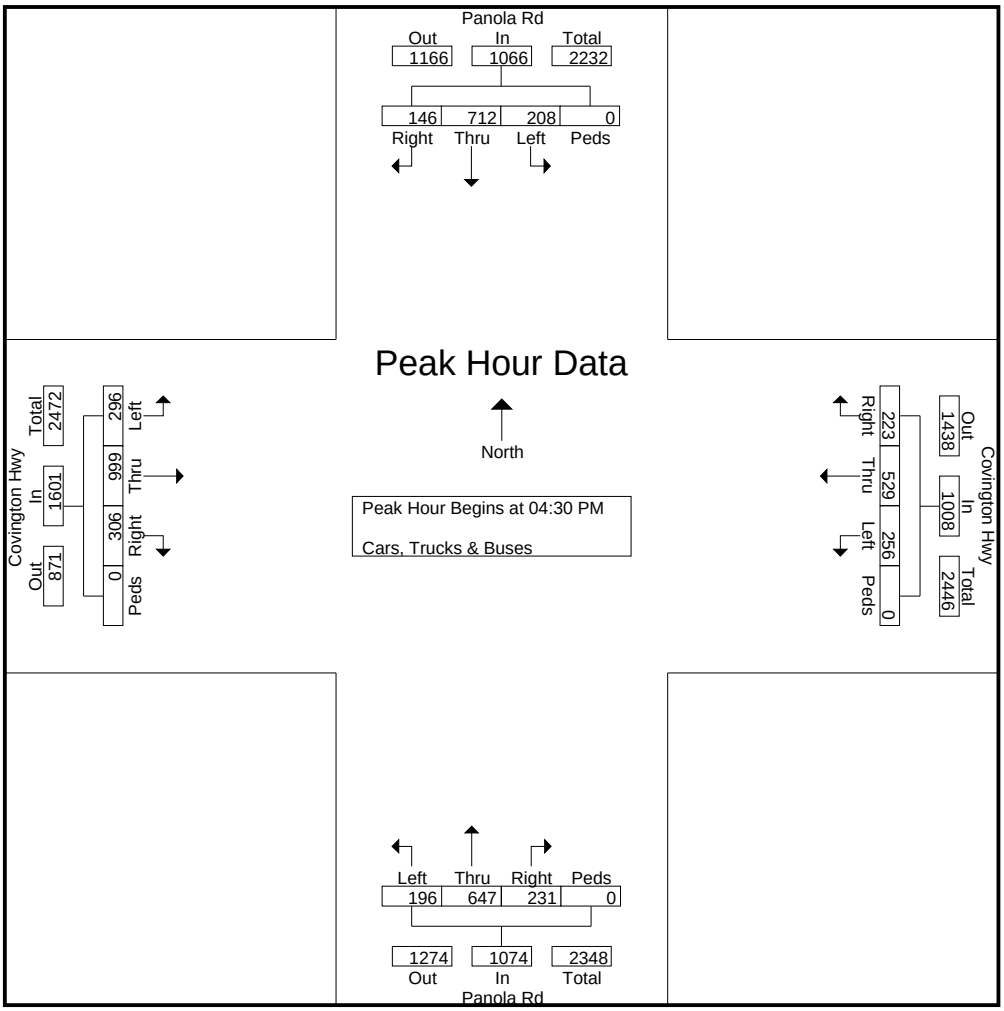
TMC Data

File Name : 22430005
Site Code : 22430005
Start Date : 5/10/2007
Page No : 3

	Panola Rd Northbound					Panola Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	41	156	58	0	255	56	175	39	0	270	71	243	72	0	386	65	142	48	0	255	1166
04:45 PM	58	174	54	0	286	51	186	35	0	272	74	259	87	0	420	59	129	57	0	245	1223
05:00 PM	49	165	61	0	275	46	173	38	0	257	78	251	76	0	405	68	135	62	0	265	1202
05:15 PM	48	152	58	0	258	55	178	34	0	267	73	246	71	0	390	64	123	56	0	243	1158
Total Volume	196	647	231	0	1074	208	712	146	0	1066	296	999	306	0	1601	256	529	223	0	1008	4749
% App. Total	18.2	60.2	21.5	0		19.5	66.8	13.7	0		18.5	62.4	19.1	0		25.4	52.5	22.1	0		
PHF	.845	.930	.947	.000	.939	.929	.957	.936	.000	.980	.949	.964	.879	.000	.953	.941	.931	.899	.000	.951	.971



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430004
Site Code : 22430004
Start Date : 5/9/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Park Central Blvd Northbound					SPA Dental pvt Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	8	0	12	0	20	0	0	0	0	0	0	112	17	0	129	32	302	0	0	334	483
07:15 AM	10	0	15	0	25	0	0	0	0	0	0	129	20	0	149	48	318	0	0	366	540
07:30 AM	9	0	12	0	21	0	0	0	0	0	1	136	18	0	155	53	296	0	0	349	525
07:45 AM	7	0	11	0	18	0	0	0	0	0	0	153	21	0	174	62	284	1	0	347	539
Total	34	0	50	0	84	0	0	0	0	0	1	530	76	0	607	195	1200	1	0	1396	2087
08:00 AM	9	0	9	0	18	0	0	0	0	0	0	148	17	0	165	55	296	0	0	351	534
08:15 AM	5	0	7	0	12	0	0	0	0	0	2	141	19	0	162	44	311	1	0	356	530
08:30 AM	8	0	8	0	16	0	0	0	0	0	1	135	14	0	150	40	274	3	0	317	483
08:45 AM	6	0	6	0	12	0	0	0	0	0	0	127	11	0	138	37	261	2	0	300	450
Total	28	0	30	0	58	0	0	0	0	0	3	551	61	0	615	176	1142	6	0	1324	1997
*** BREAK ***																					
04:00 PM	12	0	26	0	38	0	0	0	0	0	0	326	12	0	338	16	196	2	0	214	590
04:15 PM	10	0	29	0	39	0	0	1	0	1	0	347	16	0	363	14	201	1	0	216	619
04:30 PM	18	0	32	0	50	1	1	0	0	2	0	368	14	0	382	17	211	2	0	230	664
04:45 PM	12	0	37	0	49	0	0	2	0	2	1	392	17	0	410	19	225	1	0	245	706
Total	52	0	124	0	176	1	1	3	0	5	1	1433	59	0	1493	66	833	6	0	905	2579
05:00 PM	16	0	45	0	61	1	0	1	0	2	0	358	15	0	373	17	219	0	0	236	672
05:15 PM	13	0	34	0	47	0	0	0	0	0	0	336	13	0	349	16	203	1	0	220	616
05:30 PM	10	0	31	0	41	0	0	2	0	2	1	324	17	0	342	13	194	1	0	208	593
05:45 PM	11	0	28	0	39	0	0	0	0	0	0	317	14	0	331	11	187	0	0	198	568
Total	50	0	138	0	188	1	0	3	0	4	1	1335	59	0	1395	57	803	2	0	862	2449
Grand Total	164	0	342	0	506	2	1	6	0	9	6	3849	255	0	4110	494	3978	15	0	4487	9112
Apprch %	32.4	0	67.6	0		22.2	11.1	66.7	0		0.1	93.6	6.2	0		11	88.7	0.3	0		
Total %	1.8	0	3.8	0	5.6	0	0	0.1	0	0.1	0.1	42.2	2.8	0	45.1	5.4	43.7	0.2	0	49.2	

Reliable Traffic Data Services, LLC

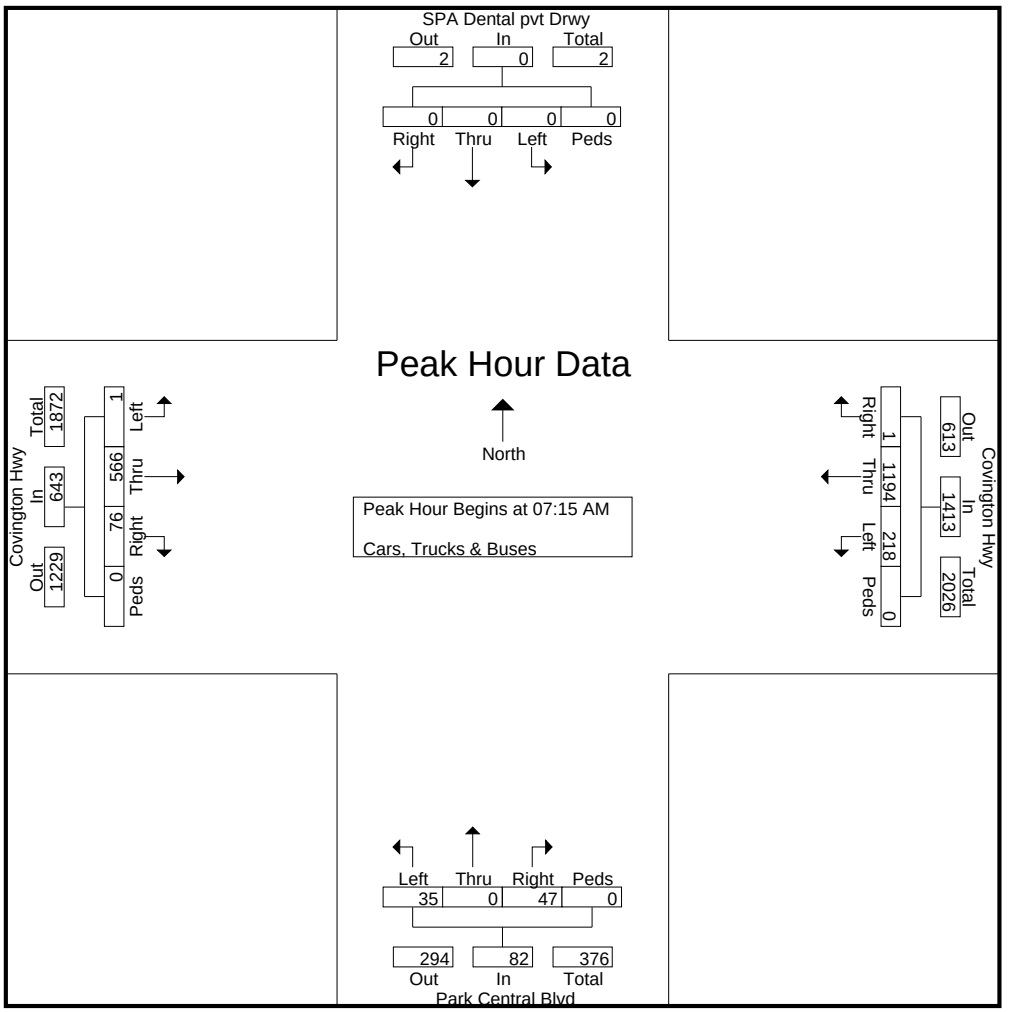
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430004
Site Code : 22430004
Start Date : 5/9/2007
Page No : 2

	Park Central Blvd Northbound					SPA Dental pvt Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	10	0	15	0	25	0	0	0	0	0	0	129	20	0	149	48	318	0	0	366	540
07:30 AM	9	0	12	0	21	0	0	0	0	0	1	136	18	0	155	53	296	0	0	349	525
07:45 AM	7	0	11	0	18	0	0	0	0	0	0	153	21	0	174	62	284	1	0	347	539
08:00 AM	9	0	9	0	18	0	0	0	0	0	0	148	17	0	165	55	296	0	0	351	534
Total Volume	35	0	47	0	82	0	0	0	0	0	1	566	76	0	643	218	1194	1	0	1413	2138
% App. Total	42.7	0	57.3	0		0	0	0	0		0.2	88	11.8	0		15.4	84.5	0.1	0		
PHF	.875	.000	.783	.000	.820	.000	.000	.000	.000	.000	.250	.925	.905	.000	.924	.879	.939	.250	.000	.965	.990



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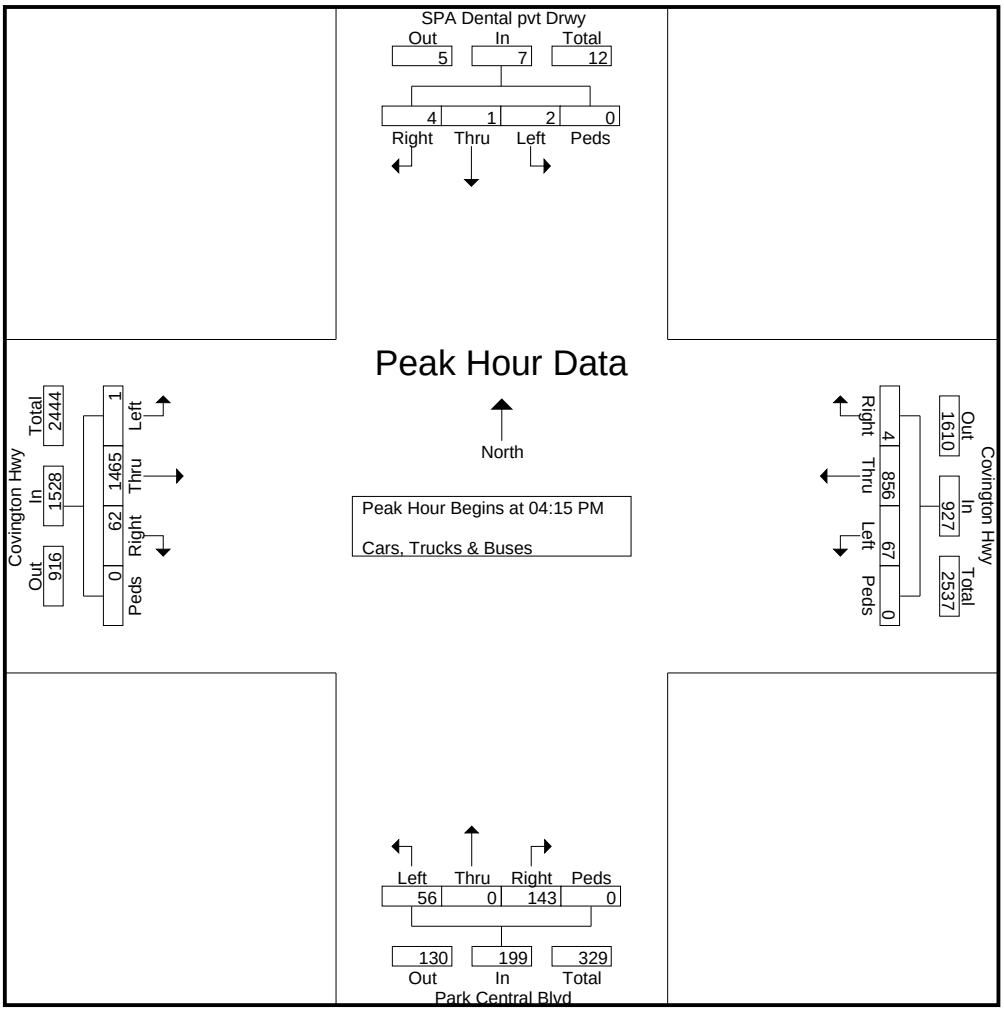
TMC Data

File Name : 22430004
Site Code : 22430004
Start Date : 5/9/2007
Page No : 3

	Park Central Blvd Northbound					SPA Dental pvt Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	10	0	29	0	39	0	0	1	0	1	0	347	16	0	363	14	201	1	0	216	619
04:30 PM	18	0	32	0	50	1	1	0	0	2	0	368	14	0	382	17	211	2	0	230	664
04:45 PM	12	0	37	0	49	0	0	2	0	2	1	392	17	0	410	19	225	1	0	245	706
05:00 PM	16	0	45	0	61	1	0	1	0	2	0	358	15	0	373	17	219	0	0	236	672
Total Volume	56	0	143	0	199	2	1	4	0	7	1	1465	62	0	1528	67	856	4	0	927	2661
% App. Total	28.1	0	71.9	0		28.6	14.3	57.1	0		0.1	95.9	4.1	0		7.2	92.3	0.4	0		
PHF	.778	.000	.794	.000	.816	.500	.250	.500	.000	.875	.250	.934	.912	.000	.932	.882	.951	.500	.000	.946	.942



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430003
Site Code : 22430003
Start Date : 5/9/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Miller Rd Northbound					Wachovia Bank Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	59	2	18	0	79	2	3	3	0	8	1	119	45	0	165	38	247	6	0	291	543
07:15 AM	56	1	26	0	83	3	1	2	0	6	3	136	56	0	195	45	252	4	0	301	585
07:30 AM	61	1	23	0	85	4	2	2	0	8	2	142	71	0	215	49	263	5	0	317	625
07:45 AM	76	0	19	0	95	3	3	3	0	9	3	155	82	0	240	54	271	4	0	329	673
Total	252	4	86	0	342	12	9	10	0	31	9	552	254	0	815	186	1033	19	0	1238	2426
08:00 AM	64	1	24	0	89	5	2	1	0	8	5	161	73	0	239	59	267	6	0	332	668
08:15 AM	73	2	31	0	106	4	3	4	0	11	7	148	68	0	223	61	256	7	0	324	664
08:30 AM	67	2	29	0	98	3	1	2	0	6	5	129	64	0	198	55	243	5	0	303	605
08:45 AM	62	1	23	0	86	3	2	2	0	7	6	116	61	0	183	51	235	4	0	290	566
Total	266	6	107	0	379	15	8	9	0	32	23	554	266	0	843	226	1001	22	0	1249	2503
*** BREAK ***																					
04:00 PM	87	3	27	0	117	20	9	9	0	38	9	323	65	0	397	30	158	8	0	196	748
04:15 PM	91	5	33	0	129	26	11	11	0	48	13	334	74	0	421	33	174	11	0	218	816
04:30 PM	85	5	31	0	121	29	8	16	0	53	12	347	82	0	441	29	189	9	0	227	842
04:45 PM	93	6	28	0	127	24	12	11	0	47	9	365	97	0	471	31	196	8	0	235	880
Total	356	19	119	0	494	99	40	47	0	186	43	1369	318	0	1730	123	717	36	0	876	3286
05:00 PM	82	2	25	0	109	17	6	10	0	33	7	347	80	0	434	36	181	9	0	226	802
05:15 PM	97	3	26	0	126	19	7	6	0	32	9	326	73	0	408	29	174	6	0	209	775
05:30 PM	78	4	31	0	113	16	3	7	0	26	7	314	79	0	400	32	165	7	0	204	743
05:45 PM	84	2	28	0	114	13	2	8	0	23	8	302	68	0	378	28	162	6	0	196	711
Total	341	11	110	0	462	65	18	31	0	114	31	1289	300	0	1620	125	682	28	0	835	3031
Grand Total	1215	40	422	0	1677	191	75	97	0	363	106	3764	1138	0	5008	660	3433	105	0	4198	11246
Apprch %	72.5	2.4	25.2	0		52.6	20.7	26.7	0		2.1	75.2	22.7	0		15.7	81.8	2.5	0		
Total %	10.8	0.4	3.8	0	14.9	1.7	0.7	0.9	0	3.2	0.9	33.5	10.1	0	44.5	5.9	30.5	0.9	0	37.3	

Reliable Traffic Data Services, LLC

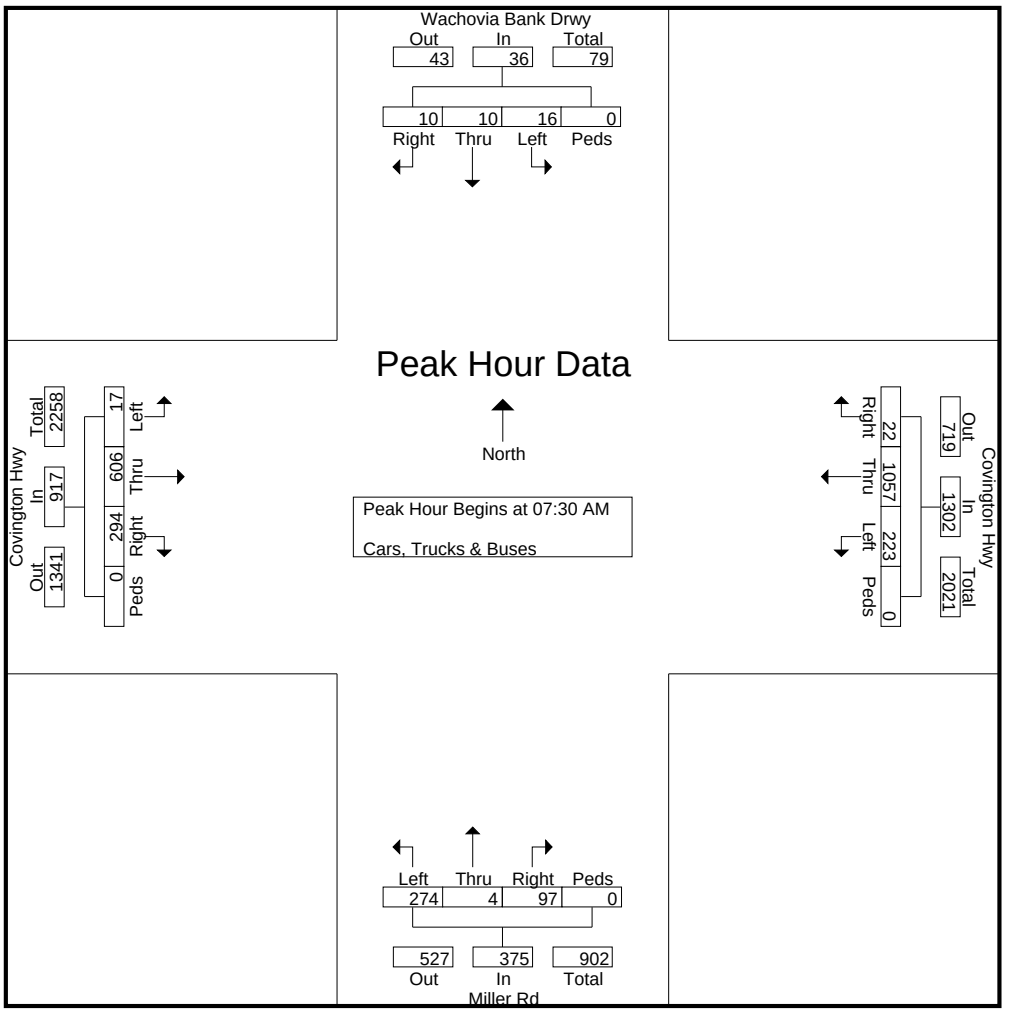
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430003
Site Code : 22430003
Start Date : 5/9/2007
Page No : 2

	Miller Rd Northbound					Wachovia Bank Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	61	1	23	0	85	4	2	2	0	8	2	142	71	0	215	49	263	5	0	317	625
07:45 AM	76	0	19	0	95	3	3	3	0	9	3	155	82	0	240	54	271	4	0	329	673
08:00 AM	64	1	24	0	89	5	2	1	0	8	5	161	73	0	239	59	267	6	0	332	668
08:15 AM	73	2	31	0	106	4	3	4	0	11	7	148	68	0	223	61	256	7	0	324	664
Total Volume	274	4	97	0	375	16	10	10	0	36	17	606	294	0	917	223	1057	22	0	1302	2630
% App. Total	73.1	1.1	25.9	0		44.4	27.8	27.8	0		1.9	66.1	32.1	0		17.1	81.2	1.7	0		
PHF	.901	.500	.782	.000	.884	.800	.833	.625	.000	.818	.607	.941	.896	.000	.955	.914	.975	.786	.000	.980	.977



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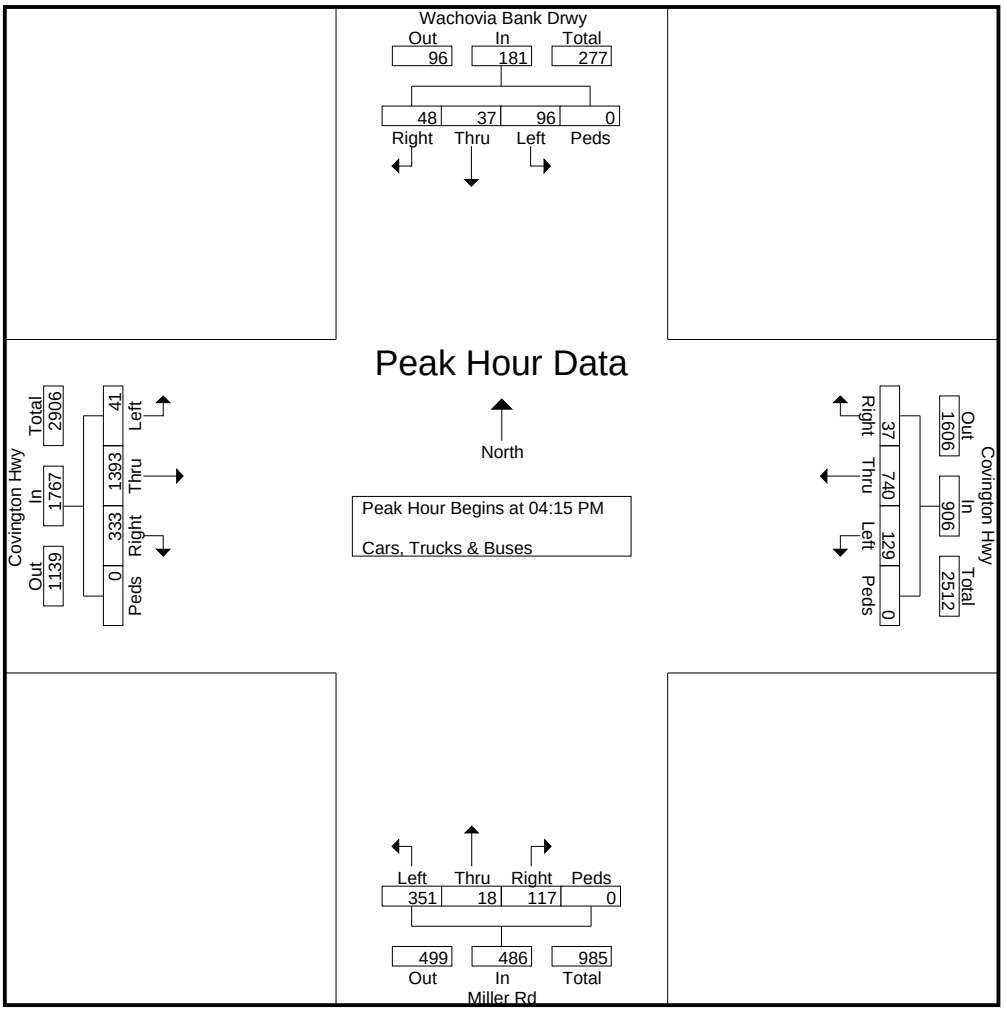
email: reliabletraffic@msn.com

TMC Data

File Name : 22430003
Site Code : 22430003
Start Date : 5/9/2007
Page No : 3

	Miller Rd Northbound					Wachovia Bank Drwy Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	91	5	33	0	129	26	11	11	0	48	13	334	74	0	421	33	174	11	0	218	816
04:30 PM	85	5	31	0	121	29	8	16	0	53	12	347	82	0	441	29	189	9	0	227	842
04:45 PM	93	6	28	0	127	24	12	11	0	47	9	365	97	0	471	31	196	8	0	235	880
05:00 PM	82	2	25	0	109	17	6	10	0	33	7	347	80	0	434	36	181	9	0	226	802
Total Volume	351	18	117	0	486	96	37	48	0	181	41	1393	333	0	1767	129	740	37	0	906	3340
% App. Total	72.2	3.7	24.1	0		53	20.4	26.5	0		2.3	78.8	18.8	0		14.2	81.7	4.1	0		
PHF	.944	.750	.886	.000	.942	.828	.771	.750	.000	.854	.788	.954	.858	.000	.938	.896	.944	.841	.000	.964	.949



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430002
Site Code : 22430002
Start Date : 5/8/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Hidden Creek Dr Northbound					Young Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	13	2	5	0	20	22	4	128	0	154	38	168	2	0	208	3	293	12	0	308	690
07:15 AM	18	1	8	0	27	27	3	135	0	165	46	184	3	0	233	2	318	14	0	334	759
07:30 AM	15	4	9	0	28	29	5	139	0	173	54	191	2	0	247	3	335	13	0	351	799
07:45 AM	12	3	11	0	26	25	4	127	0	156	59	211	3	0	273	1	346	15	0	362	817
Total	58	10	33	0	101	103	16	529	0	648	197	754	10	0	961	9	1292	54	0	1355	3065
08:00 AM	14	6	7	0	27	32	6	116	0	154	55	197	6	0	258	2	331	17	0	350	789
08:15 AM	12	3	9	0	24	31	4	112	0	147	51	189	2	0	242	5	324	21	0	350	763
08:30 AM	9	5	7	0	21	28	3	107	0	138	48	177	3	0	228	2	315	18	0	335	722
08:45 AM	11	3	5	0	19	25	2	109	0	136	42	165	2	0	209	3	289	15	0	307	671
Total	46	17	28	0	91	116	15	444	0	575	196	728	13	0	937	12	1259	71	0	1342	2945
*** BREAK ***																					
04:00 PM	12	8	10	0	30	20	3	68	0	91	102	367	14	0	483	7	217	28	0	252	856
04:15 PM	15	5	12	0	32	24	4	74	0	102	109	379	17	0	505	9	225	32	0	266	905
04:30 PM	13	7	15	0	35	29	6	65	0	100	112	384	12	0	508	8	231	35	0	274	917
04:45 PM	11	6	12	0	29	26	5	69	0	100	117	371	13	0	501	12	224	37	0	273	903
Total	51	26	49	0	126	99	18	276	0	393	440	1501	56	0	1997	36	897	132	0	1065	3581
05:00 PM	13	8	18	0	39	31	6	73	0	110	123	349	18	0	490	10	237	40	0	287	926
05:15 PM	15	7	14	0	36	25	8	67	0	100	118	358	19	0	495	12	218	36	0	266	897
05:30 PM	16	9	12	0	37	28	7	62	0	97	111	369	14	0	494	10	206	29	0	245	873
05:45 PM	12	7	9	0	28	24	5	56	0	85	106	347	11	0	464	9	186	24	0	219	796
Total	56	31	53	0	140	108	26	258	0	392	458	1423	62	0	1943	41	847	129	0	1017	3492
Grand Total	211	84	163	0	458	426	75	1507	0	2008	1291	4406	141	0	5838	98	4295	386	0	4779	13083
Apprch %	46.1	18.3	35.6	0		21.2	3.7	75	0		22.1	75.5	2.4	0		2.1	89.9	8.1	0		
Total %	1.6	0.6	1.2	0	3.5	3.3	0.6	11.5	0	15.3	9.9	33.7	1.1	0	44.6	0.7	32.8	3	0	36.5	

Reliable Traffic Data Services, LLC

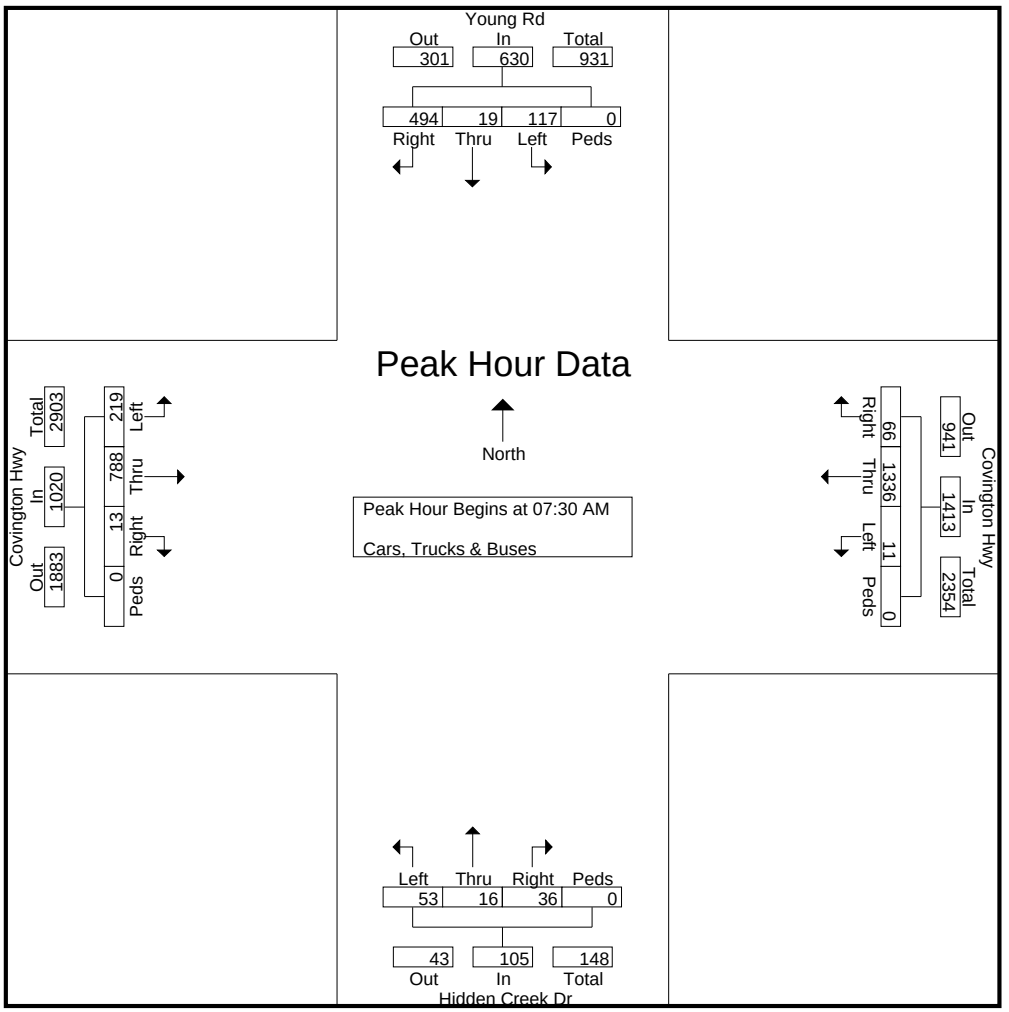
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430002
Site Code : 22430002
Start Date : 5/8/2007
Page No : 2

	Hidden Creek Dr Northbound					Young Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	15	4	9	0	28	29	5	139	0	173	54	191	2	0	247	3	335	13	0	351	799
07:45 AM	12	3	11	0	26	25	4	127	0	156	59	211	3	0	273	1	346	15	0	362	817
08:00 AM	14	6	7	0	27	32	6	116	0	154	55	197	6	0	258	2	331	17	0	350	789
08:15 AM	12	3	9	0	24	31	4	112	0	147	51	189	2	0	242	5	324	21	0	350	763
Total Volume	53	16	36	0	105	117	19	494	0	630	219	788	13	0	1020	11	1336	66	0	1413	3168
% App. Total	50.5	15.2	34.3	0		18.6	3	78.4	0		21.5	77.3	1.3	0		0.8	94.6	4.7	0		
PHF	.883	.667	.818	.000	.938	.914	.792	.888	.000	.910	.928	.934	.542	.000	.934	.550	.965	.786	.000	.976	.969



Reliable Traffic Data Services, LLC

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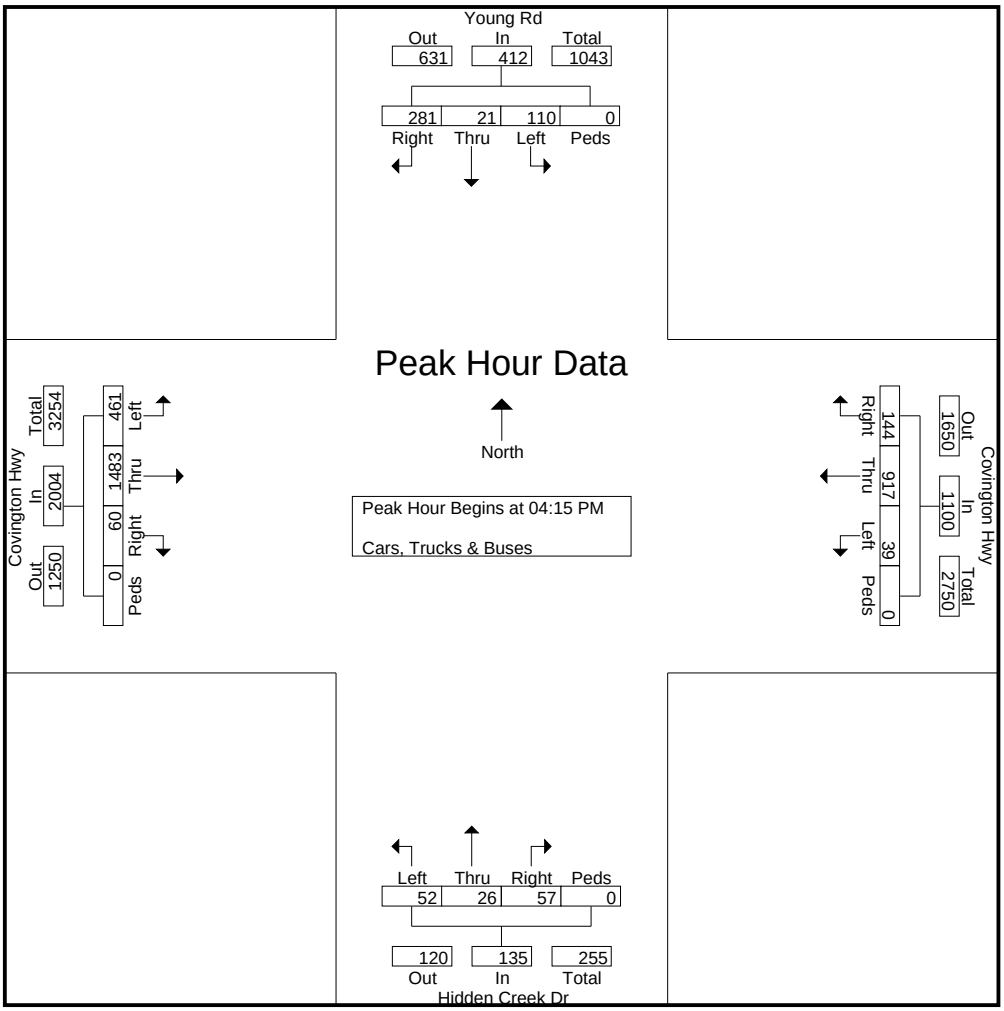
email: reliabletraffic@msn.com

TMC Data

File Name : 22430002
Site Code : 22430002
Start Date : 5/8/2007
Page No : 3

	Hidden Creek Dr Northbound					Young Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	15	5	12	0	32	24	4	74	0	102	109	379	17	0	505	9	225	32	0	266	905
04:30 PM	13	7	15	0	35	29	6	65	0	100	112	384	12	0	508	8	231	35	0	274	917
04:45 PM	11	6	12	0	29	26	5	69	0	100	117	371	13	0	501	12	224	37	0	273	903
05:00 PM	13	8	18	0	39	31	6	73	0	110	123	349	18	0	490	10	237	40	0	287	926
Total Volume	52	26	57	0	135	110	21	281	0	412	461	1483	60	0	2004	39	917	144	0	1100	3651
% App. Total	38.5	19.3	42.2	0		26.7	5.1	68.2	0		23	74	3	0		3.5	83.4	13.1	0		
PHF	.867	.813	.792	.000	.865	.887	.875	.949	.000	.936	.937	.965	.833	.000	.986	.813	.967	.900	.000	.958	.986



Reliable Traffic Data Services, LLC

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TMC Data

File Name : 22430001
Site Code : 22430001
Start Date : 5/8/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	S Hairston Rd Northbound					S Hairston Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	32	153	37	0	222	74	147	146	0	367	56	114	7	0	177	59	448	58	0	565	1331
07:15 AM	35	165	40	0	240	79	186	171	0	436	69	138	6	0	213	72	423	55	0	550	1439
07:30 AM	31	156	42	0	229	91	157	182	0	430	63	156	8	0	227	74	448	51	0	573	1459
07:45 AM	29	162	56	0	247	86	144	147	0	377	70	142	13	0	225	79	412	54	0	545	1394
Total	127	636	175	0	938	330	634	646	0	1610	258	550	34	0	842	284	1731	218	0	2233	5623
08:00 AM	37	157	52	0	246	108	133	135	0	376	74	131	9	0	214	86	384	48	0	518	1354
08:15 AM	32	129	47	0	208	97	126	147	0	370	87	127	10	0	224	114	327	69	0	510	1312
08:30 AM	28	114	38	0	180	82	114	126	0	322	74	123	10	0	207	91	304	62	0	457	1166
08:45 AM	25	102	34	0	161	76	102	114	0	292	65	114	8	0	187	68	286	56	0	410	1050
Total	122	502	171	0	795	363	475	522	0	1360	300	495	37	0	832	359	1301	235	0	1895	4882
*** BREAK ***																					
04:00 PM	23	108	71	0	202	114	94	57	0	265	92	284	7	0	383	67	181	58	0	306	1156
04:15 PM	29	119	76	0	224	122	106	53	0	281	101	289	9	0	399	71	187	61	0	319	1223
04:30 PM	33	125	87	0	245	115	113	49	0	277	96	295	14	0	405	68	192	67	0	327	1254
04:45 PM	37	137	82	0	256	124	126	45	0	295	93	308	10	0	411	63	204	60	0	327	1289
Total	122	489	316	0	927	475	439	204	0	1118	382	1176	40	0	1598	269	764	246	0	1279	4922
05:00 PM	44	141	78	0	263	117	107	41	0	265	108	301	17	0	426	74	193	56	0	323	1277
05:15 PM	32	149	71	0	252	112	123	34	0	269	94	283	11	0	388	62	168	51	0	281	1190
05:30 PM	26	142	74	0	242	118	118	38	0	274	87	276	9	0	372	57	159	47	0	263	1151
05:45 PM	21	126	68	0	215	109	111	42	0	262	81	269	6	0	356	59	148	45	0	252	1085
Total	123	558	291	0	972	456	459	155	0	1070	370	1129	43	0	1542	252	668	199	0	1119	4703
Grand Total	494	2185	953	0	3632	1624	2007	1527	0	5158	1310	3350	154	0	4814	1164	4464	898	0	6526	20130
Apprch %	13.6	60.2	26.2	0		31.5	38.9	29.6	0		27.2	69.6	3.2	0		17.8	68.4	13.8	0		
Total %	2.5	10.9	4.7	0	18	8.1	10	7.6	0	25.6	6.5	16.6	0.8	0	23.9	5.8	22.2	4.5	0	32.4	

Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

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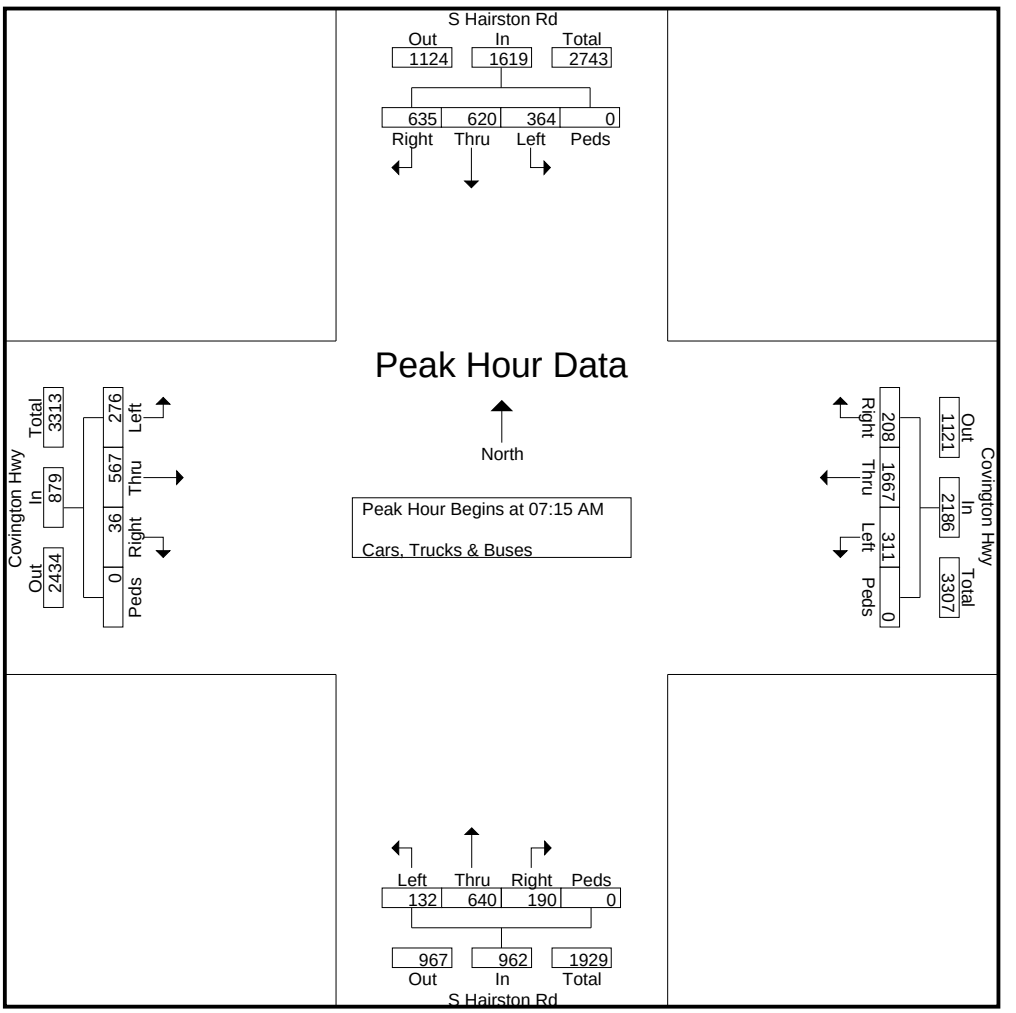
	S Hairston Rd Northbound					S Hairston Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	35	165	40	0	240	79	186	171	0	436	69	138	6	0	213	72	423	55	0	550	1439
07:30 AM	31	156	42	0	229	91	157	182	0	430	63	156	8	0	227	74	448	51	0	573	1459
07:45 AM	29	162	56	0	247	86	144	147	0	377	70	142	13	0	225	79	412	54	0	545	1394
08:00 AM	37	157	52	0	246	108	133	135	0	376	74	131	9	0	214	86	384	48	0	518	1354
Total Volume	132	640	190	0	962	364	620	635	0	1619	276	567	36	0	879	311	1667	208	0	2186	5646
% App. Total	13.7	66.5	19.8	0		22.5	38.3	39.2	0		31.4	64.5	4.1	0		14.2	76.3	9.5	0		
PHF	.892	.970	.848	.000	.974	.843	.833	.872	.000	.928	.932	.909	.692	.000	.968	.904	.930	.945	.000	.954	.967



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File Name : 22430001
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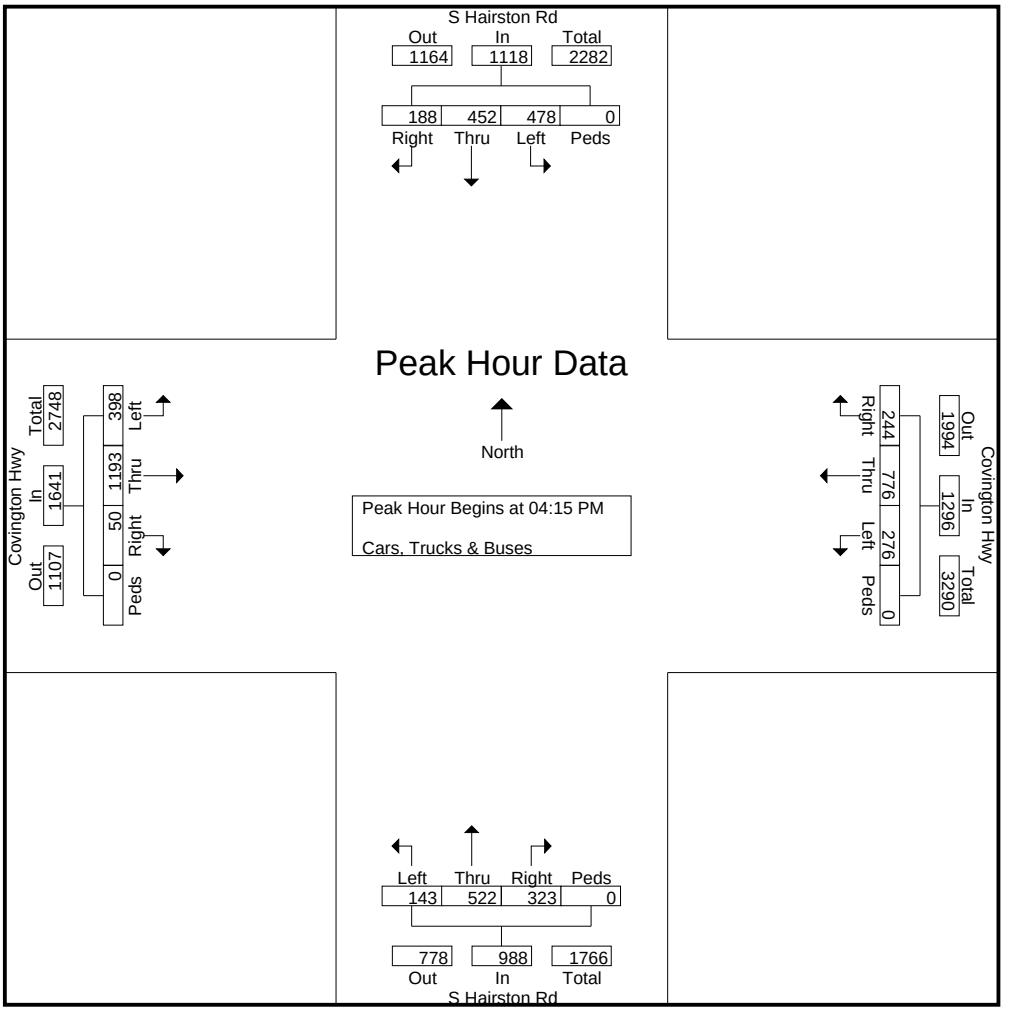
	S Hairston Rd Northbound					S Hairston Rd Southbound					Covington Hwy Eastbound					Covington Hwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	29	119	76	0	224	122	106	53	0	281	101	289	9	0	399	71	187	61	0	319	1223
04:30 PM	33	125	87	0	245	115	113	49	0	277	96	295	14	0	405	68	192	67	0	327	1254
04:45 PM	37	137	82	0	256	124	126	45	0	295	93	308	10	0	411	63	204	60	0	327	1289
05:00 PM	44	141	78	0	263	117	107	41	0	265	108	301	17	0	426	74	193	56	0	323	1277
Total Volume	143	522	323	0	988	478	452	188	0	1118	398	1193	50	0	1641	276	776	244	0	1296	5043
% App. Total	14.5	52.8	32.7	0		42.8	40.4	16.8	0		24.3	72.7	3	0		21.3	59.9	18.8	0		
PHF	.813	.926	.928	.000	.939	.964	.897	.887	.000	.947	.921	.968	.735	.000	.963	.932	.951	.910	.000	.991	.978



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430008
Site Code : 22430008
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Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					Snapfinger Woods Dr Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	112	212	0	0	324	0	189	51	0	240	25	0	42	0	67	0	0	0	0	0	631
07:15 AM	123	224	0	0	347	0	196	62	0	258	31	0	53	0	84	0	0	0	0	0	689
07:30 AM	117	241	0	0	358	0	207	67	0	274	34	0	58	0	92	0	0	0	0	0	724
07:45 AM	121	253	0	0	374	0	228	75	0	303	37	0	64	0	101	0	0	0	0	0	778
Total	473	930	0	0	1403	0	820	255	0	1075	127	0	217	0	344	0	0	0	0	0	2822
08:00 AM	119	246	0	0	365	0	234	69	0	303	41	0	51	0	92	0	0	0	0	0	760
08:15 AM	114	237	0	0	351	0	238	63	0	301	38	0	46	0	84	0	0	0	0	0	736
08:30 AM	108	229	0	0	337	0	223	58	0	281	35	0	42	0	77	0	0	0	0	0	695
08:45 AM	101	223	0	0	324	0	215	52	0	267	32	0	37	0	69	0	0	0	0	0	660
Total	442	935	0	0	1377	0	910	242	0	1152	146	0	176	0	322	0	0	0	0	0	2851
*** BREAK ***																					
04:00 PM	204	206	0	0	410	0	207	178	0	385	86	0	91	0	177	0	0	0	0	0	972
04:15 PM	221	215	0	0	436	0	214	192	0	406	94	0	96	0	190	0	0	0	0	0	1032
04:30 PM	245	227	0	0	472	0	238	203	0	441	99	0	104	0	203	0	0	0	0	0	1116
04:45 PM	267	267	0	0	534	0	265	211	0	476	105	0	92	0	197	0	0	0	0	0	1207
Total	937	915	0	0	1852	0	924	784	0	1708	384	0	383	0	767	0	0	0	0	0	4327
05:00 PM	259	228	0	0	487	0	270	197	0	467	96	0	98	0	194	0	0	0	0	0	1148
05:15 PM	278	214	0	0	492	0	264	184	0	448	88	0	86	0	174	0	0	0	0	0	1114
05:30 PM	265	206	0	0	471	0	235	169	0	404	81	0	81	0	162	0	0	0	0	0	1037
05:45 PM	241	193	0	0	434	0	216	137	0	353	75	0	76	0	151	0	0	0	0	0	938
Total	1043	841	0	0	1884	0	985	687	0	1672	340	0	341	0	681	0	0	0	0	0	4237
Grand Total	2895	3621	0	0	6516	0	3639	1968	0	5607	997	0	1117	0	2114	0	0	0	0	0	14237
Apprch %	44.4	55.6	0	0		0	64.9	35.1	0		47.2	0	52.8	0		0	0	0	0		
Total %	20.3	25.4	0	0	45.8	0	25.6	13.8	0	39.4	7	0	7.8	0	14.8	0	0	0	0	0	

Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430008
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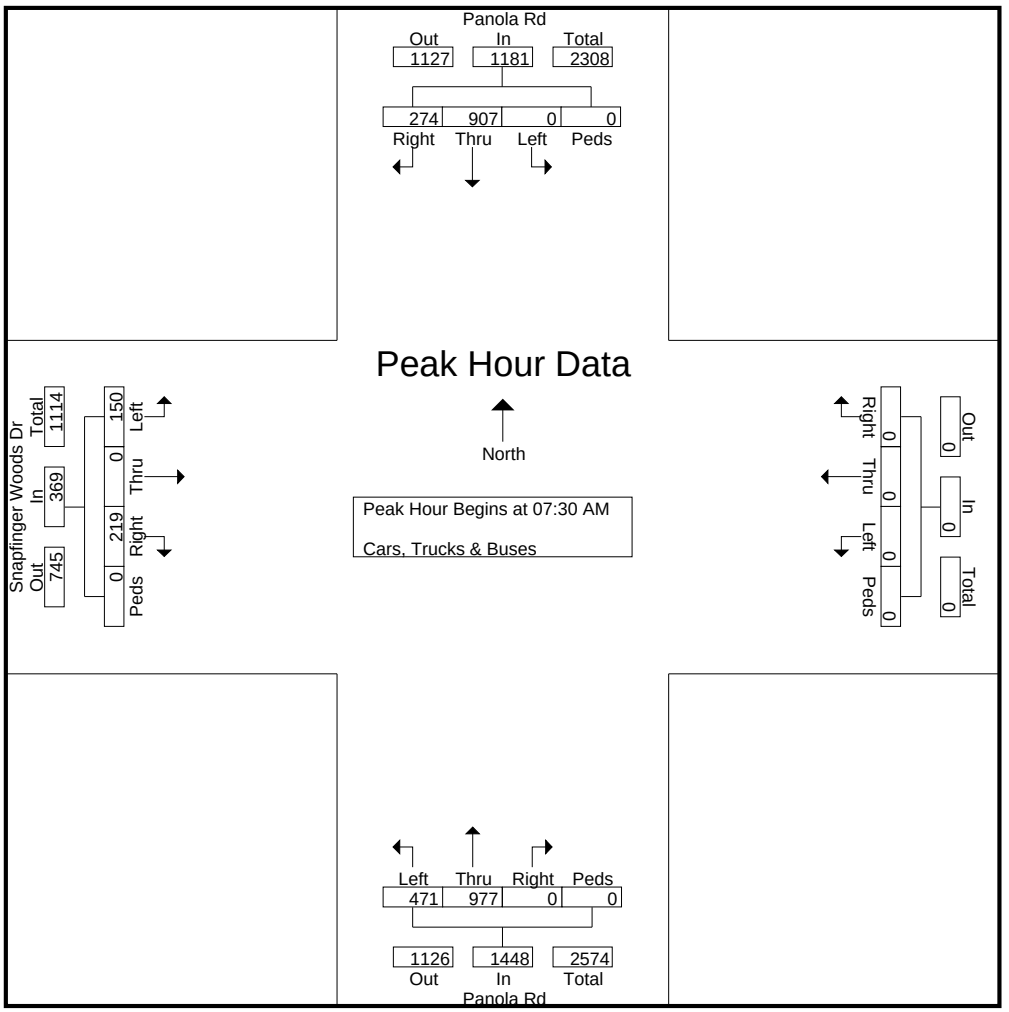
	Panola Rd Northbound					Panola Rd Southbound					Snapfinger Woods Dr Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	117	241	0	0	358	0	207	67	0	274	34	0	58	0	92	0	0	0	0	0	724
07:45 AM	121	253	0	0	374	0	228	75	0	303	37	0	64	0	101	0	0	0	0	0	778
08:00 AM	119	246	0	0	365	0	234	69	0	303	41	0	51	0	92	0	0	0	0	0	760
08:15 AM	114	237	0	0	351	0	238	63	0	301	38	0	46	0	84	0	0	0	0	0	736
Total Volume	471	977	0	0	1448	0	907	274	0	1181	150	0	219	0	369	0	0	0	0	0	2998
% App. Total	32.5	67.5	0	0		0	76.8	23.2	0		40.7	0	59.3	0		0	0	0	0		
PHF	.973	.965	.000	.000	.968	.000	.953	.913	.000	.974	.915	.000	.855	.000	.913	.000	.000	.000	.000	.000	.963



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TMC Data

File Name : 22430008
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Start Date : 5/16/2007
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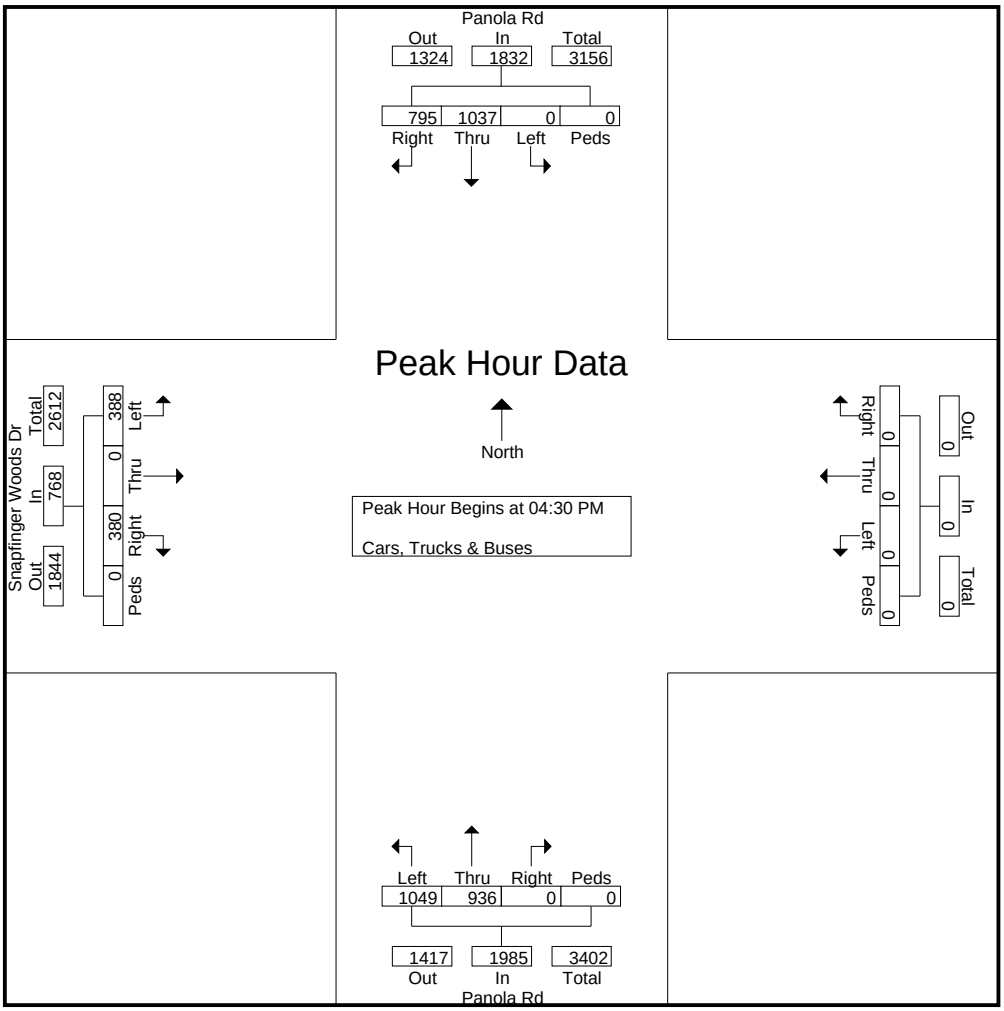
	Panola Rd Northbound					Panola Rd Southbound					Snapfinger Woods Dr Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	245	227	0	0	472	0	238	203	0	441	99	0	104	0	203	0	0	0	0	0	1116
04:45 PM	267	267	0	0	534	0	265	211	0	476	105	0	92	0	197	0	0	0	0	0	1207
05:00 PM	259	228	0	0	487	0	270	197	0	467	96	0	98	0	194	0	0	0	0	0	1148
05:15 PM	278	214	0	0	492	0	264	184	0	448	88	0	86	0	174	0	0	0	0	0	1114
Total Volume	1049	936	0	0	1985	0	1037	795	0	1832	388	0	380	0	768	0	0	0	0	0	4585
% App. Total	52.8	47.2	0	0		0	56.6	43.4	0		50.5	0	49.5	0		0	0	0	0		
PHF	.943	.876	.000	.000	.929	.000	.960	.942	.000	.962	.924	.000	.913	.000	.946	.000	.000	.000	.000	.000	.950



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Tel: (770) 578-5158 Fax: (770) 578-8159
email: reliabletraffic@msn.com

TMC Data

File Name : 22430009
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Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					Panola Industrial Blvd Eastbound					Hillandale Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	42	264	21	0	327	32	186	6	0	224	9	12	12	0	33	83	55	70	0	208	792
07:15 AM	56	268	25	0	349	36	208	8	0	252	10	16	17	0	43	84	64	73	0	221	865
07:30 AM	61	276	29	0	366	42	223	10	0	275	13	19	22	0	54	86	67	78	0	231	926
07:45 AM	77	292	23	0	392	48	257	9	0	314	18	25	26	0	69	88	71	81	0	240	1015
Total	236	1100	98	0	1434	158	874	33	0	1065	50	72	77	0	199	341	257	302	0	900	3598
08:00 AM	84	309	37	0	430	56	246	8	0	310	15	30	21	0	66	91	69	89	0	249	1055
08:15 AM	67	276	45	0	388	47	231	11	0	289	17	28	18	0	63	94	86	73	0	253	993
08:30 AM	59	258	39	0	356	44	226	8	0	278	14	26	21	0	61	88	79	68	0	235	930
08:45 AM	52	253	30	0	335	36	214	6	0	256	16	21	17	0	54	76	72	62	0	210	855
Total	262	1096	151	0	1509	183	917	33	0	1133	62	105	77	0	244	349	306	292	0	947	3833
*** BREAK ***																					
04:00 PM	76	267	26	0	369	64	219	32	0	315	33	35	22	0	90	128	54	106	0	288	1062
04:15 PM	81	285	34	0	400	78	227	36	0	341	37	41	24	0	102	139	67	117	0	323	1166
04:30 PM	95	292	40	0	427	89	235	33	0	357	45	46	27	0	118	153	59	134	0	346	1248
04:45 PM	89	305	35	0	429	92	249	39	0	380	41	43	33	0	117	148	65	116	0	329	1255
Total	341	1149	135	0	1625	323	930	140	0	1393	156	165	106	0	427	568	245	473	0	1286	4731
05:00 PM	98	318	31	0	447	81	255	34	0	370	49	48	39	0	136	164	87	127	0	378	1331
05:15 PM	79	304	32	0	415	76	279	28	0	383	46	42	34	0	122	157	81	148	0	386	1306
05:30 PM	72	312	26	0	410	65	257	25	0	347	43	39	31	0	113	138	73	137	0	348	1218
05:45 PM	67	289	23	0	379	61	238	22	0	321	37	36	27	0	100	132	65	126	0	323	1123
Total	316	1223	112	0	1651	283	1029	109	0	1421	175	165	131	0	471	591	306	538	0	1435	4978
Grand Total	1155	4568	496	0	6219	947	3750	315	0	5012	443	507	391	0	1341	1849	1114	1605	0	4568	17140
Apprch %	18.6	73.5	8	0		18.9	74.8	6.3	0		33	37.8	29.2	0		40.5	24.4	35.1	0		
Total %	6.7	26.7	2.9	0	36.3	5.5	21.9	1.8	0	29.2	2.6	3	2.3	0	7.8	10.8	6.5	9.4	0	26.7	

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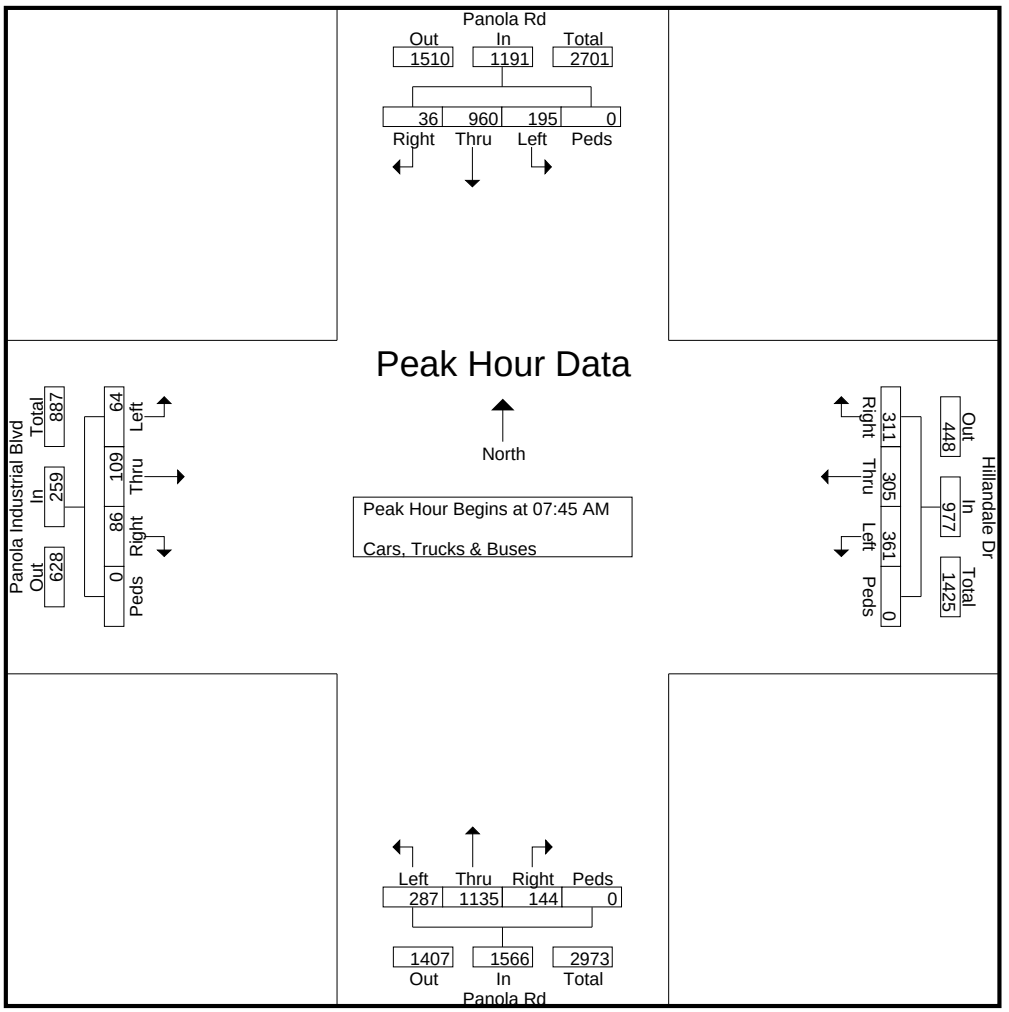
	Panola Rd Northbound					Panola Rd Southbound					Panola Industrial Blvd Eastbound					Hillandale Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	77	292	23	0	392	48	257	9	0	314	18	25	26	0	69	88	71	81	0	240	1015
08:00 AM	84	309	37	0	430	56	246	8	0	310	15	30	21	0	66	91	69	89	0	249	1055
08:15 AM	67	276	45	0	388	47	231	11	0	289	17	28	18	0	63	94	86	73	0	253	993
08:30 AM	59	258	39	0	356	44	226	8	0	278	14	26	21	0	61	88	79	68	0	235	930
Total Volume	287	1135	144	0	1566	195	960	36	0	1191	64	109	86	0	259	361	305	311	0	977	3993
% App. Total	18.3	72.5	9.2	0		16.4	80.6	3	0		24.7	42.1	33.2	0		36.9	31.2	31.8	0		
PHF	.854	.918	.800	.000	.910	.871	.934	.818	.000	.948	.889	.908	.827	.000	.938	.960	.887	.874	.000	.965	.946



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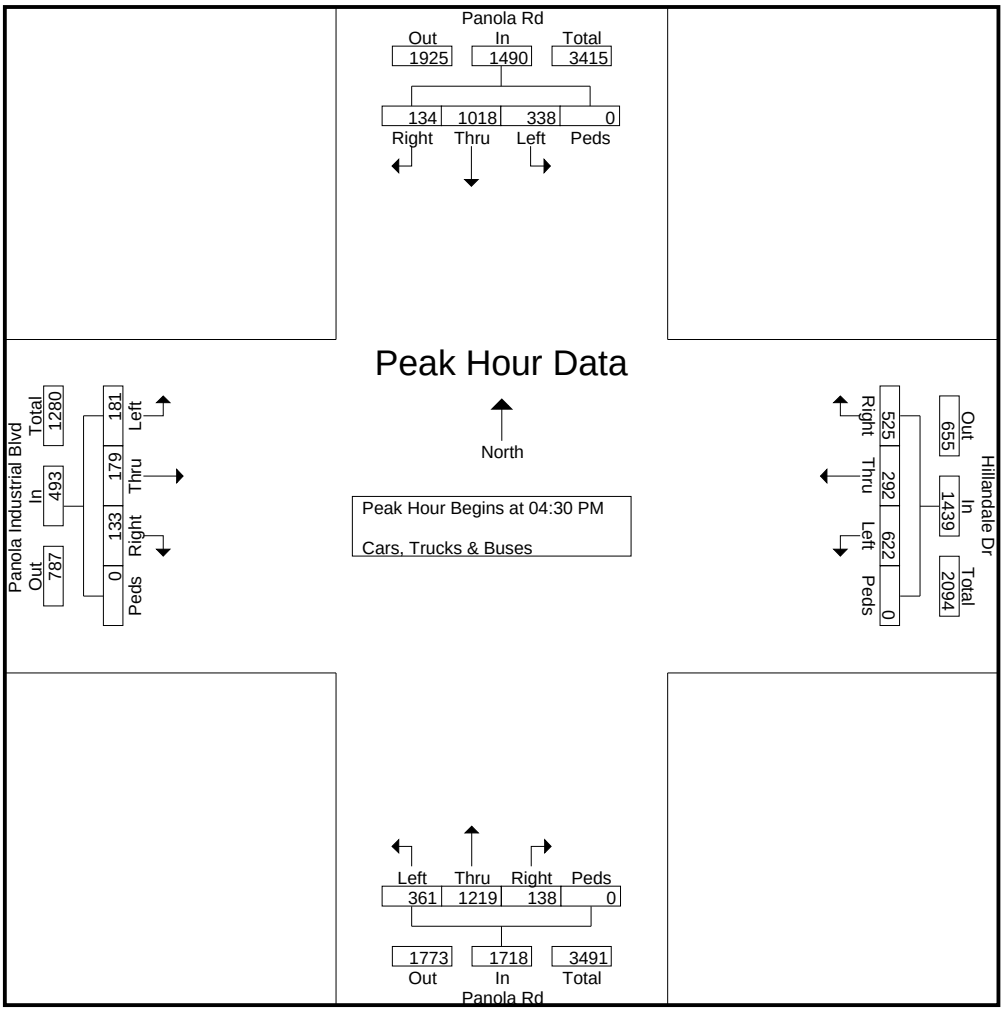
	Panola Rd Northbound					Panola Rd Southbound					Panola Industrial Blvd Eastbound					Hillandale Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	95	292	40	0	427	89	235	33	0	357	45	46	27	0	118	153	59	134	0	346	1248
04:45 PM	89	305	35	0	429	92	249	39	0	380	41	43	33	0	117	148	65	116	0	329	1255
05:00 PM	98	318	31	0	447	81	255	34	0	370	49	48	39	0	136	164	87	127	0	378	1331
05:15 PM	79	304	32	0	415	76	279	28	0	383	46	42	34	0	122	157	81	148	0	386	1306
Total Volume	361	1219	138	0	1718	338	1018	134	0	1490	181	179	133	0	493	622	292	525	0	1439	5140
% App. Total	21	71	8	0		22.7	68.3	9	0		36.7	36.3	27	0		43.2	20.3	36.5	0		
PHF	.921	.958	.863	.000	.961	.918	.912	.859	.000	.973	.923	.932	.853	.000	.906	.948	.839	.887	.000	.932	.965



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Tel: (770) 578-5158 Fax: (770) 578-8159
email: reliabletraffic@msn.com

TMC Data

File Name : 22430010
Site Code : 22430010
Start Date : 5/17/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					Eastbound					I-20 WB Off-Ramp Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	119	328	0	0	447	0	166	196	0	362	0	0	0	0	0	25	0	23	0	48	857
07:15 AM	123	337	0	0	460	0	176	199	0	375	0	0	0	0	0	29	2	29	0	60	895
07:30 AM	137	381	0	0	518	0	179	211	0	390	0	0	0	0	0	33	0	34	0	67	975
07:45 AM	142	406	0	0	548	0	174	228	0	402	0	0	0	0	0	39	0	40	0	79	1029
Total	521	1452	0	0	1973	0	695	834	0	1529	0	0	0	0	0	126	2	126	0	254	3756
08:00 AM	131	423	0	0	554	0	183	221	0	404	0	0	0	0	0	44	0	44	0	88	1046
08:15 AM	128	393	0	0	521	0	190	201	0	391	0	0	0	0	0	40	0	51	0	91	1003
08:30 AM	133	376	0	0	509	0	175	191	0	366	0	0	0	0	0	33	0	41	0	74	949
08:45 AM	116	352	0	0	468	0	152	185	0	337	0	0	0	0	0	30	1	43	0	74	879
Total	508	1544	0	0	2052	0	700	798	0	1498	0	0	0	0	0	147	1	179	0	327	3877
*** BREAK ***																					
04:00 PM	117	410	0	0	527	0	328	102	0	430	0	0	0	0	0	74	0	49	0	123	1080
04:15 PM	123	419	0	0	542	0	342	107	0	449	0	0	0	0	0	86	2	53	0	141	1132
04:30 PM	134	433	0	0	567	0	362	114	0	476	0	0	0	0	0	97	0	56	0	153	1196
04:45 PM	143	415	0	0	558	0	387	122	0	509	0	0	0	0	0	104	1	48	0	153	1220
Total	517	1677	0	0	2194	0	1419	445	0	1864	0	0	0	0	0	361	3	206	0	570	4628
05:00 PM	156	427	0	0	583	0	395	112	0	507	0	0	0	0	0	99	0	61	0	160	1250
05:15 PM	141	421	0	0	562	0	398	104	0	502	0	0	0	0	0	89	0	58	0	147	1211
05:30 PM	133	408	0	0	541	0	383	100	0	483	0	0	0	0	0	85	0	53	0	138	1162
05:45 PM	124	387	0	0	511	0	374	94	0	468	0	0	0	0	0	82	1	50	0	133	1112
Total	554	1643	0	0	2197	0	1550	410	0	1960	0	0	0	0	0	355	1	222	0	578	4735
Grand Total	2100	6316	0	0	8416	0	4364	2487	0	6851	0	0	0	0	0	989	7	733	0	1729	16996
Apprch %	25	75	0	0		0	63.7	36.3	0		0	0	0	0		57.2	0.4	42.4	0		
Total %	12.4	37.2	0	0	49.5	0	25.7	14.6	0	40.3	0	0	0	0	0	5.8	0	4.3	0	10.2	

Reliable Traffic Data Services, LLC

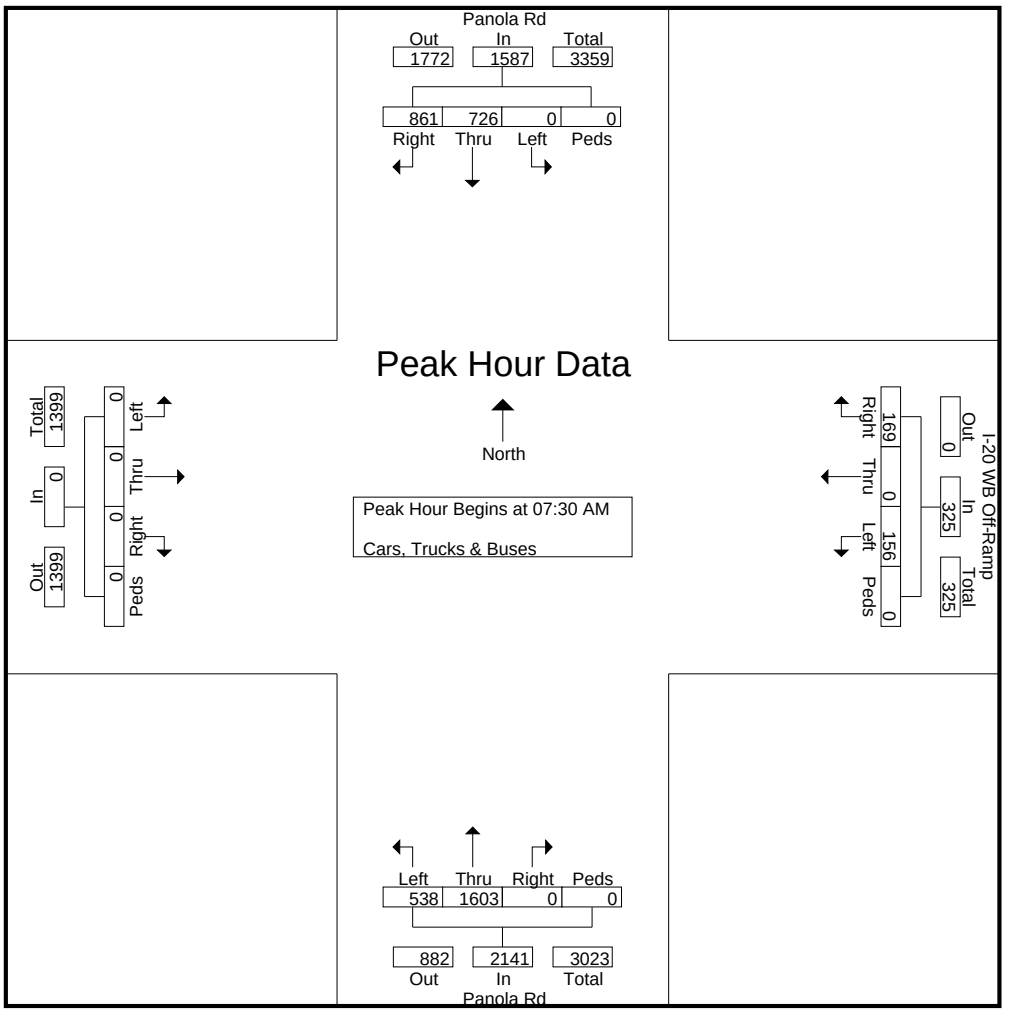
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430010
Site Code : 22430010
Start Date : 5/17/2007
Page No : 2

	Panola Rd Northbound					Panola Rd Southbound					Eastbound					I-20 WB Off-Ramp Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	137	381	0	0	518	0	179	211	0	390	0	0	0	0	0	33	0	34	0	67	975
07:45 AM	142	406	0	0	548	0	174	228	0	402	0	0	0	0	0	39	0	40	0	79	1029
08:00 AM	131	423	0	0	554	0	183	221	0	404	0	0	0	0	0	44	0	44	0	88	1046
08:15 AM	128	393	0	0	521	0	190	201	0	391	0	0	0	0	0	40	0	51	0	91	1003
Total Volume	538	1603	0	0	2141	0	726	861	0	1587	0	0	0	0	0	156	0	169	0	325	4053
% App. Total	25.1	74.9	0	0		0	45.7	54.3	0		0	0	0	0		48	0	52	0		
PHF	.947	.947	.000	.000	.966	.000	.955	.944	.000	.982	.000	.000	.000	.000	.000	.886	.000	.828	.000	.893	.969



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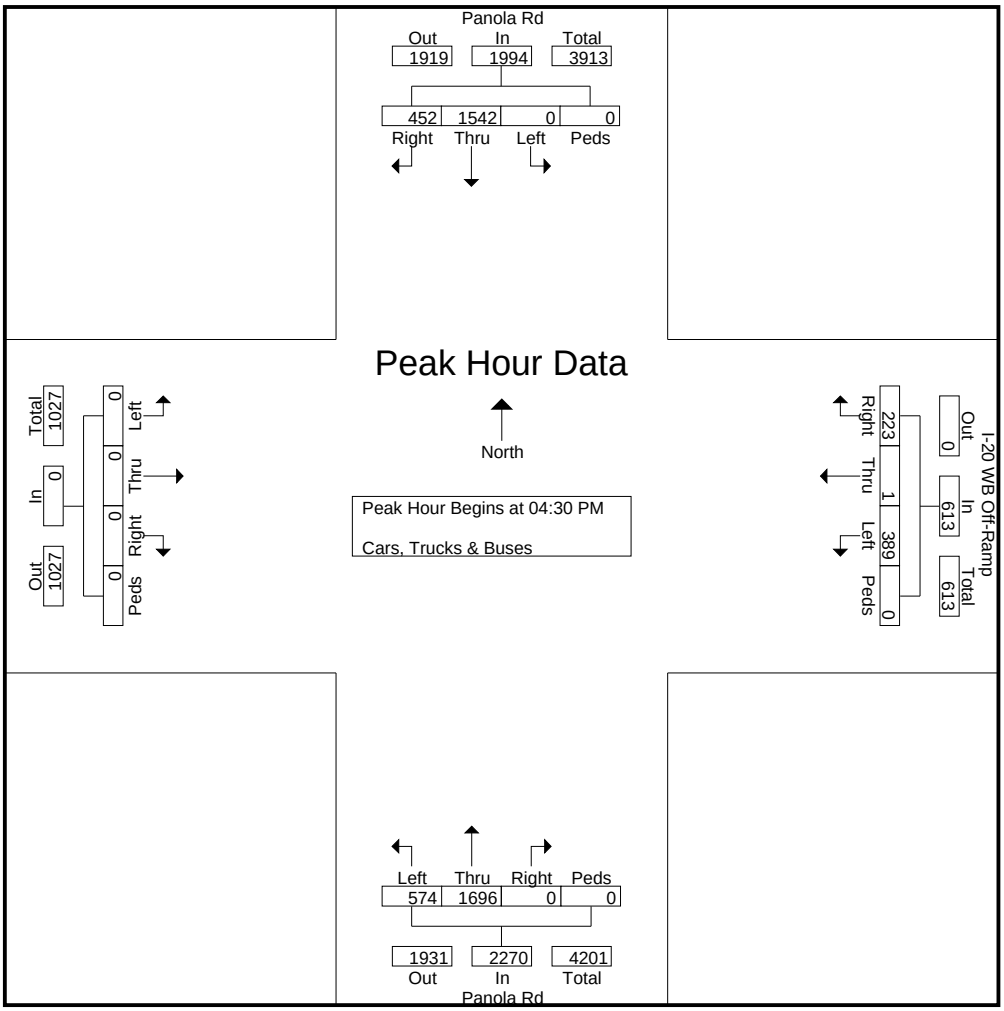
TMC Data

File Name : 22430010
Site Code : 22430010
Start Date : 5/17/2007
Page No : 3

	Panola Rd Northbound					Panola Rd Southbound					Eastbound					I-20 WB Off-Ramp Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	134	433	0	0	567	0	362	114	0	476	0	0	0	0	0	97	0	56	0	153	1196
04:45 PM	143	415	0	0	558	0	387	122	0	509	0	0	0	0	0	104	1	48	0	153	1220
05:00 PM	156	427	0	0	583	0	395	112	0	507	0	0	0	0	0	99	0	61	0	160	1250
05:15 PM	141	421	0	0	562	0	398	104	0	502	0	0	0	0	0	89	0	58	0	147	1211
Total Volume	574	1696	0	0	2270	0	1542	452	0	1994	0	0	0	0	0	389	1	223	0	613	4877
% App. Total	25.3	74.7	0	0		0	77.3	22.7	0		0	0	0	0		63.5	0.2	36.4	0		
PHF	.920	.979	.000	.000	.973	.000	.969	.926	.000	.979	.000	.000	.000	.000	.000	.935	.250	.914	.000	.958	.975



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430011
Site Code : 22430011
Start Date : 5/17/2007
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Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					I-20 EB Off-Ramp Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	287	44	0	331	31	145	0	0	176	132	0	98	0	230	0	0	0	0	0	737
07:15 AM	0	317	49	0	366	36	159	0	0	195	145	0	107	0	252	0	0	0	0	0	813
07:30 AM	0	348	57	0	405	43	168	0	0	211	167	0	118	0	285	0	0	0	0	0	901
07:45 AM	0	367	68	0	435	48	175	0	0	223	182	0	129	0	311	0	0	0	0	0	969
Total	0	1319	218	0	1537	158	647	0	0	805	626	0	452	0	1078	0	0	0	0	0	3420
08:00 AM	0	374	64	0	438	52	182	0	0	234	174	2	131	0	307	0	0	0	0	0	979
08:15 AM	0	362	59	0	421	45	193	0	0	238	165	0	138	0	303	0	0	0	0	0	962
08:30 AM	0	349	53	0	402	42	182	0	0	224	172	1	127	0	300	0	0	0	0	0	926
08:45 AM	0	342	51	0	393	40	156	0	0	196	157	0	114	0	271	0	0	0	0	0	860
Total	0	1427	227	0	1654	179	713	0	0	892	668	3	510	0	1181	0	0	0	0	0	3727
*** BREAK ***																					
04:00 PM	0	328	92	0	420	92	318	0	0	410	191	0	136	0	327	0	0	0	0	0	1157
04:15 PM	0	337	105	0	442	96	332	0	0	428	207	0	142	0	349	0	0	0	0	0	1219
04:30 PM	0	351	108	0	459	112	370	0	0	482	219	0	149	0	368	0	0	0	0	0	1309
04:45 PM	0	365	112	0	477	115	389	0	0	504	223	0	151	0	374	0	0	0	0	0	1355
Total	0	1381	417	0	1798	415	1409	0	0	1824	840	0	578	0	1418	0	0	0	0	0	5040
05:00 PM	0	371	119	0	490	113	374	0	0	487	218	0	159	0	377	0	0	0	0	0	1354
05:15 PM	0	359	115	0	474	104	408	0	0	512	203	0	178	0	381	0	0	0	0	0	1367
05:30 PM	0	364	106	0	470	96	392	0	0	488	192	3	182	0	377	0	0	0	0	0	1335
05:45 PM	0	352	97	0	449	89	368	0	0	457	185	0	167	0	352	0	0	0	0	0	1258
Total	0	1446	437	0	1883	402	1542	0	0	1944	798	3	686	0	1487	0	0	0	0	0	5314
Grand Total	0	5573	1299	0	6872	1154	4311	0	0	5465	2932	6	2226	0	5164	0	0	0	0	0	17501
Apprch %	0	81.1	18.9	0		21.1	78.9	0	0		56.8	0.1	43.1	0		0	0	0	0		
Total %	0	31.8	7.4	0	39.3	6.6	24.6	0	0	31.2	16.8	0	12.7	0	29.5	0	0	0	0	0	

Reliable Traffic Data Services, LLC

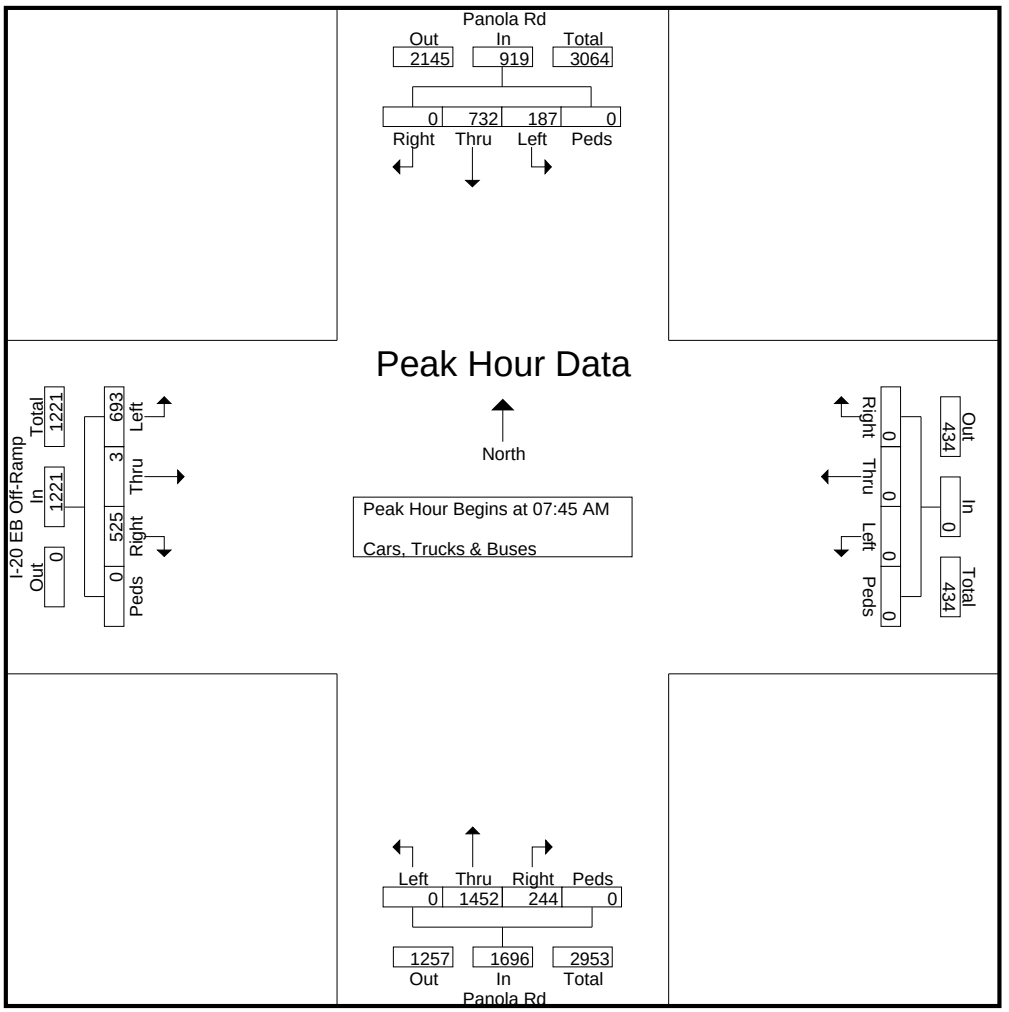
Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22430011
Site Code : 22430011
Start Date : 5/17/2007
Page No : 2

	Panola Rd Northbound					Panola Rd Southbound					I-20 EB Off-Ramp Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	367	68	0	435	48	175	0	0	223	182	0	129	0	311	0	0	0	0	0	969
08:00 AM	0	374	64	0	438	52	182	0	0	234	174	2	131	0	307	0	0	0	0	0	979
08:15 AM	0	362	59	0	421	45	193	0	0	238	165	0	138	0	303	0	0	0	0	0	962
08:30 AM	0	349	53	0	402	42	182	0	0	224	172	1	127	0	300	0	0	0	0	0	926
Total Volume	0	1452	244	0	1696	187	732	0	0	919	693	3	525	0	1221	0	0	0	0	0	3836
% App. Total	0	85.6	14.4	0		20.3	79.7	0	0		56.8	0.2	43	0		0	0	0	0		
PHF	.000	.971	.897	.000	.968	.899	.948	.000	.000	.965	.952	.375	.951	.000	.982	.000	.000	.000	.000	.000	.980



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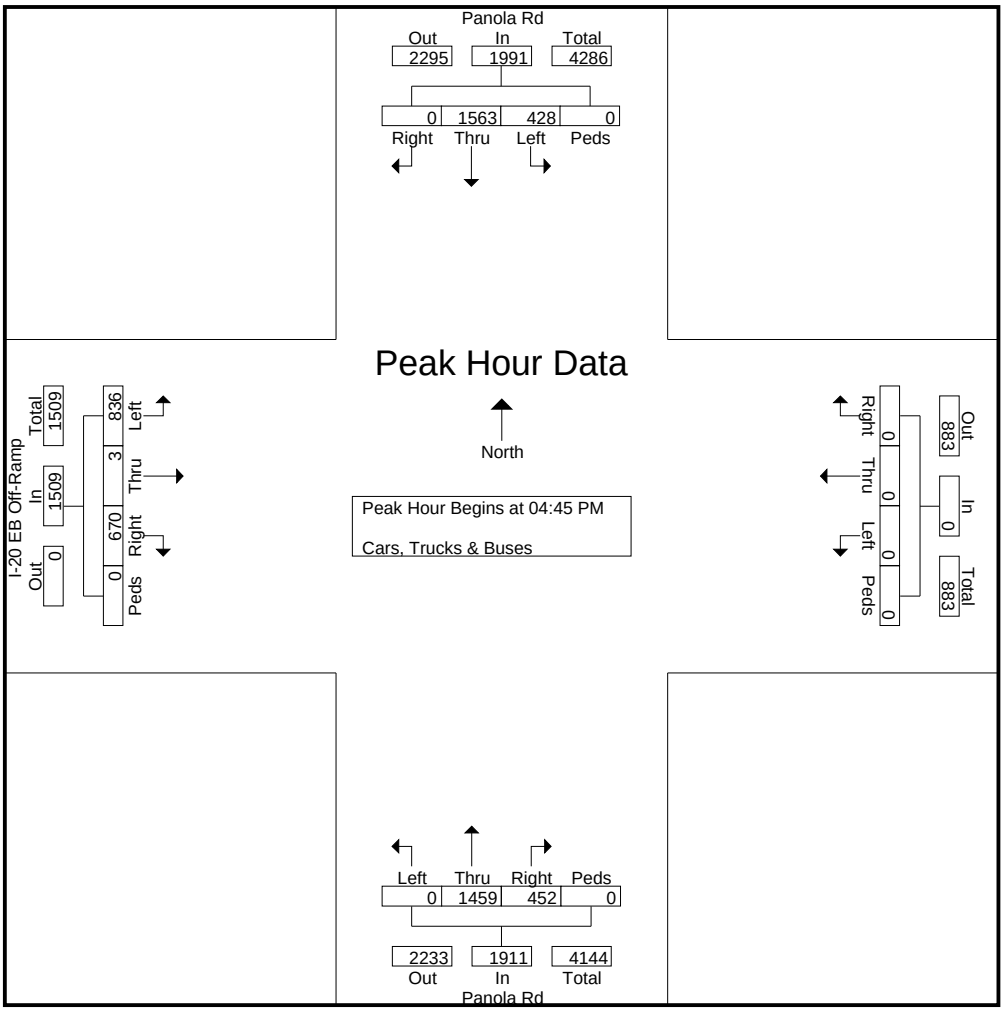
TMC Data

File Name : 22430011
Site Code : 22430011
Start Date : 5/17/2007
Page No : 3

	Panola Rd Northbound					Panola Rd Southbound					I-20 EB Off-Ramp Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	365	112	0	477	115	389	0	0	504	223	0	151	0	374	0	0	0	0	0	1355
05:00 PM	0	371	119	0	490	113	374	0	0	487	218	0	159	0	377	0	0	0	0	0	1354
05:15 PM	0	359	115	0	474	104	408	0	0	512	203	0	178	0	381	0	0	0	0	0	1367
05:30 PM	0	364	106	0	470	96	392	0	0	488	192	3	182	0	377	0	0	0	0	0	1335
Total Volume	0	1459	452	0	1911	428	1563	0	0	1991	836	3	670	0	1509	0	0	0	0	0	5411
% App. Total	0	76.3	23.7	0		21.5	78.5	0	0		55.4	0.2	44.4	0		0	0	0	0		
PHF	.000	.983	.950	.000	.975	.930	.958	.000	.000	.972	.937	.250	.920	.000	.990	.000	.000	.000	.000	.000	.990



Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22770001
Site Code : 22770001
Start Date : 6/13/2007
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Panola Rd Northbound					Panola Rd Southbound					Minola Dr Eastbound					Fairington Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	198	10	0	212	42	117	29	0	188	19	12	3	0	34	25	35	104	0	164	598
07:15 AM	5	219	9	0	233	48	130	32	0	210	23	11	2	0	36	29	37	112	0	178	657
07:30 AM	7	227	8	0	242	57	135	35	0	227	36	12	4	0	52	33	34	117	0	184	705
07:45 AM	5	216	12	0	233	62	124	38	0	224	39	15	4	0	58	31	31	108	0	170	685
Total	21	860	39	0	920	209	506	134	0	849	117	50	13	0	180	118	137	441	0	696	2645
08:00 AM	3	235	15	0	253	67	138	46	0	251	41	12	5	0	58	29	26	96	0	151	713
08:15 AM	4	246	11	0	261	57	153	43	0	253	37	19	4	0	60	32	22	92	0	146	720
08:30 AM	5	239	9	0	253	64	144	37	0	245	35	10	5	0	50	28	17	84	0	129	677
08:45 AM	3	228	7	0	238	62	134	34	0	230	38	7	3	0	48	26	15	78	0	119	635
Total	15	948	42	0	1005	250	569	160	0	979	151	48	17	0	216	115	80	350	0	545	2745
*** BREAK ***																					
04:00 PM	9	186	24	0	219	139	263	11	0	413	88	48	6	0	142	49	10	62	0	121	895
04:15 PM	10	191	28	0	229	143	271	15	0	429	101	46	9	0	156	51	12	65	0	128	942
04:30 PM	8	206	31	0	245	148	296	14	0	458	108	49	8	0	165	55	16	73	0	144	1012
04:45 PM	10	220	37	0	267	136	284	13	0	433	92	53	7	0	152	59	13	76	0	148	1000
Total	37	803	120	0	960	566	1114	53	0	1733	389	196	30	0	615	214	51	276	0	541	3849
05:00 PM	12	217	42	0	271	147	313	15	0	475	83	58	6	0	147	62	17	72	0	151	1044
05:15 PM	13	221	39	0	273	156	324	12	0	492	88	61	8	0	157	67	13	74	0	154	1076
05:30 PM	11	228	33	0	272	150	334	16	0	500	98	67	7	0	172	59	11	77	0	147	1091
05:45 PM	9	225	31	0	265	147	314	13	0	474	95	62	5	0	162	52	14	70	0	136	1037
Total	45	891	145	0	1081	600	1285	56	0	1941	364	248	26	0	638	240	55	293	0	588	4248
Grand Total	118	3502	346	0	3966	1625	3474	403	0	5502	1021	542	86	0	1649	687	323	1360	0	2370	13487
Apprch %	3	88.3	8.7	0		29.5	63.1	7.3	0		61.9	32.9	5.2	0		29	13.6	57.4	0		
Total %	0.9	26	2.6	0	29.4	12	25.8	3	0	40.8	7.6	4	0.6	0	12.2	5.1	2.4	10.1	0	17.6	

Reliable Traffic Data Services, LLC

Tel: (770) 578-5158 Fax: (770) 578-8159

email: reliabletraffic@msn.com

TMC Data

File Name : 22770001
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Start Date : 6/13/2007
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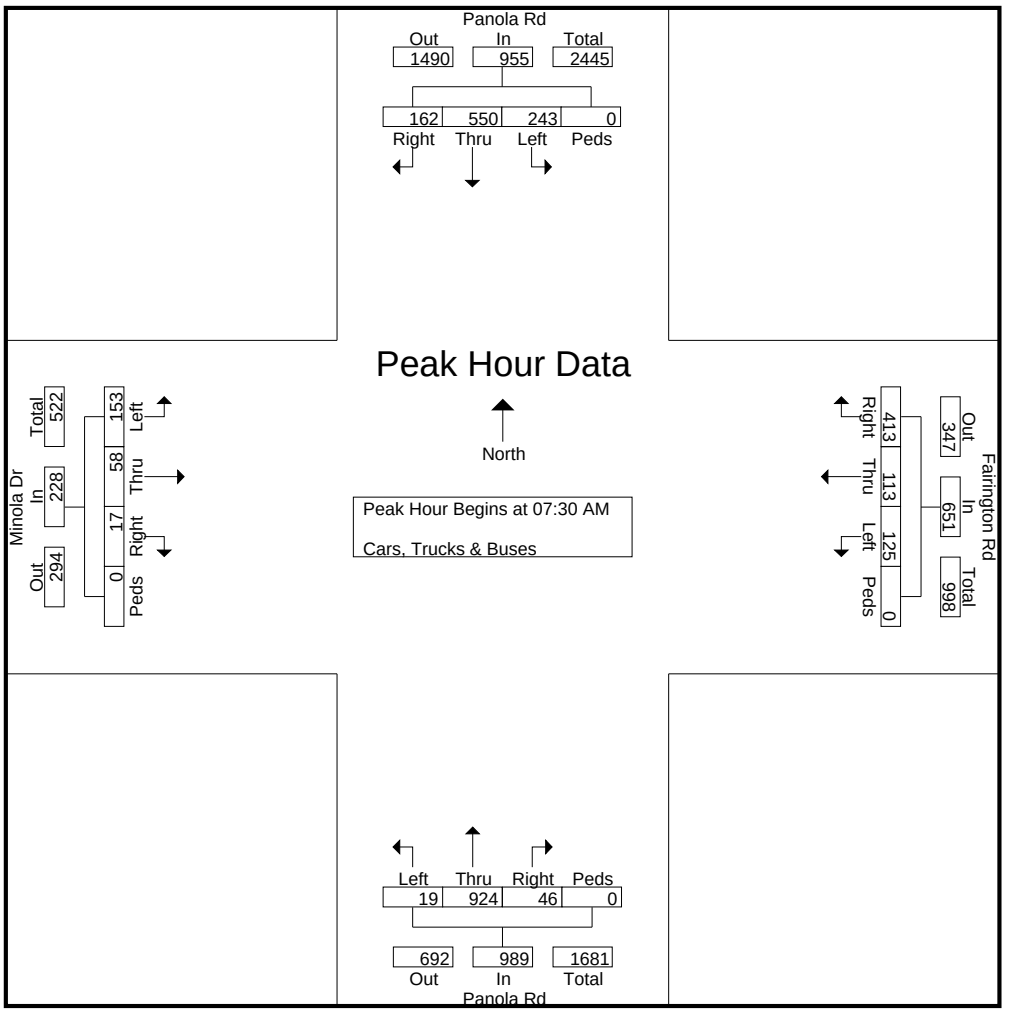
	Panola Rd Northbound					Panola Rd Southbound					Minola Dr Eastbound					Fairington Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	7	227	8	0	242	57	135	35	0	227	36	12	4	0	52	33	34	117	0	184	705
07:45 AM	5	216	12	0	233	62	124	38	0	224	39	15	4	0	58	31	31	108	0	170	685
08:00 AM	3	235	15	0	253	67	138	46	0	251	41	12	5	0	58	29	26	96	0	151	713
08:15 AM	4	246	11	0	261	57	153	43	0	253	37	19	4	0	60	32	22	92	0	146	720
Total Volume	19	924	46	0	989	243	550	162	0	955	153	58	17	0	228	125	113	413	0	651	2823
% App. Total	1.9	93.4	4.7	0		25.4	57.6	17	0		67.1	25.4	7.5	0		19.2	17.4	63.4	0		
PHF	.679	.939	.767	.000	.947	.907	.899	.880	.000	.944	.933	.763	.850	.000	.950	.947	.831	.882	.000	.885	.980



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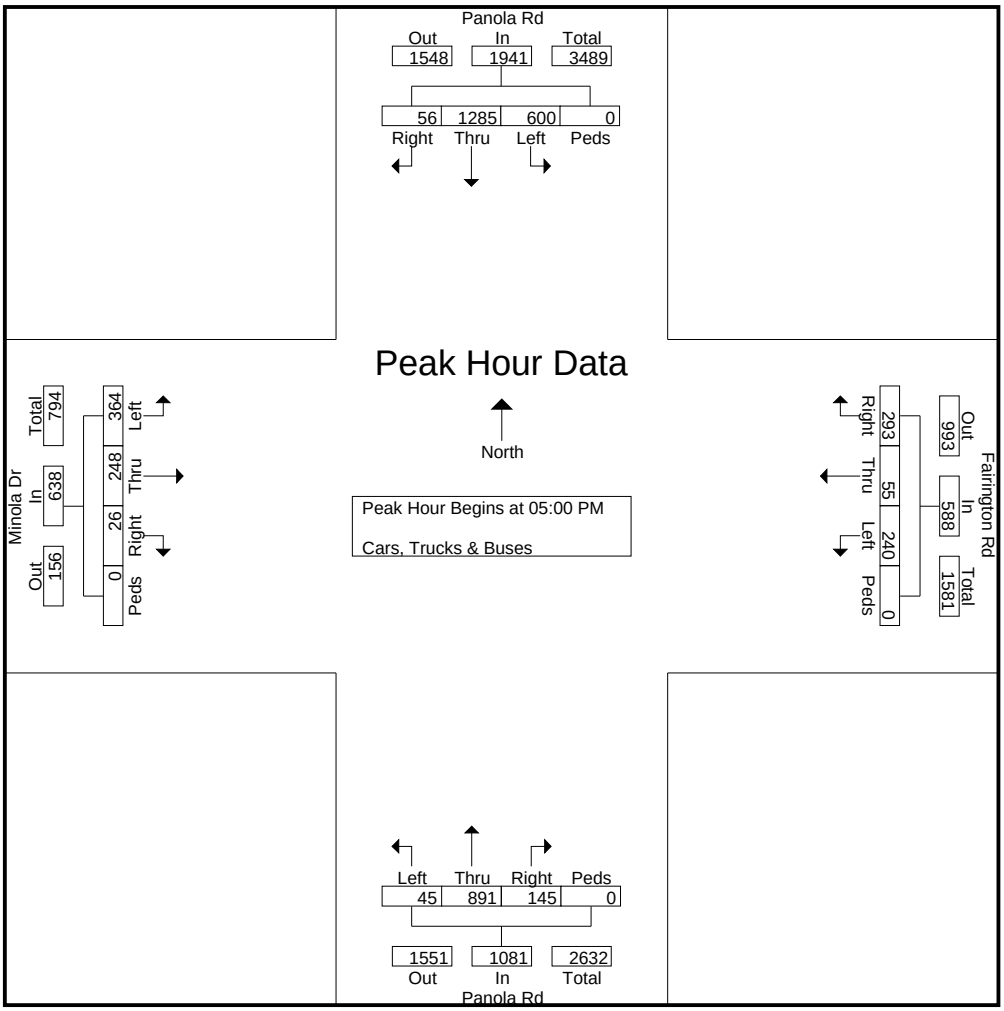
TMC Data

File Name : 22770001
Site Code : 22770001
Start Date : 6/13/2007
Page No : 3

	Panola Rd Northbound					Panola Rd Southbound					Minola Dr Eastbound					Fairington Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	12	217	42	0	271	147	313	15	0	475	83	58	6	0	147	62	17	72	0	151	1044
05:15 PM	13	221	39	0	273	156	324	12	0	492	88	61	8	0	157	67	13	74	0	154	1076
05:30 PM	11	228	33	0	272	150	334	16	0	500	98	67	7	0	172	59	11	77	0	147	1091
05:45 PM	9	225	31	0	265	147	314	13	0	474	95	62	5	0	162	52	14	70	0	136	1037
Total Volume	45	891	145	0	1081	600	1285	56	0	1941	364	248	26	0	638	240	55	293	0	588	4248
% App. Total	4.2	82.4	13.4	0		30.9	66.2	2.9	0		57.1	38.9	4.1	0		40.8	9.4	49.8	0		
PHF	.865	.977	.863	.000	.990	.962	.962	.875	.000	.971	.929	.925	.813	.000	.927	.896	.809	.951	.000	.955	.973



Appendix D
Traffic Volume Worksheets

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 1: Covington Highway and Panola Road

a.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**200**	**574**	**150**	**924**	**202**	**648**	**242**	**1092**	**115**	**427**	**122**	**664**	**402**	**985**	**233**	**1620**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	119	76	0	195	39	136	0	175	0	61	204	265	0	36	24	60
2011 No-Build Volumes	**344**	**722**	**169**	**1235**	**266**	**865**	**272**	**1404**	**129**	**542**	**341**	**1012**	**452**	**1145**	**286**	**1883**
Panola Road DRI Retail New Trips	17	4	0	21	5	9	6	20	4	4	8	16	0	10	1	11
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	7	6	0	13	14	37	0	51	0	9	17	26	0	3	2	5
Panola Road DRI Office Trips	10	0	0	10	0	0	0	0	0	0	3	3	0	4	0	4
Total Panola Road DRI Trips	**34**	**10**	**0**	**44**	**19**	**46**	**6**	**71**	**4**	**13**	**28**	**45**	**0**	**17**	**3**	**20**
2011 Build Volumes	**378**	**732**	**169**	**1279**	**285**	**911**	**278**	**1475**	**133**	**555**	**369**	**1057**	**452**	**1162**	**289**	**1903**

p.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**196**	**647**	**231**	**1074**	**208**	**712**	**146**	**1066**	**296**	**999**	**306**	**1601**	**256**	**529**	**223**	**1008**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	258	172	0	430	63	142	0	205	0	97	218	315	0	142	93	235
2011 No-Build Volumes	**479**	**900**	**260**	**1639**	**297**	**943**	**164**	**1405**	**333**	**1221**	**562**	**2117**	**288**	**737**	**344**	**1370**
Panola Road DRI Retail New Trips	31	8	0	39	11	19	11	41	11	10	17	38	0	18	2	20
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	29	19	0	48	5	15	0	20	0	4	8	12	0	10	9	19
Panola Road DRI Office Trips	4	0	0	4	0	0	0	0	0	0	24	24	0	2	0	2
Total Panola Road DRI Trips	**64**	**27**	**0**	**91**	**16**	**34**	**11**	**61**	**11**	**14**	**49**	**74**	**0**	**30**	**11**	**41**
2011 Build Volumes	**543**	**927**	**260**	**1730**	**313**	**977**	**175**	**1466**	**344**	**1235**	**611**	**2191**	**288**	**767**	**355**	**1411**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 2: Covington Highway and Park Central Boulevard

a.m. peak hour

	Northbound Park Central Blvd.				Eastbound Covington Highway			Westbound Covington Highway		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (May 2007)	**35**	**47**	**82**		**566**	**76**	**642**	**218**	**1194**	**1412**
Background Growth	12.6%	12.6%			12.6%	12.6%		12.6%	12.6%	
Panola Road Conn. Developments	0	0	0		265	0	265	0	155	155
2011 No-Build Volumes	**39**	**53**	**92**		**902**	**86**	**988**	**245**	**1499**	**1744**
Panola Road DRI Retail New Trips	0	2	2		24	0	24	1	18	19
Panola Road DRI Retail Pass-By Trips	0	0	0		0	0	0	0	0	0
Panola Road DRI Residential Trips	0	1	1		7	0	7	4	32	36
Panola Road DRI Office Trips	0	1	1		10	0	10	0	0	0
Total Panola Road DRI Trips	**0**	**4**	**4**		**41**	**0**	**41**	**5**	**50**	**55**
2011 Build Volumes	**39**	**57**	**96**		**943**	**86**	**1029**	**250**	**1549**	**1799**

p.m. peak hour

	Northbound Park Central Blvd.				Eastbound Covington Highway			Westbound Covington Highway		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (May 2007)	**56**	**143**	**199**		**1465**	**62**	**1527**	**67**	**856**	**923**
Background Growth	12.6%	12.6%			12.6%	12.6%		12.6%	12.6%	
Panola Road Conn. Developments	0	0	0		315	0	315	0	400	400
2011 No-Build Volumes	**63**	**161**	**224**		**1964**	**70**	**2034**	**75**	**1363**	**1439**
Panola Road DRI Retail New Trips	0	3	3		44	0	44	3	42	45
Panola Road DRI Retail Pass-By Trips	0	0	0		0	0	0	0	0	0
Panola Road DRI Residential Trips	0	4	4		29	0	29	2	14	16
Panola Road DRI Office Trips	0	0	0		3	0	3	1	21	22
Total Panola Road DRI Trips	**0**	**7**	**7**		**76**	**0**	**76**	**6**	**77**	**83**
2011 Build Volumes	**63**	**168**	**231**		**2040**	**70**	**2110**	**81**	**1440**	**1522**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 3: Covington Highway and Miller Road / Wachovia

a.m. peak hour

	Northbound Miller Road				Southbound Wachovia				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**274**	**4**	**97**	**375**	**16**	**10**	**10**	**36**	**17**	**606**	**294**	**917**	**223**	**1057**	**22**	**1302**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	5	5	5	0	0	5	0	255	0	255	3	149	3	155
2011 No-Build Volumes	**308**	**5**	**114**	**427**	**23**	**11**	**11**	**46**	**19**	**937**	**331**	**1287**	**254**	**1339**	**28**	**1620**
Panola Road DRI Retail New Trips	0	0	3	3	0	0	0	0	0	21	0	21	2	16	0	18
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	0	0	0	0	0	0	0	7	0	7	1	32	0	33
Panola Road DRI Office Trips	0	0	1	1	0	0	0	0	0	9	0	9	0	0	0	0
Total Panola Road DRI Trips	**0**	**0**	**4**	**4**	**0**	**0**	**0**	**0**	**0**	**37**	**0**	**37**	**3**	**48**	**0**	**51**
2011 Build Volumes	**308**	**5**	**118**	**431**	**23**	**11**	**11**	**46**	**19**	**974**	**331**	**1324**	**257**	**1387**	**28**	**1671**

p.m. peak hour

	Northbound Miller Road				Southbound Wachovia				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**351**	**18**	**117**	**486**	**96**	**37**	**48**	**181**	**41**	**1393**	**333**	**1767**	**129**	**740**	**37**	**906**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	6	6	6	0	0	6	0	303	0	303	8	384	8	400
2011 No-Build Volumes	**395**	**20**	**138**	**553**	**114**	**42**	**54**	**210**	**46**	**1871**	**375**	**2292**	**153**	**1217**	**50**	**1420**
Panola Road DRI Retail New Trips	0	0	6	6	0	0	0	0	0	38	0	38	5	37	0	42
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	1	1	0	0	0	0	0	28	0	28	0	14	0	14
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	3	0	3	2	19	0	21
Total Panola Road DRI Trips	**0**	**0**	**7**	**7**	**0**	**0**	**0**	**0**	**0**	**69**	**0**	**69**	**7**	**70**	**0**	**77**
2011 Build Volumes	**395**	**20**	**145**	**560**	**114**	**42**	**54**	**210**	**46**	**1940**	**375**	**2361**	**160**	**1287**	**50**	**1497**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 4: Covington Highway and Young Road / Hidden Creek Drive

a.m. peak hour

	Northbound Hidden Creek Dr.				Southbound Young Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**53**	**16**	**36**	**105**	**117**	**19**	**494**	**630**	**219**	**788**	**13**	**1020**	**11**	**1336**	**66**	**1413**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	5	5	5	0	0	5	0	245	0	245	3	143	3	149
2011 No-Build Volumes	**60**	**18**	**46**	**123**	**137**	**21**	**556**	**714**	**246**	**1132**	**15**	**1393**	**15**	**1647**	**77**	**1739**
Panola Road DRI Retail New Trips	0	0	2	2	3	0	0	3	0	16	0	16	1	13	2	16
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	0	0	0	0	0	0	0	7	0	7	0	32	0	32
Panola Road DRI Office Trips	0	0	1	1	1	0	0	1	0	7	0	7	0	0	0	0
Total Panola Road DRI Trips	**0**	**0**	**3**	**3**	**4**	**0**	**0**	**4**	**0**	**30**	**0**	**30**	**1**	**45**	**2**	**48**
2011 Build Volumes	**60**	**18**	**49**	**126**	**141**	**21**	**556**	**718**	**246**	**1162**	**15**	**1423**	**16**	**1692**	**79**	**1787**

p.m. peak hour

	Northbound Hidden Creek Dr.				Southbound Young Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**52**	**26**	**57**	**135**	**110**	**21**	**281**	**412**	**461**	**1483**	**60**	**2004**	**39**	**917**	**144**	**1100**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	6	6	6	0	0	6	0	291	0	291	8	368	8	384
2011 No-Build Volumes	**59**	**29**	**70**	**158**	**130**	**24**	**316**	**470**	**519**	**1960**	**68**	**2547**	**52**	**1400**	**170**	**1622**
Panola Road DRI Retail New Trips	0	0	3	3	6	0	0	6	0	29	0	29	3	29	5	37
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	0	0	0	0	0	0	0	28	0	28	0	13	0	13
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	3	0	3	1	17	2	20
Total Panola Road DRI Trips	**0**	**0**	**3**	**3**	**6**	**0**	**0**	**6**	**0**	**60**	**0**	**60**	**4**	**59**	**7**	**70**
2011 Build Volumes	**59**	**29**	**73**	**161**	**136**	**24**	**316**	**476**	**519**	**2020**	**68**	**2607**	**56**	**1459**	**177**	**1692**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 5: Covington Highway and South Hairston Road

a.m. peak hour

	Northbound South Hairston Road				Southbound South Hairston Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**132**	**640**	**190**	**962**	**364**	**620**	**635**	**1619**	**276**	**567**	**36**	**879**	**311**	**1667**	**208**	**2186**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	33	33	98	0	0	98	0	123	0	123	14	72	57	143
2011 No-Build Volumes	**149**	**720**	**247**	**1116**	**508**	**698**	**715**	**1920**	**311**	**761**	**41**	**1112**	**364**	**1948**	**291**	**2603**
Panola Road DRI Retail New Trips	0	0	4	4	6	0	0	6	0	6	0	6	3	5	5	13
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	1	1	3	0	0	3	0	3	0	3	4	15	12	31
Panola Road DRI Office Trips	0	0	2	2	3	0	0	3	0	3	0	3	0	0	0	0
Total Panola Road DRI Trips	**0**	**0**	**7**	**7**	**12**	**0**	**0**	**12**	**0**	**12**	**0**	**12**	**7**	**20**	**17**	**44**
2011 Build Volumes	**149**	**720**	**254**	**1123**	**520**	**698**	**715**	**1932**	**311**	**773**	**41**	**1124**	**371**	**1968**	**308**	**2647**

p.m. peak hour

	Northbound South Hairston Road				Southbound South Hairston Road				Eastbound Covington Highway				Westbound Covington Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**143**	**522**	**323**	**988**	**478**	**452**	**188**	**1118**	**398**	**1193**	**50**	**1641**	**276**	**776**	**244**	**1296**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	0	29	29	116	0	0	116	0	146	0	146	18	184	166	368
2011 No-Build Volumes	**161**	**588**	**393**	**1141**	**654**	**509**	**212**	**1374**	**448**	**1489**	**56**	**1993**	**329**	**1057**	**441**	**1827**
Panola Road DRI Retail New Trips	0	0	7	7	11	0	0	11	0	11	0	11	7	10	10	27
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	0	4	4	11	0	0	11	0	12	0	12	2	7	6	15
Panola Road DRI Office Trips	0	0	1	1	1	0	0	1	0	1	0	1	4	7	6	17
Total Panola Road DRI Trips	**0**	**0**	**12**	**12**	**23**	**0**	**0**	**23**	**0**	**24**	**0**	**24**	**13**	**24**	**22**	**59**
2011 Build Volumes	**161**	**588**	**405**	**1153**	**677**	**509**	**212**	**1397**	**448**	**1513**	**56**	**2017**	**342**	**1081**	**463**	**1886**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 6: Panola Road and Snapfinger Woods Drive

a.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Snapfinger Woods Dr.				Westbound Panola Road Conn.			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**471**	**977**		**1448**		**907**	**274**	**1181**	**150**		**219**	**369**				
Background Growth	12.6%	12.6%				12.6%	12.6%		12.6%		12.6%					
Panola Road Conn. Developments	0	-25	205	180	340	-40	0	300	-5	96	-5	86	140	75	195	410
2011 No-Build Volumes	**530**	**1075**	**205**	**1810**	**340**	**981**	**308**	**1629**	**164**	**96**	**241**	**501**	**140**	**75**	**195**	**410**
Panola Road DRI Retail New Trips	0	21	0	21	0	17	0	17	0	0	0	0	0	0	0	0
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	11	0	11	0	51	5	56	1	0	0	1	0	0	0	0
Panola Road DRI Office Trips	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**42**	**0**	**42**	**0**	**71**	**5**	**76**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
2011 Build Volumes	**530**	**1117**	**205**	**1852**	**340**	**1052**	**313**	**1705**	**165**	**96**	**241**	**502**	**140**	**75**	**195**	**410**

p.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Snapfinger Woods Dr.				Westbound Panola Road Conn.			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**1049**	**936**		**1985**		**1037**	**795**	**1832**	**388**		**380**	**768**				
Background Growth	12.6%	12.6%				12.6%	12.6%		12.6%		12.6%					
Panola Road Conn. Developments	0	-40	200	160	360	-70	0	290	-10	80	-5	65	285	40	430	755
2011 No-Build Volumes	**1181**	**1013**	**200**	**2394**	**360**	**1097**	**895**	**2352**	**427**	**80**	**423**	**929**	**285**	**40**	**430**	**755**
Panola Road DRI Retail New Trips	0	39	0	39	0	38	0	38	0	0	0	0	0	0	0	0
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	43	0	43	0	20	2	22	5	0	0	5	0	0	0	0
Panola Road DRI Office Trips	0	4	0	4	0	24	0	24	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**86**	**0**	**86**	**0**	**82**	**2**	**84**	**5**	**0**	**0**	**5**	**0**	**0**	**0**	**0**
2011 Build Volumes	**1181**	**1099**	**200**	**2480**	**360**	**1179**	**897**	**2436**	**432**	**80**	**423**	**934**	**285**	**40**	**430**	**755**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 7: Panola Road and Panola Industrial Boulevard / Hillandale Drive

a.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Panola Industrial Blvd				Westbound Hillandale Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**287**	**1135**	**144**	**1566**	**195**	**960**	**36**	**1191**	**64**	**109**	**86**	**259**	**361**	**305**	**311**	**977**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	205	0	205	0	140	0	140	0	0	0	0	0	0	0	0
2011 No-Build Volumes	**323**	**1482**	**162**	**1968**	**219**	**1220**	**41**	**1480**	**72**	**123**	**97**	**292**	**406**	**343**	**350**	**1100**
Panola Road DRI Retail New Trips	0	21	0	21	0	17	0	17	0	0	0	0	0	0	0	0
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	11	0	11	4	47	1	52	0	0	0	0	0	0	1	1
Panola Road DRI Office Trips	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**42**	**0**	**42**	**4**	**67**	**1**	**72**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
2011 Build Volumes	**323**	**1524**	**162**	**2010**	**223**	**1287**	**42**	**1552**	**72**	**123**	**97**	**292**	**406**	**343**	**351**	**1101**

p.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Panola Industrial Blvd				Westbound Hillandale Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (May 2007)	**361**	**1219**	**138**	**1718**	**338**	**1018**	**134**	**1490**	**181**	**179**	**133**	**493**	**622**	**292**	**525**	**1439**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	200	0	200	0	285	0	285	0	0	0	0	0	0	0	0
2011 No-Build Volumes	**406**	**1572**	**155**	**2134**	**380**	**1431**	**151**	**1962**	**204**	**201**	**150**	**555**	**700**	**329**	**591**	**1620**
Panola Road DRI Retail New Trips	0	39	0	39	0	38	0	38	0	0	0	0	0	0	0	0
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	42	0	42	2	20	0	22	1	0	0	1	0	0	3	3
Panola Road DRI Office Trips	0	4	0	4	0	24	0	24	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**85**	**0**	**85**	**2**	**82**	**0**	**84**	**1**	**0**	**0**	**1**	**0**	**0**	**3**	**3**
2011 Build Volumes	**406**	**1657**	**155**	**2219**	**382**	**1513**	**151**	**2046**	**205**	**201**	**150**	**556**	**700**	**329**	**594**	**1623**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 8: Interstate 20 Westbound Ramps and Panola Road

a.m. peak hour

	Northbound Panola Road			Southbound Panola Road				Westbound I-20 Westbound		
	L	T	Tot	T	R	Tot		L	R	Tot
Counted Volumes (May 2007)	**538**	**1603**	**2141**	**726**	**861**	**1587**		**156**	**169**	**325**
Background Growth	12.6%	12.6%		12.6%	12.6%			12.6%	12.6%	
Panola Road Conn. Developments	0	143	143	63	77	140		0	62	62
2011 No-Build Volumes	**606**	**1947**	**2553**	**880**	**1046**	**1926**		**176**	**252**	**428**
Panola Road DRI Retail New Trips	0	15	15	9	8	17		0	6	6
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0		0	0	0
Panola Road DRI Residential Trips	0	8	8	21	23	44		0	3	3
Panola Road DRI Office Trips	0	7	7	1	2	3		0	4	4
Total Panola Road DRI Trips	**0**	**30**	**30**	**31**	**33**	**64**		**0**	**13**	**13**
2011 Build Volumes	**606**	**1977**	**2583**	**911**	**1079**	**1990**		**176**	**265**	**441**

p.m. peak hour

	Northbound Panola Road			Southbound Panola Road				Westbound I-20 Westbound		
	L	T	Tot	T	R	Tot		L	R	Tot
Counted Volumes (May 2007)	**574**	**1696**	**2270**	**1542**	**452**	**1994**		**390**	**223**	**613**
Background Growth	12.6%	12.6%		12.6%	12.6%			12.6%	12.6%	
Panola Road Conn. Developments	0	140	140	128	157	285		0	60	60
2011 No-Build Volumes	**646**	**2049**	**2695**	**1864**	**666**	**2529**		**439**	**311**	**750**
Panola Road DRI Retail New Trips	0	27	27	20	16	36		0	11	11
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0		0	0	0
Panola Road DRI Residential Trips	0	28	28	9	10	19		0	11	11
Panola Road DRI Office Trips	0	3	3	13	10	23		0	1	1
Total Panola Road DRI Trips	**0**	**58**	**58**	**42**	**36**	**78**		**0**	**23**	**23**
2011 Build Volumes	**646**	**2107**	**2753**	**1906**	**702**	**2607**		**439**	**334**	**773**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 9: Interstate 20 Eastbound Ramps and Panola Road

a.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound I-20 Westbound			
	T	R	Tot	L	T	Tot	L	R	Tot	
Counted Volumes (May 2007)	**1452**	**244**	**1696**	**187**	**732**	**919**	**696**	**525**	**1221**	
Background Growth	12.6%	12.6%		12.6%	12.6%		12.6%	12.6%		
Panola Road Conn. Developments	30	0	30	42	21	63	113	0	113	
2011 No-Build Volumes	**1664**	**275**	**1939**	**252**	**845**	**1097**	**896**	**591**	**1487**	
Panola Road DRI Retail New Trips	6	0	6	5	5	10	9	0	9	
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	
Panola Road DRI Residential Trips	2	0	2	12	9	21	6	0	6	
Panola Road DRI Office Trips	2	0	2	1	0	1	5	0	5	
Total Panola Road DRI Trips	**10**	**0**	**10**	**18**	**14**	**32**	**20**	**0**	**20**	
2011 Build Volumes	**1674**	**275**	**1949**	**270**	**859**	**1129**	**916**	**591**	**1507**	

p.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound I-20 Westbound			
	T	R	Tot	L	T	Tot	L	R	Tot	
Counted Volumes (May 2007)	**1459**	**452**	**1911**	**428**	**1563**	**1991**	**839**	**670**	**1509**	
Background Growth	12.6%	12.6%		12.6%	12.6%		12.6%	12.6%		
Panola Road Conn. Developments	30	0	30	86	42	128	110	0	110	
2011 No-Build Volumes	**1672**	**509**	**2181**	**568**	**1801**	**2369**	**1054**	**754**	**1808**	
Panola Road DRI Retail New Trips	10	0	10	10	10	20	16	0	16	
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	
Panola Road DRI Residential Trips	9	0	9	6	3	9	19	0	19	
Panola Road DRI Office Trips	1	0	1	8	7	15	2	0	2	
Total Panola Road DRI Trips	**20**	**0**	**20**	**24**	**20**	**44**	**37**	**0**	**37**	
2011 Build Volumes	**1692**	**509**	**2201**	**592**	**1821**	**2413**	**1091**	**754**	**1845**	

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection 10: Panola Road and Minola Drive / Fairington Road

a.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Minola Drive				Westbound Fairington Road			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (June 2007)	**19**	**924**	**46**	**989**	**243**	**550**	**162**	**955**	**153**	**58**	**17**	**228**	**125**	**113**	**413**	**651**
seasonal adjustment	1.138	1.138	1.138		1.316	1.316	1.316		1.138	1.227	1.316		1.316	1.227	1.138	
Existing Adjusted Volumes	**22**	**1052**	**52**	**1125**	**320**	**724**	**213**	**1257**	**174**	**71**	**22**	**268**	**165**	**139**	**470**	**773**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	22	0	22	3	15	3	21	4	0	0	4	0	0	4	4
2011 No-Build Volumes	**24**	**1205**	**59**	**1289**	**363**	**830**	**243**	**1436**	**200**	**80**	**25**	**305**	**185**	**156**	**533**	**874**
Panola Road DRI Retail New Trips	0	4	0	4	2	3	0	5	0	0	0	0	0	0	2	2
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	2	0	2	1	8	1	10	0	0	0	0	0	0	0	0
Panola Road DRI Office Trips	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**8**	**0**	**8**	**3**	**11**	**1**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**
2011 Build Volumes	**24**	**1213**	**59**	**1297**	**366**	**841**	**244**	**1451**	**200**	**80**	**25**	**305**	**185**	**156**	**535**	**876**

p.m. peak hour

	Northbound Panola Road				Southbound Panola Road				Eastbound Minola Drive				Westbound Fairington Road			
	L	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**	**L**	**T**	**R**	**Tot**
Counted Volumes (June 2007)	**45**	**891**	**145**	**1081**	**600**	**1285**	**56**	**1941**	**364**	**248**	**26**	**638**	**240**	**55**	**293**	**588**
seasonal adjustment	1.235	1.235	1.235		1.150	1.150	1.150		1.235	1.189	1.150		1.150	1.189	1.235	
Existing Adjusted Volumes	**56**	**1100**	**179**	**1335**	**690**	**1478**	**64**	**2232**	**450**	**295**	**30**	**774**	**276**	**65**	**362**	**703**
Background Growth	12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%		12.6%	12.6%	12.6%	
Panola Road Conn. Developments	0	22	0	22	6	30	6	42	4	0	0	4	0	0	4	4
2011 No-Build Volumes	**63**	**1260**	**202**	**1525**	**783**	**1693**	**78**	**2554**	**510**	**332**	**34**	**875**	**311**	**74**	**411**	**796**
Panola Road DRI Retail New Trips	0	7	0	7	4	7	0	11	0	0	0	0	0	0	4	4
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panola Road DRI Residential Trips	0	7	0	7	0	3	0	3	1	0	0	1	0	0	1	1
Panola Road DRI Office Trips	0	1	0	1	3	4	0	7	0	0	0	0	0	0	0	0
Total Panola Road DRI Trips	**0**	**15**	**0**	**15**	**7**	**14**	**0**	**21**	**1**	**0**	**0**	**1**	**0**	**0**	**5**	**5**
2011 Build Volumes	**63**	**1275**	**202**	**1540**	**790**	**1707**	**78**	**2575**	**511**	**332**	**34**	**876**	**311**	**74**	**416**	**801**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection A: Covington Highway and Site Access A

a.m. peak hour

		Southbound Site Access A			Eastbound Covington Highway			Westbound Covington Highway		
		L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (May 2007)						**664**	**664**	**1427**		**1427**
Background Growth						12.6%		12.6%		
Panola Road Conn. Developments						265	265	155		155
2011 No-Build Volumes						**1012**	**1012**	**1761**		**1761**
Panola Road DRI Retail New Trips		16	19	35	26	0	26	10	29	39
Panola Road DRI Retail Pass-By Trips		3	4	7	6	-6	0	-9	9	0
Panola Road DRI Residential Trips		26	25	51	8	0	8	13	9	22
Panola Road DRI Office Trips		3	0	3	11	0	11	0	13	13
Total Panola Road DRI Trips		**48**	**48**	**96**	**51**	**-6**	**45**	**14**	**60**	**74**
2011 Build Volumes		**48**	**48**	**96**	**51**	**1006**	**1057**	**1775**	**60**	**1835**

p.m. peak hour

		Southbound Site Access A			Eastbound Covington Highway			Westbound Covington Highway		
		L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (May 2007)						**1601**	**1601**	**871**		**871**
Background Growth						12.6%		12.6%		
Panola Road Conn. Developments						315	315	400		400
2011 No-Build Volumes						**2117**	**2117**	**1380**		**1380**
Panola Road DRI Retail New Trips		38	45	83	47	0	47	21	51	72
Panola Road DRI Retail Pass-By Trips		34	6	40	38	-38	0	-17	17	0
Panola Road DRI Residential Trips		11	10	21	33	0	33	6	40	46
Panola Road DRI Office Trips		34	22	56	3	0	3	0	6	6
Total Panola Road DRI Trips		**117**	**83**	**200**	**121**	**-38**	**83**	**10**	**114**	**124**
2011 Build Volumes		**117**	**83**	**200**	**121**	**2079**	**2200**	**1390**	**114**	**1504**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection B: Covington Highway and Site Access B

a.m. peak hour

		Southbound Site Access B		Eastbound Covington Highway		Westbound Covington Highway	
		R	Tot	T	Tot	T	Tot
Counted Volumes (May 2007)				**664**	**664**	**1427**	**1427**
Background Growth				12.6%		12.6%	
Panola Road Conn. Developments				265	265	155	155
2011 No-Build Volumes				**1012**	**1012**	**1761**	**1761**
Panola Road DRI Retail New Trips		11	11	15	15	26	26
Panola Road DRI Retail Pass-By Trips		5	5	0	0	0	0
Panola Road DRI Residential Trips		11	11	25	25	9	9
Panola Road DRI Office Trips		0	0	3	3	13	13
Total Panola Road DRI Trips		**27**	**27**	**43**	**43**	**48**	**48**
2011 Build Volumes		**27**	**27**	**1055**	**1055**	**1809**	**1809**

p.m. peak hour

		Southbound Site Access B		Eastbound Covington Highway		Westbound Covington Highway	
		R	Tot	T	Tot	T	Tot
Counted Volumes (May 2007)				**1601**	**1601**	**871**	**871**
Background Growth				12.6%		12.6%	
Panola Road Conn. Developments				315	315	400	400
2011 No-Build Volumes				**2117**	**2117**	**1380**	**1380**
Panola Road DRI Retail New Trips		21	21	38	38	50	50
Panola Road DRI Retail Pass-By Trips		9	9	0	0	0	0
Panola Road DRI Residential Trips		6	6	11	11	39	39
Panola Road DRI Office Trips		0	0	33	33	6	6
Total Panola Road DRI Trips		**36**	**36**	**82**	**82**	**95**	**95**
2011 Build Volumes		**36**	**36**	**2199**	**2199**	**1475**	**1475**

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection C: Panola Road and Site Access C

a.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access C			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**922**	**922**	**1092**		**1092**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		100	100	175		175				
2011 No-Build Volumes		**1138**	**1138**	**1404**		**1404**				
Panola Road DRI Retail New Trips	0	13	13	16	0	16	0	0	0	
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	
Panola Road DRI Residential Trips	2	7	9	1	2	3	6	12	18	
Panola Road DRI Office Trips	0	0	0	0	5	5	0	0	0	
Total Panola Road DRI Trips	**2**	**20**	**22**	**17**	**7**	**24**	**6**	**12**	**18**	
2011 Build Volumes	**2**	**1158**	**1160**	**1421**	**7**	**1428**	**6**	**12**	**18**	

p.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access C			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**1166**	**1166**	**1066**		**1066**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		265	265	205		205				
2011 No-Build Volumes		**1577**	**1577**	**1405**		**1405**				
Panola Road DRI Retail New Trips	0	30	30	32	0	32	0	0	0	
Panola Road DRI Retail Pass-By Trips	0	0	0	0	0	0	0	0	0	
Panola Road DRI Residential Trips	8	3	11	7	5	12	3	5	8	
Panola Road DRI Office Trips	0	0	0	0	2	2	10	0	10	
Total Panola Road DRI Trips	**8**	**33**	**41**	**39**	**7**	**46**	**13**	**5**	**18**	
2011 Build Volumes	**8**	**1610**	**1618**	**1444**	**7**	**1451**	**13**	**5**	**18**	

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection D: Panola Road and Site Access D

a.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access D			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**922**	**922**	**1092**		**1092**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		100	100	175		175				
2011 No-Build Volumes		**1138**	**1138**	**1404**		**1404**				
Panola Road DRI Retail New Trips	2	8	10	11	5	16	5	5	10	
Panola Road DRI Retail Pass-By Trips	4	-4	0	-7	7	0	4	4	8	
Panola Road DRI Residential Trips	3	5	8	11	1	12	5	18	23	
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	
Total Panola Road DRI Trips	**9**	**9**	**18**	**15**	**13**	**28**	**14**	**27**	**41**	
2011 Build Volumes	**9**	**1147**	**1156**	**1419**	**13**	**1432**	**14**	**27**	**41**	

p.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access D			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**1166**	**1166**	**1066**		**1066**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		265	265	205		205				
2011 No-Build Volumes		**1577**	**1577**	**1405**		**1405**				
Panola Road DRI Retail New Trips	4	19	23	20	11	31	10	13	23	
Panola Road DRI Retail Pass-By Trips	9	-9	0	-18	18	0	11	15	26	
Panola Road DRI Residential Trips	9	9	18	7	4	11	2	7	9	
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	
Total Panola Road DRI Trips	**22**	**19**	**41**	**9**	**33**	**42**	**23**	**35**	**58**	
2011 Build Volumes	**22**	**1596**	**1618**	**1414**	**33**	**1447**	**23**	**35**	**58**	

Panola Road DRI #1447
DeKalb County, Georgia

Intersection Volume Worksheet

July 2007

Intersection E: Panola Road and Site Access E

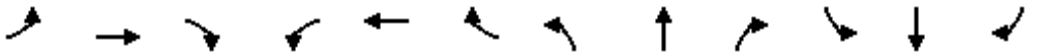
a.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access E			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**922**	**922**	**1092**		**1092**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		100	100	175		175				
2011 No-Build Volumes		**1138**	**1138**	**1404**		**1404**				
Panola Road DRI Retail New Trips	3	6	9	13	5	18	5	8	13	
Panola Road DRI Retail Pass-By Trips	3	-3	0	-3	3	0	2	3	5	
Panola Road DRI Residential Trips	3	5	8	31	0	31	3	18	21	
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	
Total Panola Road DRI Trips	**9**	**8**	**17**	**41**	**8**	**49**	**10**	**29**	**39**	
2011 Build Volumes	**9**	**1146**	**1155**	**1445**	**8**	**1453**	**10**	**29**	**39**	

p.m. peak hour

	Northbound Panola Road			Southbound Panola Road			Eastbound Site Access E			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (May 2007)		**1166**	**1166**	**1066**		**1066**				
Background Growth		12.6%		12.6%						
Panola Road Conn. Developments		265	265	205		205				
2011 No-Build Volumes		**1577**	**1577**	**1405**		**1405**				
Panola Road DRI Retail New Trips	6	13	19	22	10	32	9	15	24	
Panola Road DRI Retail Pass-By Trips	6	-6	0	-6	6	0	4	9	13	
Panola Road DRI Residential Trips	8	17	25	12	3	15	1	7	8	
Panola Road DRI Office Trips	0	0	0	0	0	0	0	0	0	
Total Panola Road DRI Trips	**20**	**24**	**44**	**28**	**19**	**47**	**14**	**31**	**45**	
2011 Build Volumes	**20**	**1601**	**1621**	**1433**	**19**	**1452**	**14**	**31**	**45**	

Appendix E
Existing Condition Analysis



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	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1568	1770	3505	1583	1752	3429		1770	3539	1583
Flt Permitted	0.17	1.00	1.00	0.28	1.00	1.00	0.24	1.00		0.15	1.00	1.00
Satd. Flow (perm)	317	3505	1568	528	3505	1583	438	3429		287	3539	1583
Volume (vph)	115	427	122	402	985	233	200	574	150	202	648	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	459	131	410	1005	238	211	604	158	213	682	255
RTOR Reduction (vph)	0	0	98	0	0	118	0	15	0	0	0	165
Lane Group Flow (vph)	124	459	33	410	1005	120	211	747	0	213	682	90
Heavy Vehicles (%)	2%	3%	3%	2%	3%	2%	3%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	45.4	35.0	35.0	70.4	54.5	54.5	58.5	44.6		63.9	47.3	47.3
Effective Green, g (s)	49.5	37.6	37.6	73.0	57.1	57.1	62.3	46.6		67.7	49.3	49.3
Actuated g/C Ratio	0.33	0.25	0.25	0.49	0.38	0.38	0.42	0.31		0.45	0.33	0.33
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	220	879	393	517	1334	603	319	1065		311	1163	520
v/s Ratio Prot	0.04	0.13		c0.17	0.29		0.07	0.22		c0.08	0.19	
v/s Ratio Perm	0.14		0.02	c0.22		0.08	0.21			c0.22		0.06
v/c Ratio	0.56	0.52	0.08	0.79	0.75	0.20	0.66	0.70		0.68	0.59	0.17
Uniform Delay, d1	37.2	48.5	43.0	27.6	40.3	31.1	30.7	45.6		29.6	41.9	35.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.68		1.00	1.00	1.00
Incremental Delay, d2	3.3	2.2	0.4	8.2	4.0	0.7	4.7	3.6		6.1	2.2	0.7
Delay (s)	40.5	50.7	43.4	35.7	44.3	31.9	27.8	34.7		35.7	44.0	36.6
Level of Service	D	D	D	D	D	C	C	C		D	D	D
Approach Delay (s)		47.6			40.4			33.2			40.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
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)	566	76	218	1194	35	47
Peak Hour Factor	0.92	0.92	0.97	0.97	0.82	0.82
Hourly flow rate (vph)	615	83	225	1231	43	57
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			698		1680	308
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			698		1680	308
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			74		31	92
cM capacity (veh/h)			875		62	679

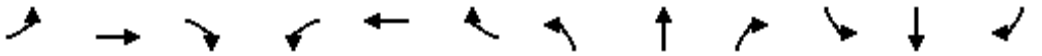
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	308	308	83	635	821	100
Volume Left	0	0	0	225	0	43
Volume Right	0	0	83	0	0	57
cSH	1700	1700	1700	875	1700	130
Volume to Capacity	0.18	0.18	0.05	0.26	0.48	0.77
Queue Length 95th (ft)	0	0	0	26	0	113
Control Delay (s)	0.0	0.0	0.0	6.0	0.0	91.8
Lane LOS				A		F
Approach Delay (s)	0.0			2.6		91.8
Approach LOS						F

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1672	1568		1754	
Flt Permitted	0.17	1.00	1.00	0.27	1.00	1.00	0.95	0.95	1.00		0.98	
Satd. Flow (perm)	315	3505	1568	499	3505	1583	1665	1672	1568		1754	
Volume (vph)	17	606	294	223	1057	22	274	4	97	16	10	10
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.88	0.88	0.88	0.82	0.82	0.82
Adj. Flow (vph)	18	631	306	228	1079	22	311	5	110	20	12	12
RTOR Reduction (vph)	0	0	191	0	0	12	0	0	75	0	11	0
Lane Group Flow (vph)	18	631	115	228	1079	10	156	160	35	0	33	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	45.5	43.2	43.2	63.2	54.9	54.9	38.1	38.1	38.1		6.7	
Effective Green, g (s)	49.5	45.2	45.2	63.2	54.9	54.9	38.1	38.1	38.1		6.7	
Actuated g/C Ratio	0.41	0.38	0.38	0.53	0.46	0.46	0.32	0.32	0.32		0.06	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	182	1320	591	409	1604	724	529	531	498		98	
v/s Ratio Prot	0.00	0.18		c0.07	c0.31		0.09	c0.10			c0.02	
v/s Ratio Perm	0.04		0.07	0.23		0.01			0.02			
v/c Ratio	0.10	0.48	0.20	0.56	0.67	0.01	0.29	0.30	0.07		0.33	
Uniform Delay, d1	22.1	28.4	25.2	17.2	25.5	17.8	30.8	30.9	28.6		54.5	
Progression Factor	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	1.2	0.7	0.9	1.5	0.0	1.4	1.5	0.3		0.7	
Delay (s)	22.2	29.7	25.9	18.1	27.0	17.8	32.3	32.4	28.9		55.2	
Level of Service	C	C	C	B	C	B	C	C	C		E	
Approach Delay (s)		28.3			25.3			31.4			55.2	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

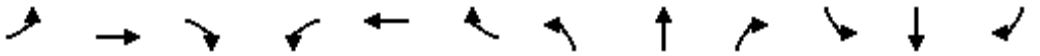
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3482			1733			1786	1583
Flt Permitted	0.07	1.00	1.00	0.29	1.00			0.98			0.96	1.00
Satd. Flow (perm)	123	3505	1583	535	3482			1733			1786	1583
Volume (vph)	219	788	13	11	1336	66	53	16	36	117	19	494
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.94	0.94	0.94	0.91	0.91	0.91
Adj. Flow (vph)	235	847	14	11	1363	67	56	17	38	129	21	543
RTOR Reduction (vph)	0	0	7	0	2	0	0	14	0	0	0	177
Lane Group Flow (vph)	235	847	7	11	1428	0	0	97	0	0	150	366
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	71.0	63.5	63.5	55.0	53.0			16.0			28.0	28.0
Effective Green, g (s)	74.5	67.0	67.0	60.0	56.5			18.5			30.0	30.0
Actuated g/C Ratio	0.55	0.50	0.50	0.44	0.42			0.14			0.22	0.22
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	239	1740	786	270	1457			237			397	352
v/s Ratio Prot	c0.10	0.24		0.00	0.41			c0.06			0.08	
v/s Ratio Perm	c0.44		0.00	0.02								c0.23
v/c Ratio	0.98	0.49	0.01	0.04	0.98			0.41			0.38	1.04
Uniform Delay, d1	44.1	22.6	17.2	21.2	38.7			53.3			44.6	52.5
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	53.0	1.0	0.0	0.0	19.2			5.2			2.7	58.4
Delay (s)	97.1	23.6	17.2	21.2	57.9			58.4			47.3	110.9
Level of Service	F	C	B	C	E			E			D	F
Approach Delay (s)		39.2			57.7			58.4			97.1	
Approach LOS		D			E			E			F	

Intersection Summary			
HCM Average Control Delay	59.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

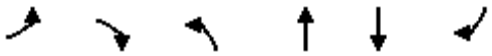
c Critical Lane Group



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	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3505	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3505	1583	1770	3505	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	276	567	36	311	1667	208	132	640	190	364	620	635
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	285	585	37	327	1755	219	136	660	196	391	667	683
RTOR Reduction (vph)	0	0	24	0	0	72	0	0	160	0	0	188
Lane Group Flow (vph)	285	585	13	327	1755	147	136	660	36	391	667	495
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	15.0	42.9	42.9	27.1	54.5	54.5	6.0	21.5	21.5	12.0	27.5	27.5
Effective Green, g (s)	17.0	46.4	46.4	28.6	58.0	58.0	9.0	24.0	24.0	15.0	30.0	30.0
Actuated g/C Ratio	0.13	0.36	0.36	0.22	0.45	0.45	0.07	0.18	0.18	0.12	0.23	0.23
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	231	1251	565	389	1564	706	123	653	292	396	817	365
v/s Ratio Prot	c0.16	0.17		0.18	c0.50		0.08	0.19		c0.11	0.19	
v/s Ratio Perm			0.01			0.09			0.02			c0.31
v/c Ratio	1.23	0.47	0.02	0.84	1.12	0.21	1.11	1.01	0.12	0.99	0.82	1.36
Uniform Delay, d1	56.5	32.3	27.1	48.5	36.0	22.0	60.5	53.0	44.2	57.4	47.4	50.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	136.8	1.3	0.1	14.5	64.0	0.7	112.4	37.9	0.9	41.4	8.8	177.6
Delay (s)	193.3	33.5	27.2	63.0	100.0	22.6	172.9	90.9	45.1	98.8	56.2	227.6
Level of Service	F	C	C	E	F	C	F	F	D	F	E	F
Approach Delay (s)		83.5			87.4			93.1			133.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	101.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

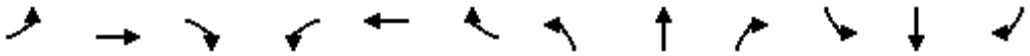
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	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	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1468	1641	3505	3383	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1752	1468	1641	3505	3383	
Volume (vph)	150	219	471	977	907	274
Peak-hour factor, PHF	0.91	0.91	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	241	486	1007	935	282
RTOR Reduction (vph)	0	28	0	0	19	0
Lane Group Flow (vph)	165	213	486	1007	1198	0
Heavy Vehicles (%)	3%	10%	10%	3%	3%	3%
Turn Type		pm+ov	Prot			
Protected Phases	4	5	5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	17.0	72.1	55.1	121.7	61.2	
Effective Green, g (s)	18.4	74.9	56.5	123.6	63.1	
Actuated g/C Ratio	0.12	0.50	0.38	0.82	0.42	
Clearance Time (s)	5.4	5.4	5.4	5.9	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	215	772	618	2888	1423	
v/s Ratio Prot	c0.09	0.10	c0.30	0.29	c0.35	
v/s Ratio Perm		0.04				
v/c Ratio	0.77	0.28	0.79	0.35	0.84	
Uniform Delay, d1	63.7	21.8	41.4	3.3	39.0	
Progression Factor	1.00	1.00	0.35	0.22	0.73	
Incremental Delay, d2	15.1	0.2	0.6	0.0	4.8	
Delay (s)	78.8	22.0	15.0	0.7	33.1	
Level of Service	E	C	B	A	C	
Approach Delay (s)	45.1			5.4	33.1	
Approach LOS	D			A	C	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

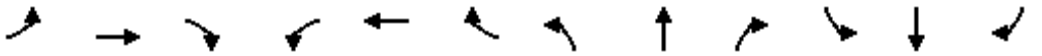
c Critical Lane Group



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	0.85	1.00	0.92		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1811	1538	1770	1713		1719	3505	1583	1770	3519	
Flt Permitted		0.98	1.00	0.95	1.00		0.08	1.00	1.00	0.09	1.00	
Satd. Flow (perm)		1811	1538	1770	1713		152	3505	1583	171	3519	
Volume (vph)	64	109	86	361	305	311	287	1135	144	195	960	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	68	116	91	372	314	321	315	1247	158	205	1011	38
RTOR Reduction (vph)	0	0	67	0	24	0	0	0	64	0	2	0
Lane Group Flow (vph)	0	184	24	372	611	0	315	1247	94	205	1047	0
Heavy Vehicles (%)	3%	3%	5%	2%	3%	2%	5%	3%	2%	2%	2%	3%
Turn Type	Split		pm+ov	Split			pm+pt		Perm	pm+pt		
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2		2	6		
Actuated Green, G (s)		15.7	36.7	49.9	49.9		66.8	49.8	49.8	53.1	41.8	
Effective Green, g (s)		18.0	39.0	51.3	51.3		68.7	51.7	51.7	56.7	43.7	
Actuated g/C Ratio		0.12	0.26	0.34	0.34		0.46	0.34	0.34	0.38	0.29	
Clearance Time (s)		6.3	4.0	5.4	5.4		4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		217	400	605	586		289	1208	546	203	1025	
v/s Ratio Prot		c0.10	0.01	0.21	c0.36		c0.15	0.36		0.09	0.30	
v/s Ratio Perm			0.01				c0.35		0.06	0.29		
v/c Ratio		0.85	0.06	0.61	1.04		1.09	1.03	0.17	1.01	1.02	
Uniform Delay, d1		64.7	41.7	41.1	49.4		49.1	49.1	34.3	70.7	53.2	
Progression Factor		1.00	1.00	1.00	1.00		1.16	0.74	0.75	0.87	1.25	
Incremental Delay, d2		25.2	0.1	1.9	48.6		73.7	31.9	0.6	56.0	29.3	
Delay (s)		89.8	41.8	43.0	97.9		130.7	68.4	26.2	117.7	95.6	
Level of Service		F	D	D	F		F	E	C	F	F	
Approach Delay (s)		73.9			77.6			76.0			99.3	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM Average Control Delay	83.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

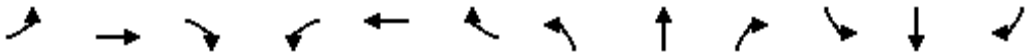
c Critical Lane Group



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
Lane Util. Factor				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1752		1538	1752	3438			4940	1538
Flt Permitted				0.95		1.00	0.32	1.00			1.00	1.00
Satd. Flow (perm)				1752		1538	588	3438			4940	1538
Volume (vph)	0	0	0	156	0	169	538	1603	0	0	726	861
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.92	0.89	0.97	0.97	0.92	0.92	0.98	0.98
Adj. Flow (vph)	0	0	0	175	0	190	555	1653	0	0	741	879
RTOR Reduction (vph)	0	0	0	0	0	62	0	0	0	0	0	205
Lane Group Flow (vph)	0	0	0	175	0	128	555	1653	0	0	741	674
Heavy Vehicles (%)	2%	2%	2%	3%	2%	5%	3%	5%	2%	2%	5%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				17.7		17.7	120.7	120.7			88.7	88.7
Effective Green, g (s)				19.4		19.4	122.6	122.6			90.6	90.6
Actuated g/C Ratio				0.13		0.13	0.82	0.82			0.60	0.60
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				227		199	698	2810			2984	929
v/s Ratio Prot							c0.15	0.48			0.15	
v/s Ratio Perm				c0.10		0.08	c0.50					0.44
v/c Ratio				0.77		0.64	0.80	0.59			0.25	0.73
Uniform Delay, d1				63.2		62.0	6.0	4.8			13.8	20.9
Progression Factor				1.00		1.00	2.68	0.36			0.66	1.20
Incremental Delay, d2				14.9		7.0	4.4	0.6			0.1	2.9
Delay (s)				78.0		69.0	20.4	2.3			9.2	28.1
Level of Service				E		E	C	A			A	C
Approach Delay (s)		0.0			73.3			6.8			19.5	
Approach LOS		A			E			A			B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

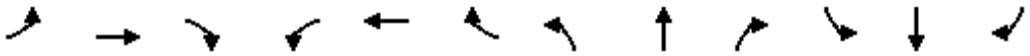
c Critical Lane Group



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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.97	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1633	1541	1490					4847		1719	3438	
Flt Permitted	0.95	0.96	1.00					1.00		0.06	1.00	
Satd. Flow (perm)	1633	1541	1490					4847		107	3438	
Volume (vph)	696	0	525	0	0	0	0	1452	244	187	732	0
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	710	0	536	0	0	0	0	1497	252	193	755	0
RTOR Reduction (vph)	0	6	148	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	387	399	306	0	0	0	0	1735	0	193	755	0
Heavy Vehicles (%)	5%	2%	3%	2%	2%	2%	2%	5%	3%	5%	5%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	43.1	43.1	43.1					69.7		96.0	95.7	
Effective Green, g (s)	44.7	44.7	44.7					71.3		97.3	97.3	
Actuated g/C Ratio	0.30	0.30	0.30					0.48		0.65	0.65	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	487	459	444					2304		306	2230	
v/s Ratio Prot								c0.36		c0.09	0.22	
v/s Ratio Perm	0.24	0.26	0.21							0.32		
v/c Ratio	0.79	0.87	0.69					0.75		0.63	0.34	
Uniform Delay, d1	48.4	49.9	46.5					32.2		42.6	11.9	
Progression Factor	1.00	1.00	1.00					0.58		0.78	0.66	
Incremental Delay, d2	8.7	15.9	4.4					1.6		4.0	0.4	
Delay (s)	57.1	65.7	50.9					20.1		37.4	8.2	
Level of Service	E	E	D					C		D	A	
Approach Delay (s)		57.7			0.0			20.1			14.1	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

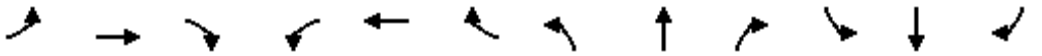
c Critical Lane Group



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	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1863	1583	1770	3482		3433	3393	
Flt Permitted	0.53	1.00		0.61	1.00	1.00	0.18	1.00		0.95	1.00	
Satd. Flow (perm)	983	1797		1138	1863	1583	334	3482		3433	3393	
Volume (vph)	174	71	22	165	139	470	22	1052	52	320	724	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	183	75	23	185	156	528	23	1107	55	340	770	227
RTOR Reduction (vph)	0	9	0	0	0	239	0	2	0	0	15	0
Lane Group Flow (vph)	183	89	0	185	156	289	23	1160	0	340	982	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	34.0	29.0		36.0	30.0	30.0	69.7	69.7		20.7	86.9	
Effective Green, g (s)	39.2	31.2		41.2	32.2	32.2	71.7	71.7		22.1	88.9	
Actuated g/C Ratio	0.26	0.21		0.27	0.21	0.21	0.48	0.48		0.15	0.59	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	299	374		350	400	340	207	1664		506	2011	
v/s Ratio Prot	c0.03	0.05		0.03	0.08		0.00	c0.33		c0.10	0.29	
v/s Ratio Perm	0.13			0.11		c0.18	0.05					
v/c Ratio	0.61	0.24		0.53	0.39	0.85	0.11	0.70		0.67	0.49	
Uniform Delay, d1	48.1	49.5		45.2	50.5	56.6	22.9	30.6		60.5	17.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.92	0.79	
Incremental Delay, d2	3.7	0.3		1.4	0.6	18.1	0.2	2.4		3.1	0.7	
Delay (s)	51.8	49.8		46.7	51.1	74.7	23.1	33.1		58.5	14.6	
Level of Service	D	D		D	D	E	C	C		E	B	
Approach Delay (s)		51.1			64.5			32.9			25.8	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1538	1770	3505	1583	1736	3391		1770	3539	1583
Flt Permitted	0.30	1.00	1.00	0.08	1.00	1.00	0.16	1.00		0.09	1.00	1.00
Satd. Flow (perm)	560	3505	1538	148	3505	1583	286	3391		172	3539	1583
Volume (vph)	296	999	306	256	529	223	196	647	231	208	712	146
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.98	0.98	0.98
Adj. Flow (vph)	312	1052	322	269	557	235	209	688	246	212	727	149
RTOR Reduction (vph)	0	0	152	0	0	156	0	24	0	0	0	100
Lane Group Flow (vph)	312	1052	170	269	557	79	209	910	0	212	727	49
Heavy Vehicles (%)	2%	3%	5%	2%	3%	2%	4%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	70.2	49.2	49.2	67.6	47.9	47.9	58.3	42.4		56.1	41.3	41.3
Effective Green, g (s)	74.3	51.8	51.8	71.7	50.5	50.5	62.1	44.4		59.9	43.3	43.3
Actuated g/C Ratio	0.50	0.35	0.35	0.48	0.34	0.34	0.41	0.30		0.40	0.29	0.29
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	459	1210	531	300	1180	533	290	1004		246	1022	457
v/s Ratio Prot	0.10	0.30		c0.13	0.16		0.09	c0.27		c0.10	0.21	
v/s Ratio Perm	0.23		0.11	c0.30		0.05	0.21			0.25		0.03
v/c Ratio	0.68	0.87	0.32	0.90	0.47	0.15	0.72	0.91		0.86	0.71	0.11
Uniform Delay, d1	24.7	45.9	36.1	45.8	39.2	34.7	32.5	50.8		41.6	47.8	39.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.01	0.62		1.00	1.00	1.00
Incremental Delay, d2	4.0	8.6	1.6	27.1	1.4	0.6	6.6	10.6		25.2	4.2	0.5
Delay (s)	28.7	54.6	37.7	72.9	40.6	35.3	39.5	42.3		66.8	52.0	39.6
Level of Service	C	D	D	E	D	D	D	D		E	D	D
Approach Delay (s)		46.6			47.6			41.8			53.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
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)	1465	62	67	856	56	143
Peak Hour Factor	0.93	0.93	0.95	0.95	0.82	0.82
Hourly flow rate (vph)	1575	67	71	901	68	174
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			1642		2167	788
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1642		2167	788
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			81		0	46
cM capacity (veh/h)			377		31	326

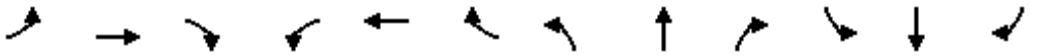
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	788	788	67	371	601	243
Volume Left	0	0	0	71	0	68
Volume Right	0	0	67	0	0	174
cSH	1700	1700	1700	377	1700	90
Volume to Capacity	0.46	0.46	0.04	0.19	0.35	2.71
Queue Length 95th (ft)	0	0	0	17	0	577
Control Delay (s)	0.0	0.0	0.0	6.3	0.0	874.6
Lane LOS				A		F
Approach Delay (s)	0.0			2.4		874.6
Approach LOS						F

Intersection Summary			
Average Delay	75.1		
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1678	1553		1750	
Flt Permitted	0.30	1.00	1.00	0.06	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (perm)	554	3505	1568	119	3505	1583	1665	1678	1553		1750	
Volume (vph)	41	1393	333	129	740	37	351	18	117	96	37	48
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85
Adj. Flow (vph)	44	1482	354	134	771	39	373	19	124	113	44	56
RTOR Reduction (vph)	0	0	149	0	0	19	0	0	104	0	11	0
Lane Group Flow (vph)	44	1482	205	134	771	20	190	202	20	0	202	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	4%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	61.4	57.4	57.4	69.6	62.0	62.0	19.7	19.7	19.7		16.3	
Effective Green, g (s)	65.4	59.4	59.4	70.6	62.0	62.0	19.7	19.7	19.7		16.3	
Actuated g/C Ratio	0.55	0.50	0.50	0.59	0.52	0.52	0.16	0.16	0.16		0.14	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	363	1735	776	187	1811	818	273	275	255		238	
v/s Ratio Prot	0.01	c0.42		c0.05	0.22		0.11	c0.12			c0.12	
v/s Ratio Perm	0.06		0.13	0.37		0.01			0.01			
v/c Ratio	0.12	0.85	0.26	0.72	0.43	0.02	0.70	0.73	0.08		0.85	
Uniform Delay, d1	13.2	26.5	17.6	26.2	18.0	14.2	47.3	47.7	42.5		50.6	
Progression Factor	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	5.6	0.8	10.4	0.3	0.0	13.7	16.0	0.6		22.6	
Delay (s)	13.3	32.1	18.4	36.6	18.3	14.2	61.0	63.6	43.1		73.2	
Level of Service	B	C	B	D	B	B	E	E	D		E	
Approach Delay (s)		29.1			20.7			57.7			73.2	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

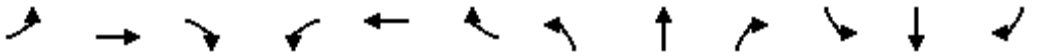
c Critical Lane Group



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			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3438			1723			1788	1583
Flt Permitted	0.08	1.00	1.00	0.13	1.00			0.98			0.96	1.00
Satd. Flow (perm)	141	3505	1583	238	3438			1723			1788	1583
Volume (vph)	461	1483	60	39	917	144	52	26	57	110	21	281
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.87	0.87	0.87	0.94	0.94	0.94
Adj. Flow (vph)	466	1498	61	41	955	150	60	30	66	117	22	299
RTOR Reduction (vph)	0	0	22	0	9	0	0	20	0	0	0	259
Lane Group Flow (vph)	466	1498	39	41	1096	0	0	136	0	0	139	40
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	83.0	73.5	73.5	49.2	45.2			16.0			16.0	16.0
Effective Green, g (s)	86.5	77.0	77.0	54.2	48.7			18.5			18.0	18.0
Actuated g/C Ratio	0.64	0.57	0.57	0.40	0.36			0.14			0.13	0.13
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	498	1999	903	158	1240			236			238	211
v/s Ratio Prot	c0.23	0.43		0.01	0.32			c0.08			c0.08	
v/s Ratio Perm	c0.36		0.02	0.09								0.03
v/c Ratio	0.94	0.75	0.04	0.26	0.88			0.58			0.58	0.19
Uniform Delay, d1	41.1	21.8	12.8	25.5	40.5			54.6			55.0	52.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	24.8	2.6	0.1	0.3	9.4			9.9			10.1	2.0
Delay (s)	65.9	24.4	12.9	25.8	49.9			64.5			65.1	54.0
Level of Service	E	C	B	C	D			E			E	D
Approach Delay (s)		33.6			49.0			64.5			57.5	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

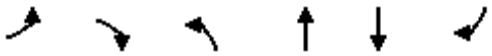
c Critical Lane Group



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	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	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3505	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3505	1583	1770	3505	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	398	1193	50	276	776	244	143	522	323	478	452	188
Peak-hour factor, PHF	0.96	0.96	0.96	0.99	0.99	0.99	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	415	1243	52	279	784	246	152	555	344	503	476	198
RTOR Reduction (vph)	0	0	24	0	0	173	0	0	266	0	0	155
Lane Group Flow (vph)	415	1243	28	279	784	73	152	555	78	503	476	43
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	31.6	46.6	46.6	20.4	34.9	34.9	10.9	19.5	19.5	17.0	25.6	25.6
Effective Green, g (s)	33.6	50.1	50.1	21.9	38.4	38.4	13.9	22.0	22.0	20.0	28.1	28.1
Actuated g/C Ratio	0.26	0.39	0.39	0.17	0.30	0.30	0.11	0.17	0.17	0.15	0.22	0.22
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	457	1351	610	298	1035	468	189	599	268	528	765	342
v/s Ratio Prot	c0.23	c0.35		0.16	0.22		0.09	c0.16		c0.15	0.13	
v/s Ratio Perm			0.02			0.05			0.05			0.03
v/c Ratio	0.91	0.92	0.05	0.94	0.76	0.16	0.80	0.93	0.29	0.95	0.62	0.13
Uniform Delay, d1	46.7	38.0	25.0	53.4	41.6	33.8	56.7	53.2	47.2	54.5	46.1	41.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1	11.6	0.1	34.9	5.2	0.7	20.3	22.5	2.7	27.3	3.8	0.8
Delay (s)	67.8	49.6	25.1	88.3	46.8	34.5	77.1	75.7	49.9	81.9	49.9	41.8
Level of Service	E	D	C	F	D	C	E	E	D	F	D	D
Approach Delay (s)		53.3			53.3			67.5			62.2	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	58.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

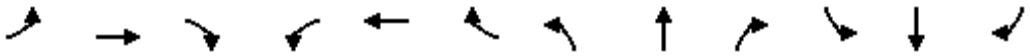
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	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	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1468	1719	3539	3295	
Flt Permitted	0.95	1.00	0.07	1.00	1.00	
Satd. Flow (perm)	1752	1468	123	3539	3295	
Volume (vph)	388	380	1049	936	1037	795
Peak-hour factor, PHF	0.95	0.95	0.93	0.93	0.96	0.96
Adj. Flow (vph)	408	400	1128	1006	1080	828
RTOR Reduction (vph)	0	9	0	0	92	0
Lane Group Flow (vph)	408	391	1128	1006	1816	0
Heavy Vehicles (%)	3%	10%	5%	2%	2%	3%
Turn Type		pm+ov	pm+pt			
Protected Phases	4	5	5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	25.6	80.2	113.1	113.1	53.1	
Effective Green, g (s)	27.0	83.0	115.0	115.0	55.0	
Actuated g/C Ratio	0.18	0.55	0.77	0.77	0.37	
Clearance Time (s)	5.4	5.4	5.4	5.9	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	315	851	690	2713	1208	
v/s Ratio Prot	c0.23	0.17	c0.61	0.28	0.55	
v/s Ratio Perm		0.09	c0.64			
v/c Ratio	1.30	0.46	1.63	0.37	1.50	
Uniform Delay, d1	61.5	20.1	49.2	5.7	47.5	
Progression Factor	1.00	1.00	0.47	0.60	0.88	
Incremental Delay, d2	154.4	0.4	286.3	0.0	230.5	
Delay (s)	215.9	20.5	309.2	3.5	272.3	
Level of Service	F	C	F	A	F	
Approach Delay (s)	119.2			165.0	272.3	
Approach LOS	F			F	F	

Intersection Summary			
HCM Average Control Delay	199.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	143.8%	ICU Level of Service	H
Analysis Period (min)	15		

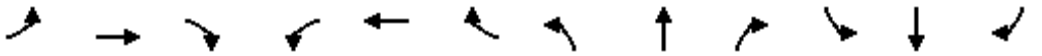
c Critical Lane Group



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	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	0.90		1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1799	1538	1752	1683		1752	3438	1583	1770	3357	
Flt Permitted		0.98	1.00	0.95	1.00		0.10	1.00	1.00	0.10	1.00	
Satd. Flow (perm)		1799	1538	1752	1683		176	3438	1583	182	3357	
Volume (vph)	181	179	133	622	292	525	361	1219	138	338	1018	134
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	199	197	146	669	314	565	376	1270	144	348	1049	138
RTOR Reduction (vph)	0	0	31	0	43	0	0	0	57	0	7	0
Lane Group Flow (vph)	0	396	115	669	836	0	376	1270	87	348	1180	0
Heavy Vehicles (%)	3%	3%	5%	3%	2%	2%	3%	5%	2%	2%	6%	3%
Turn Type	Split		pm+ov	Split			pm+pt		Perm	pm+pt		
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4				2		2	6		
Actuated Green, G (s)		23.7	40.7	48.6	48.6		57.1	40.1	40.1	53.4	39.1	
Effective Green, g (s)		26.0	43.0	50.0	50.0		59.0	42.0	42.0	57.0	41.0	
Actuated g/C Ratio		0.17	0.29	0.33	0.33		0.39	0.28	0.28	0.38	0.27	
Clearance Time (s)		6.3	4.0	5.4	5.4		4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)		312	441	584	561		248	963	443	239	918	
v/s Ratio Prot		c0.22	0.03	0.38	c0.50		c0.17	0.37		0.16	0.35	
v/s Ratio Perm			0.05				c0.43		0.06	0.40		
v/c Ratio		1.27	0.26	1.15	1.49		1.52	1.32	0.20	1.46	1.29	
Uniform Delay, d1		62.0	41.2	50.0	50.0		68.7	54.0	41.1	69.2	54.5	
Progression Factor		1.00	1.00	1.00	1.00		1.12	0.70	0.44	0.88	1.18	
Incremental Delay, d2		144.0	0.3	84.3	229.7		246.5	148.8	0.7	207.4	129.4	
Delay (s)		206.0	41.6	134.3	279.7		323.7	186.3	18.9	268.2	193.6	
Level of Service		F	D	F	F		F	F	B	F	F	
Approach Delay (s)		161.7			216.9			201.7			210.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	204.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	132.8%	ICU Level of Service	H
Analysis Period (min)	15		

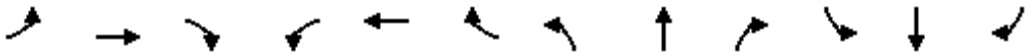
c Critical Lane Group



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
Lane Util. Factor				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1538	1752	3505			4988	1538
Flt Permitted				0.95		1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)				1770		1538	131	3505			4988	1538
Volume (vph)	0	0	0	390	0	223	574	1696	0	0	1542	452
Peak-hour factor, PHF	0.92	0.92	0.92	0.96	0.92	0.96	0.97	0.97	0.92	0.92	0.98	0.98
Adj. Flow (vph)	0	0	0	406	0	232	592	1748	0	0	1573	461
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	0	0	0	208
Lane Group Flow (vph)	0	0	0	406	0	203	592	1748	0	0	1573	253
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	3%	3%	2%	2%	4%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				34.6		34.6	103.8	103.8			50.4	50.4
Effective Green, g (s)				36.3		36.3	105.7	105.7			52.3	52.3
Actuated g/C Ratio				0.24		0.24	0.70	0.70			0.35	0.35
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				428		372	626	2470			1739	536
v/s Ratio Prot							c0.31	0.50			0.32	
v/s Ratio Perm				c0.23		0.13	c0.35					0.16
v/c Ratio				0.95		0.55	0.95	0.71			0.90	0.47
Uniform Delay, d1				55.9		49.7	42.8	13.0			46.5	38.1
Progression Factor				1.00		1.00	1.00	0.39			0.56	0.47
Incremental Delay, d2				30.3		1.6	3.7	0.2			0.9	0.3
Delay (s)				86.3		51.3	46.4	5.3			26.9	18.3
Level of Service				F		D	D	A			C	B
Approach Delay (s)		0.0			73.6			15.7			24.9	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

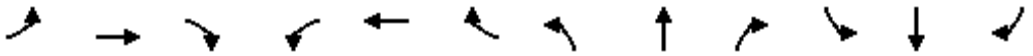
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.95	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1649	1529	1490					4846		1719	3505	
Flt Permitted	0.95	0.97	1.00					1.00		0.06	1.00	
Satd. Flow (perm)	1649	1529	1490					4846		117	3505	
Volume (vph)	839	0	670	0	0	0	0	1459	452	428	1563	0
Peak-hour factor, PHF	0.99	0.92	0.99	0.92	0.92	0.92	0.92	0.98	0.98	0.97	0.97	0.92
Adj. Flow (vph)	847	0	677	0	0	0	0	1489	461	441	1611	0
RTOR Reduction (vph)	0	14	23	0	0	0	0	37	0	0	0	0
Lane Group Flow (vph)	504	523	460	0	0	0	0	1913	0	441	1611	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	3%	4%	5%	3%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	46.4	46.4	46.4					56.4		92.7	92.4	
Effective Green, g (s)	48.0	48.0	48.0					58.0		94.0	94.0	
Actuated g/C Ratio	0.32	0.32	0.32					0.39		0.63	0.63	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	528	489	477					1874		415	2196	
v/s Ratio Prot								0.39		c0.23	0.46	
v/s Ratio Perm	0.31	0.34	0.31							c0.44		
v/c Ratio	0.95	1.07	0.96					1.02		1.06	0.73	
Uniform Delay, d1	49.9	51.0	50.2					46.0		55.0	19.3	
Progression Factor	1.00	1.00	1.00					1.37		0.58	0.72	
Incremental Delay, d2	27.9	60.8	31.9					16.9		47.6	1.0	
Delay (s)	77.8	111.8	82.0					79.7		79.5	15.0	
Level of Service	E	F	F					E		E	B	
Approach Delay (s)		91.1			0.0			79.7			28.9	
Approach LOS		F			A			E			C	

Intersection Summary			
HCM Average Control Delay	64.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	1.00	0.95		0.97	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1837		1770	1863	1568	1770	3407		3433	3452	
Flt Permitted	0.56	1.00		0.20	1.00	1.00	0.08	1.00		0.95	1.00	
Satd. Flow (perm)	1035	1837		373	1863	1568	146	3407		3433	3452	
Volume (vph)	450	295	30	276	65	362	56	1100	179	690	1478	64
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.99	0.99	0.99	0.97	0.97	0.97
Adj. Flow (vph)	484	317	32	288	68	377	57	1111	181	711	1524	66
RTOR Reduction (vph)	0	2	0	0	0	266	0	9	0	0	2	0
Lane Group Flow (vph)	484	347	0	288	68	111	57	1283	0	711	1588	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	4%	2%	2%	4%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	48.8	25.8		33.8	17.8	17.8	57.2	54.0		29.6	80.4	
Effective Green, g (s)	51.0	28.0		39.0	20.0	20.0	60.6	56.0		31.0	82.4	
Actuated g/C Ratio	0.34	0.19		0.26	0.13	0.13	0.40	0.37		0.21	0.55	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	481	343		274	248	209	109	1272		709	1896	
v/s Ratio Prot	c0.18	c0.19		0.13	0.04		0.02	c0.38		c0.21	0.46	
v/s Ratio Perm	0.16			0.14		0.07	0.20					
v/c Ratio	1.01	1.01		1.05	0.27	0.53	0.52	1.01		1.00	0.84	
Uniform Delay, d1	47.2	61.0		50.6	58.5	60.6	30.8	47.0		59.5	28.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.99	0.88	
Incremental Delay, d2	42.6	51.2		68.4	0.6	2.6	4.5	27.4		26.1	2.7	
Delay (s)	89.7	112.2		119.0	59.1	63.2	35.3	74.4		85.2	27.5	
Level of Service	F	F		F	E	E	D	E		F	C	
Approach Delay (s)		99.2			84.8			72.8			45.4	
Approach LOS		F			F			E			D	

Intersection Summary			
HCM Average Control Delay	66.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.8%	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	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1538	1770	3505	1583	1719	3422		1770	3539	1583
Flt Permitted	0.18	1.00	1.00	0.27	1.00	1.00	0.19	1.00		0.14	1.00	1.00
Satd. Flow (perm)	340	3505	1538	511	3505	1583	346	3422		260	3539	1583
Volume (vph)	115	427	122	402	985	233	200	574	150	202	648	242
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	459	131	410	1005	238	211	604	158	213	682	255
RTOR Reduction (vph)	0	0	100	0	0	149	0	22	0	0	0	160
Lane Group Flow (vph)	124	459	31	410	1005	89	211	740	0	213	682	95
Heavy Vehicles (%)	2%	3%	5%	2%	3%	2%	5%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	28.3	21.9	21.9	48.4	36.5	36.5	37.6	26.1		38.8	26.7	26.7
Effective Green, g (s)	32.4	24.5	24.5	51.0	39.1	39.1	41.4	28.1		42.6	28.7	28.7
Actuated g/C Ratio	0.31	0.23	0.23	0.49	0.37	0.37	0.39	0.27		0.41	0.27	0.27
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	213	818	359	518	1305	589	310	916		305	967	433
v/s Ratio Prot	0.04	0.13		c0.17	0.29		0.09	c0.22		c0.09	0.19	
v/s Ratio Perm	0.14		0.02	c0.21		0.06	0.18			0.19		0.06
v/c Ratio	0.58	0.56	0.09	0.79	0.77	0.15	0.68	0.81		0.70	0.71	0.22
Uniform Delay, d1	27.5	35.5	31.5	19.4	29.0	21.9	23.4	35.9		23.4	34.3	29.5
Progression Factor	1.12	0.84	1.14	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.0	2.7	0.5	8.1	4.4	0.5	6.0	7.6		6.8	4.3	1.2
Delay (s)	34.7	32.5	36.4	27.5	33.4	22.4	29.4	43.5		30.2	38.7	30.7
Level of Service	C	C	D	C	C	C	C	D		C	D	C
Approach Delay (s)		33.6			30.4			40.5			35.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1553		3468	1736	1538
Flt Permitted	1.00	1.00		0.72	0.95	1.00
Satd. Flow (perm)	3505	1553		2527	1736	1538
Volume (vph)	566	76	218	1194	35	47
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.82	0.82
Adj. Flow (vph)	615	83	225	1231	43	57
RTOR Reduction (vph)	0	15	0	0	0	51
Lane Group Flow (vph)	615	68	0	1456	43	6
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	85.5	85.5		85.5	11.5	11.5
Effective Green, g (s)	85.5	85.5		85.5	11.5	11.5
Actuated g/C Ratio	0.81	0.81		0.81	0.11	0.11
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2854	1265		2058	190	168
v/s Ratio Prot	0.18				c0.02	
v/s Ratio Perm		0.04		c0.58		0.00
v/c Ratio	0.22	0.05		0.71	0.23	0.04
Uniform Delay, d1	2.2	1.9		4.3	42.7	41.8
Progression Factor	0.12	0.00		1.52	1.00	1.00
Incremental Delay, d2	0.0	0.0		0.8	2.7	0.4
Delay (s)	0.3	0.0		7.3	45.4	42.2
Level of Service	A	A		A	D	D
Approach Delay (s)	0.3			7.3	43.6	
Approach LOS	A			A	D	

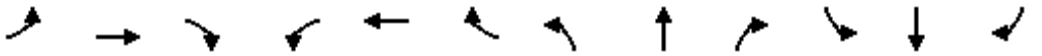
Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

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	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1672	1568		1754	
Flt Permitted	0.17	1.00	1.00	0.27	1.00	1.00	0.95	0.95	1.00		0.98	
Satd. Flow (perm)	310	3505	1568	500	3505	1583	1665	1672	1568		1754	
Volume (vph)	17	606	294	223	1057	22	274	4	97	16	10	10
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.88	0.88	0.88	0.82	0.82	0.82
Adj. Flow (vph)	18	631	306	228	1079	22	311	5	110	20	12	12
RTOR Reduction (vph)	0	0	191	0	0	12	0	0	76	0	11	0
Lane Group Flow (vph)	18	631	115	228	1079	10	156	160	34	0	33	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	39.4	37.3	37.3	55.4	47.3	47.3	32.6	32.6	32.6		5.0	
Effective Green, g (s)	43.4	39.3	39.3	55.4	47.3	47.3	32.6	32.6	32.6		5.0	
Actuated g/C Ratio	0.41	0.37	0.37	0.53	0.45	0.45	0.31	0.31	0.31		0.05	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	185	1312	587	408	1579	713	517	519	487		84	
v/s Ratio Prot	0.00	0.18		c0.06	c0.31		0.09	c0.10			c0.02	
v/s Ratio Perm	0.04		0.07	0.23		0.01			0.02			
v/c Ratio	0.10	0.48	0.20	0.56	0.68	0.01	0.30	0.31	0.07		0.39	
Uniform Delay, d1	19.3	25.1	22.2	15.0	22.9	16.0	27.5	27.6	25.5		48.5	
Progression Factor	0.49	0.38	0.12	0.45	0.48	0.39	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.1	0.7	0.7	1.2	0.0	1.5	1.5	0.3		1.1	
Delay (s)	9.5	10.6	3.2	7.4	12.1	6.2	29.0	29.1	25.8		49.6	
Level of Service	A	B	A	A	B	A	C	C	C		D	
Approach Delay (s)		8.2			11.2			28.2			49.6	
Approach LOS		A			B			C			D	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

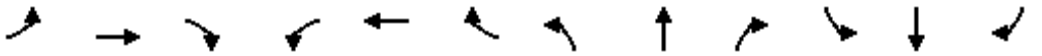
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3482			1733			1786	1583
Flt Permitted	0.08	1.00	1.00	0.28	1.00			0.98			0.96	1.00
Satd. Flow (perm)	157	3505	1583	513	3482			1733			1786	1583
Volume (vph)	219	788	13	11	1336	66	53	16	36	117	19	494
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.94	0.94	0.94	0.91	0.91	0.91
Adj. Flow (vph)	235	847	14	11	1363	67	56	17	38	129	21	543
RTOR Reduction (vph)	0	0	7	0	4	0	0	18	0	0	0	239
Lane Group Flow (vph)	235	847	7	11	1426	0	0	93	0	0	150	304
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	52.5	46.5	46.5	41.0	40.0			16.0			16.0	16.0
Effective Green, g (s)	56.5	50.0	50.0	46.0	43.5			18.5			18.0	18.0
Actuated g/C Ratio	0.54	0.48	0.48	0.44	0.41			0.18			0.17	0.17
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	223	1669	754	255	1443			305			306	271
v/s Ratio Prot	c0.09	0.24		0.00	0.41			c0.05			0.08	
v/s Ratio Perm	c0.48		0.00	0.02								c0.19
v/c Ratio	1.05	0.51	0.01	0.04	0.99			0.30			0.49	1.12
Uniform Delay, d1	30.6	19.0	14.5	17.0	30.5			37.6			39.3	43.5
Progression Factor	0.95	0.54	0.49	1.15	0.85			1.00			1.00	1.00
Incremental Delay, d2	71.2	1.0	0.0	0.0	19.4			2.6			5.5	91.9
Delay (s)	100.2	11.3	7.2	19.5	45.2			40.2			44.9	135.4
Level of Service	F	B	A	B	D			D			D	F
Approach Delay (s)		30.3			45.0			40.2			115.8	
Approach LOS		C			D			D			F	

Intersection Summary			
HCM Average Control Delay	54.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

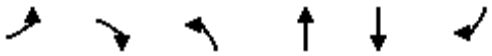
c Critical Lane Group



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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	276	567	36	311	1667	208	132	640	190	364	620	635
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	285	585	37	327	1755	219	136	660	196	391	667	683
RTOR Reduction (vph)	0	0	25	0	0	110	0	0	147	0	0	134
Lane Group Flow (vph)	285	585	12	327	1755	109	136	660	49	391	667	549
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	29.8	29.8	13.2	35.5	35.5	5.0	23.5	23.5	12.0	30.5	30.5
Effective Green, g (s)	9.0	33.3	33.3	14.7	39.0	39.0	8.0	26.0	26.0	15.0	33.0	33.0
Actuated g/C Ratio	0.09	0.32	0.32	0.14	0.37	0.37	0.08	0.25	0.25	0.14	0.31	0.31
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	294	1597	502	481	1871	588	135	876	392	490	1112	498
v/s Ratio Prot	c0.08	0.12		0.10	c0.35		c0.08	0.19		0.11	0.19	
v/s Ratio Perm			0.01			0.07			0.03			c0.35
v/c Ratio	0.97	0.37	0.02	0.68	0.94	0.19	1.01	0.75	0.12	0.80	0.60	1.10
Uniform Delay, d1	47.9	27.7	24.7	42.9	31.8	22.3	48.5	36.5	30.7	43.5	30.4	36.0
Progression Factor	1.00	1.00	1.00	1.30	0.57	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	43.4	0.7	0.1	1.5	6.0	0.4	79.4	6.0	0.6	8.2	2.4	71.5
Delay (s)	91.2	28.3	24.7	57.4	24.2	3.5	127.9	42.5	31.3	51.8	32.8	107.5
Level of Service	F	C	C	E	C	A	F	D	C	D	C	F
Approach Delay (s)		48.0			27.0			52.0			66.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

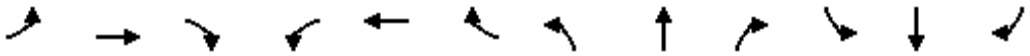
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	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	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1468	3242	3471	3471	1538
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1468	3242	3471	3471	1538
Volume (vph)	150	219	471	977	907	274
Peak-hour factor, PHF	0.91	0.91	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	241	486	1007	935	282
RTOR Reduction (vph)	0	28	0	0	0	149
Lane Group Flow (vph)	165	213	486	1007	935	133
Heavy Vehicles (%)	5%	10%	8%	4%	4%	5%
Turn Type		pm+ov	Prot			Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	13.4	32.9	19.5	65.3	40.4	40.4
Effective Green, g (s)	14.8	35.7	20.9	67.2	42.3	42.3
Actuated g/C Ratio	0.16	0.40	0.23	0.75	0.47	0.47
Clearance Time (s)	5.4	5.4	5.4	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	283	648	753	2592	1631	723
v/s Ratio Prot	c0.10	0.08	c0.15	0.29	c0.27	
v/s Ratio Perm		0.07				0.09
v/c Ratio	0.58	0.33	0.65	0.39	0.57	0.18
Uniform Delay, d1	34.7	18.8	31.2	4.1	17.3	13.8
Progression Factor	1.00	1.00	0.46	1.01	1.00	1.00
Incremental Delay, d2	3.0	0.3	1.5	0.4	1.5	0.6
Delay (s)	37.8	19.1	15.8	4.5	18.8	14.4
Level of Service	D	B	B	A	B	B
Approach Delay (s)	26.7			8.2	17.8	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

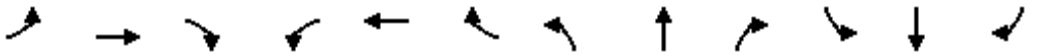
c Critical Lane Group



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	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
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)	1736	1863	1538	3400	1863	1583	3367	5036	1568	1770	5009	
Flt Permitted	0.44	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	799	1863	1538	3400	1863	1583	3367	5036	1568	240	5009	
Volume (vph)	64	109	86	361	305	311	287	1135	144	195	960	36
Peak-hour factor, PHF	0.94	0.94	0.94	0.97	0.97	0.97	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	68	116	91	372	314	321	315	1247	158	205	1011	38
RTOR Reduction (vph)	0	0	27	0	0	198	0	0	103	0	4	0
Lane Group Flow (vph)	68	116	64	372	314	123	315	1247	55	205	1045	0
Heavy Vehicles (%)	4%	2%	5%	3%	2%	2%	4%	3%	3%	2%	3%	3%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	19.6	12.7	24.5	14.7	20.5	30.2	11.8	29.6	29.6	38.9	29.2	
Effective Green, g (s)	24.2	15.0	26.8	16.1	21.9	33.3	11.8	31.5	31.5	42.5	31.1	
Actuated g/C Ratio	0.27	0.17	0.30	0.18	0.24	0.37	0.13	0.35	0.35	0.47	0.35	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.7	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	311	311	526	608	453	656	441	1763	549	307	1731	
v/s Ratio Prot	0.02	0.06	0.02	c0.11	c0.17	0.02	c0.09	c0.25		0.08	0.21	
v/s Ratio Perm	0.04		0.03			0.05			0.04	0.23		
v/c Ratio	0.22	0.37	0.12	0.61	0.69	0.19	0.71	0.71	0.10	0.67	0.60	
Uniform Delay, d1	25.1	33.3	23.0	34.1	31.0	19.2	37.5	25.3	19.7	16.5	24.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	1.40	0.82	1.06	
Incremental Delay, d2	0.4	0.8	0.1	1.8	4.6	0.1	4.2	1.9	0.3	4.8	1.4	
Delay (s)	25.5	34.1	23.1	35.9	35.5	19.3	40.3	26.1	27.8	18.4	27.2	
Level of Service	C	C	C	D	D	B	D	C	C	B	C	
Approach Delay (s)		28.3			30.5			28.8			25.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

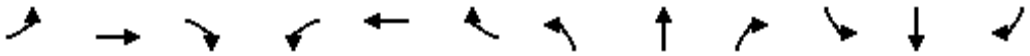
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1752		1553	1752	3438			4940	1538
Flt Permitted				0.95		1.00	0.30	1.00			1.00	1.00
Satd. Flow (perm)				1752		1553	547	3438			4940	1538
Volume (vph)	0	0	0	156	0	169	538	1603	0	0	726	861
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.92	0.89	0.97	0.97	0.92	0.92	0.98	0.98
Adj. Flow (vph)	0	0	0	175	0	190	555	1653	0	0	741	879
RTOR Reduction (vph)	0	0	0	0	0	41	0	0	0	0	0	298
Lane Group Flow (vph)	0	0	0	175	0	149	555	1653	0	0	741	581
Heavy Vehicles (%)	2%	2%	2%	3%	2%	4%	3%	5%	2%	2%	5%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				13.3		13.3	65.1	65.1			41.8	41.8
Effective Green, g (s)				15.0		15.0	67.0	67.0			43.7	43.7
Actuated g/C Ratio				0.17		0.17	0.74	0.74			0.49	0.49
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				292		259	666	2559			2399	747
v/s Ratio Prot							c0.18	0.48			0.15	
v/s Ratio Perm				c0.10		0.10	c0.44					0.38
v/c Ratio				0.60		0.58	0.83	0.65			0.31	0.78
Uniform Delay, d1				34.7		34.6	6.9	5.7			14.0	19.1
Progression Factor				1.00		1.00	1.81	0.63			0.33	1.22
Incremental Delay, d2				3.3		3.1	6.0	0.7			0.3	6.9
Delay (s)				38.0		37.7	18.4	4.3			4.8	30.2
Level of Service				D		D	B	A			A	C
Approach Delay (s)		0.0			37.8			7.8			18.6	
Approach LOS		A			D			A			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

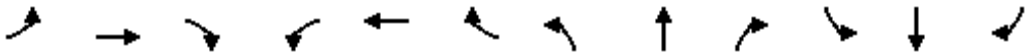
c Critical Lane Group



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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.97	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1649	1552	1490					4893		1752	3471	
Flt Permitted	0.95	0.96	1.00					1.00		0.09	1.00	
Satd. Flow (perm)	1649	1552	1490					4893		166	3471	
Volume (vph)	696	0	525	0	0	0	0	1452	244	187	732	0
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.97	0.92
Adj. Flow (vph)	710	0	536	0	0	0	0	1497	252	193	755	0
RTOR Reduction (vph)	0	11	137	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	388	396	314	0	0	0	0	1724	0	193	755	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	4%	2%	3%	4%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	26.0	26.0	26.0					38.8		53.1	52.8	
Effective Green, g (s)	27.6	27.6	27.6					40.4		54.4	54.4	
Actuated g/C Ratio	0.31	0.31	0.31					0.45		0.60	0.60	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	506	476	457					2196		277	2098	
v/s Ratio Prot								c0.35		c0.08	0.22	
v/s Ratio Perm	0.24	0.26	0.21							0.34		
v/c Ratio	0.77	0.83	0.69					0.79		0.70	0.36	
Uniform Delay, d1	28.3	29.0	27.4					21.1		27.5	9.0	
Progression Factor	1.00	1.00	1.00					0.57		0.69	0.25	
Incremental Delay, d2	6.9	11.8	4.3					1.3		7.1	0.5	
Delay (s)	35.1	40.8	31.7					13.4		26.1	2.7	
Level of Service	D	D	C					B		C	A	
Approach Delay (s)		35.7			0.0			13.4			7.5	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.9%	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	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1797		1770	1863	1583	1770	3482		3433	3393	
Flt Permitted	0.66	1.00		0.58	1.00	1.00	0.19	1.00		0.95	1.00	
Satd. Flow (perm)	1226	1797		1080	1863	1583	363	3482		3433	3393	
Volume (vph)	174	71	22	165	139	470	22	1052	52	320	724	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.89	0.89	0.89	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	183	75	23	185	156	528	23	1107	55	340	770	227
RTOR Reduction (vph)	0	13	0	0	0	123	0	4	0	0	29	0
Lane Group Flow (vph)	183	85	0	185	156	405	23	1158	0	340	968	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	22.2	18.2		33.0	23.6	23.6	30.4	28.8		9.0	36.2	
Effective Green, g (s)	27.4	20.4		36.8	25.8	25.8	33.8	30.8		10.4	38.2	
Actuated g/C Ratio	0.30	0.23		0.41	0.29	0.29	0.38	0.34		0.12	0.42	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	416	407		537	534	454	183	1192		397	1440	
v/s Ratio Prot	c0.03	0.05		0.05	0.08		0.00	c0.33		c0.10	0.29	
v/s Ratio Perm	0.10			0.09		c0.26	0.04					
v/c Ratio	0.44	0.21		0.34	0.29	0.89	0.13	0.97		0.86	0.67	
Uniform Delay, d1	24.3	28.2		17.7	25.0	30.8	18.3	29.2		39.1	20.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.03	0.71	
Incremental Delay, d2	0.7	0.3		0.4	0.3	19.4	0.3	20.1		14.6	2.2	
Delay (s)	25.0	28.5		18.1	25.3	50.2	18.7	49.2		54.8	17.1	
Level of Service	C	C		B	C	D	B	D		D	B	
Approach Delay (s)		26.2			38.9			48.6			26.7	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1553	1770	3505	1583	1736	3391		1770	3539	1583
Flt Permitted	0.29	1.00	1.00	0.10	1.00	1.00	0.17	1.00		0.11	1.00	1.00
Satd. Flow (perm)	545	3505	1553	186	3505	1583	306	3391		206	3539	1583
Volume (vph)	296	999	306	256	529	223	196	647	231	208	712	146
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.98	0.98	0.98
Adj. Flow (vph)	312	1052	322	269	557	235	209	688	246	212	727	149
RTOR Reduction (vph)	0	0	181	0	0	160	0	28	0	0	0	106
Lane Group Flow (vph)	312	1052	141	269	557	75	209	906	0	212	727	43
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	4%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	56.5	39.0	39.0	53.3	37.4	37.4	46.2	34.1		46.2	34.1	34.1
Effective Green, g (s)	60.6	41.6	41.6	57.4	40.0	40.0	50.0	36.1		50.0	36.1	36.1
Actuated g/C Ratio	0.48	0.33	0.33	0.46	0.32	0.32	0.40	0.29		0.40	0.29	0.29
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	450	1166	517	306	1122	507	281	979		256	1022	457
v/s Ratio Prot	c0.11	c0.30		c0.12	0.16		0.08	c0.27		c0.09	0.21	
v/s Ratio Perm	0.23		0.09	0.28		0.05	0.21			0.24		0.03
v/c Ratio	0.69	0.90	0.27	0.88	0.50	0.15	0.74	0.92		0.83	0.71	0.09
Uniform Delay, d1	21.4	39.8	30.6	35.0	34.4	30.3	27.9	43.1		30.5	39.8	32.5
Progression Factor	1.35	0.60	0.27	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	9.3	1.0	23.6	1.6	0.6	10.2	15.5		19.3	4.2	0.4
Delay (s)	32.7	33.2	9.2	58.6	35.9	31.0	38.1	58.7		49.8	44.0	32.9
Level of Service	C	C	A	E	D	C	D	E		D	D	C
Approach Delay (s)		28.5			40.6			54.9			43.6	
Approach LOS		C			D			D			D	

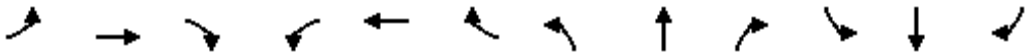
Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3505	1553		3487	1736	1538
Flt Permitted	1.00	1.00		0.64	0.95	1.00
Satd. Flow (perm)	3505	1553		2255	1736	1538
Volume (vph)	1465	62	67	856	56	143
Peak-hour factor, PHF	0.93	0.93	0.95	0.95	0.82	0.82
Adj. Flow (vph)	1575	67	71	901	68	174
RTOR Reduction (vph)	0	19	0	0	0	35
Lane Group Flow (vph)	1575	48	0	972	68	139
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	89.0	89.0		89.0	28.0	28.0
Effective Green, g (s)	89.0	89.0		89.0	28.0	28.0
Actuated g/C Ratio	0.71	0.71		0.71	0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2496	1106		1606	389	345
v/s Ratio Prot	c0.45				0.04	
v/s Ratio Perm		0.03		0.43		c0.09
v/c Ratio	0.63	0.04		0.61	0.17	0.40
Uniform Delay, d1	9.4	5.3		9.1	39.2	41.4
Progression Factor	0.17	0.05		1.57	1.00	1.00
Incremental Delay, d2	0.3	0.0		0.6	1.0	3.5
Delay (s)	1.9	0.3		14.8	40.1	44.9
Level of Service	A	A		B	D	D
Approach Delay (s)	1.8			14.8	43.5	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

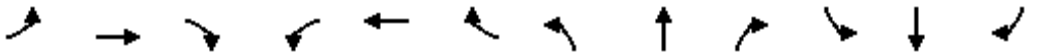
c Critical Lane Group



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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1678	1568		1750	
Flt Permitted	0.30	1.00	1.00	0.06	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (perm)	552	3505	1568	115	3505	1583	1665	1678	1568		1750	
Volume (vph)	41	1393	333	129	740	37	351	18	117	96	37	48
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.94	0.94	0.94	0.85	0.85	0.85
Adj. Flow (vph)	44	1482	354	134	771	39	373	19	124	113	44	56
RTOR Reduction (vph)	0	0	144	0	0	19	0	0	102	0	10	0
Lane Group Flow (vph)	44	1482	210	134	771	20	190	202	22	0	203	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	63.0	59.0	59.0	72.0	64.0	64.0	21.9	21.9	21.9		17.1	
Effective Green, g (s)	67.0	61.0	61.0	73.0	64.0	64.0	21.9	21.9	21.9		17.1	
Actuated g/C Ratio	0.54	0.49	0.49	0.58	0.51	0.51	0.18	0.18	0.18		0.14	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	354	1710	765	185	1795	810	292	294	275		239	
v/s Ratio Prot	0.01	c0.42		c0.05	0.22		0.11	c0.12			c0.12	
v/s Ratio Perm	0.06		0.13	0.37		0.01			0.01			
v/c Ratio	0.12	0.87	0.27	0.72	0.43	0.02	0.65	0.69	0.08		0.85	
Uniform Delay, d1	14.3	28.4	18.9	28.6	19.1	15.1	48.0	48.3	43.1		52.7	
Progression Factor	0.51	0.40	0.06	1.45	1.15	1.81	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	4.6	0.6	9.2	0.3	0.0	10.7	12.4	0.6		22.5	
Delay (s)	7.3	15.8	1.7	50.8	22.2	27.2	58.7	60.7	43.7		75.2	
Level of Service	A	B	A	D	C	C	E	E	D		E	
Approach Delay (s)		13.0			26.5			55.9			75.2	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.5%	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			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3438			1723			1788	1583
Flt Permitted	0.09	1.00	1.00	0.11	1.00			0.98			0.96	1.00
Satd. Flow (perm)	160	3505	1583	196	3438			1723			1788	1583
Volume (vph)	461	1483	60	39	917	144	52	26	57	110	21	281
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.87	0.87	0.87	0.94	0.94	0.94
Adj. Flow (vph)	466	1498	61	41	955	150	60	30	66	117	22	299
RTOR Reduction (vph)	0	0	24	0	10	0	0	21	0	0	0	256
Lane Group Flow (vph)	466	1498	37	41	1095	0	0	135	0	0	139	43
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	73.0	63.5	63.5	43.0	39.0			16.0			16.0	16.0
Effective Green, g (s)	76.5	67.0	67.0	48.0	42.5			18.5			18.0	18.0
Actuated g/C Ratio	0.61	0.54	0.54	0.38	0.34			0.15			0.14	0.14
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	484	1879	848	145	1169			255			257	228
v/s Ratio Prot	c0.23	0.43		0.01	0.32			c0.08			c0.08	
v/s Ratio Perm	c0.36		0.02	0.10								0.03
v/c Ratio	0.96	0.80	0.04	0.28	0.94			0.53			0.54	0.19
Uniform Delay, d1	38.4	23.5	13.8	25.6	39.9			49.2			49.7	47.1
Progression Factor	0.81	0.41	0.04	0.88	0.45			1.00			1.00	1.00
Incremental Delay, d2	24.6	2.5	0.1	0.3	13.4			7.6			7.9	1.8
Delay (s)	55.7	12.2	0.7	22.9	31.5			56.8			57.6	48.9
Level of Service	E	B	A	C	C			E			E	D
Approach Delay (s)		21.9			31.2			56.8			51.7	
Approach LOS		C			C			E			D	

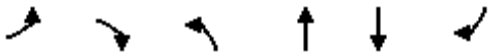
Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

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	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	398	1193	50	276	776	244	143	522	323	478	452	188
Peak-hour factor, PHF	0.96	0.96	0.96	0.99	0.99	0.99	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	415	1243	52	279	784	246	152	555	344	503	476	198
RTOR Reduction (vph)	0	0	34	0	0	177	0	0	215	0	0	141
Lane Group Flow (vph)	415	1243	18	279	784	69	152	555	129	503	476	57
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	20.0	39.1	39.1	12.9	31.5	31.5	13.3	26.0	26.0	20.5	33.2	33.2
Effective Green, g (s)	22.0	42.6	42.6	14.4	35.0	35.0	16.3	28.5	28.5	23.5	35.7	35.7
Actuated g/C Ratio	0.18	0.34	0.34	0.12	0.28	0.28	0.13	0.23	0.23	0.19	0.29	0.29
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	604	1716	539	395	1410	443	231	807	361	645	1011	452
v/s Ratio Prot	0.12	c0.25		c0.08	0.16		0.09	c0.16		c0.15	0.13	
v/s Ratio Perm			0.01			0.04			0.08			0.04
v/c Ratio	0.69	0.72	0.03	0.71	0.56	0.16	0.66	0.69	0.36	0.78	0.47	0.13
Uniform Delay, d1	48.3	36.1	27.5	53.3	38.4	33.9	51.7	44.2	40.6	48.3	36.9	33.1
Progression Factor	1.00	1.00	1.00	0.98	0.37	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	2.7	0.1	2.4	0.8	0.4	5.1	4.8	2.8	5.4	1.6	0.6
Delay (s)	50.9	38.8	27.6	54.8	15.0	3.9	56.8	48.9	43.3	53.7	38.4	33.6
Level of Service	D	D	C	D	B	A	E	D	D	D	D	C
Approach Delay (s)		41.4			21.4			48.2			44.2	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	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	1.00	0.97	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1752	1468	3335	3539	3539	1568
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1752	1468	3335	3539	3539	1568
Volume (vph)	388	380	1049	936	1037	795
Peak-hour factor, PHF	0.95	0.95	0.93	0.93	0.96	0.96
Adj. Flow (vph)	408	400	1128	1006	1080	828
RTOR Reduction (vph)	0	5	0	0	0	296
Lane Group Flow (vph)	408	395	1128	1006	1080	532
Heavy Vehicles (%)	3%	10%	5%	2%	2%	3%
Turn Type		pm+ov	Prot			Perm
Protected Phases	4	5	5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	19.6	49.2	29.6	64.1	29.1	29.1
Effective Green, g (s)	21.0	52.0	31.0	66.0	31.0	31.0
Actuated g/C Ratio	0.22	0.55	0.33	0.69	0.33	0.33
Clearance Time (s)	5.4	5.4	5.4	5.9	5.9	5.9
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	5.0
Lane Grp Cap (vph)	387	865	1088	2459	1155	512
v/s Ratio Prot	c0.23	0.15	c0.34	0.28	0.31	
v/s Ratio Perm		0.12				c0.34
v/c Ratio	1.05	0.46	1.04	0.41	0.94	1.04
Uniform Delay, d1	37.0	13.0	32.0	6.2	31.0	32.0
Progression Factor	1.00	1.00	0.64	0.75	1.00	1.00
Incremental Delay, d2	60.7	0.4	30.7	0.3	14.9	50.0
Delay (s)	97.7	13.4	51.1	4.9	45.9	82.0
Level of Service	F	B	D	A	D	F
Approach Delay (s)	56.0			29.3	61.6	
Approach LOS	E			C	E	

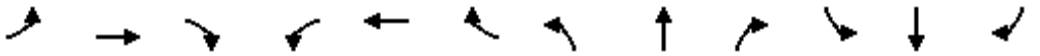
Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

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	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
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)	1752	1845	1538	3400	1863	1583	3400	4940	1583	1770	4824	
Flt Permitted	0.34	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	631	1845	1538	3400	1863	1583	3400	4940	1583	251	4824	
Volume (vph)	181	179	133	622	292	525	361	1219	138	338	1018	134
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	199	197	146	669	314	565	376	1270	144	348	1049	138
RTOR Reduction (vph)	0	0	7	0	0	91	0	0	105	0	17	0
Lane Group Flow (vph)	199	197	139	669	314	474	376	1270	39	348	1170	0
Heavy Vehicles (%)	3%	3%	5%	3%	2%	2%	3%	5%	2%	2%	6%	3%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	26.5	14.1	27.2	18.3	20.0	35.5	13.1	23.8	23.8	43.4	27.9	
Effective Green, g (s)	31.1	16.4	29.5	19.7	21.4	38.6	13.1	25.7	25.7	46.9	29.8	
Actuated g/C Ratio	0.33	0.17	0.31	0.21	0.23	0.41	0.14	0.27	0.27	0.49	0.31	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.7	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	380	319	542	705	420	710	469	1336	428	399	1513	
v/s Ratio Prot	0.08	0.11	0.04	c0.20	c0.17	0.12	0.11	0.26		c0.16	0.24	
v/s Ratio Perm	0.09		0.06			0.18			0.02	c0.27		
v/c Ratio	0.52	0.62	0.26	0.95	0.75	0.67	0.80	0.95	0.09	0.87	0.77	
Uniform Delay, d1	24.5	36.4	24.5	37.2	34.3	23.0	39.7	34.0	25.9	24.5	29.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.11	1.82	0.42	0.81	
Incremental Delay, d2	1.3	3.5	0.3	21.9	7.1	2.4	6.7	11.6	0.3	12.2	2.4	
Delay (s)	25.8	39.9	24.8	59.1	41.4	25.4	40.9	49.2	47.5	22.4	26.4	
Level of Service	C	D	C	E	D	C	D	D	D	C	C	
Approach Delay (s)		30.7			43.2			47.3			25.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

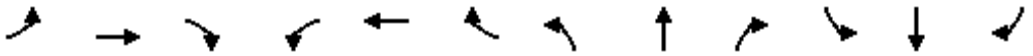
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1538	1752	3505			4988	1538
Flt Permitted				0.95		1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)				1770		1538	210	3505			4988	1538
Volume (vph)	0	0	0	390	0	223	574	1696	0	0	1542	452
Peak-hour factor, PHF	0.92	0.92	0.92	0.96	0.92	0.96	0.97	0.97	0.92	0.92	0.98	0.98
Adj. Flow (vph)	0	0	0	406	0	232	592	1748	0	0	1573	461
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	0	0	0	310
Lane Group Flow (vph)	0	0	0	406	0	207	592	1748	0	0	1573	151
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	3%	3%	2%	2%	4%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				21.1		21.1	62.3	62.3			29.3	29.3
Effective Green, g (s)				22.8		22.8	64.2	64.2			31.2	31.2
Actuated g/C Ratio				0.24		0.24	0.68	0.68			0.33	0.33
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				425		369	613	2369			1638	505
v/s Ratio Prot							c0.29	0.50			0.32	
v/s Ratio Perm				c0.23		0.13	c0.36					0.10
v/c Ratio				0.96		0.56	0.97	0.74			0.96	0.30
Uniform Delay, d1				35.6		31.7	26.2	10.0			31.3	23.8
Progression Factor				1.00		1.00	1.35	0.09			0.58	1.55
Incremental Delay, d2				32.1		1.9	5.3	0.2			11.0	1.0
Delay (s)				67.7		33.7	40.8	1.1			29.2	37.9
Level of Service				E		C	D	A			C	D
Approach Delay (s)		0.0			55.3			11.2			31.2	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

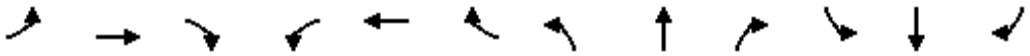
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.95	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1649	1528	1490					4846		1719	3505	
Flt Permitted	0.95	0.97	1.00					1.00		0.10	1.00	
Satd. Flow (perm)	1649	1528	1490					4846		186	3505	
Volume (vph)	839	0	670	0	0	0	0	1459	452	428	1563	0
Peak-hour factor, PHF	0.99	0.92	0.99	0.92	0.92	0.92	0.92	0.98	0.98	0.97	0.97	0.92
Adj. Flow (vph)	847	0	677	0	0	0	0	1489	461	441	1611	0
RTOR Reduction (vph)	0	20	20	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	503	522	459	0	0	0	0	1891	0	441	1611	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	3%	4%	5%	3%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	28.4	28.4	28.4					33.4		55.7	55.4	
Effective Green, g (s)	30.0	30.0	30.0					35.0		57.0	57.0	
Actuated g/C Ratio	0.32	0.32	0.32					0.37		0.60	0.60	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	521	483	471					1785		402	2103	
v/s Ratio Prot								0.39		c0.21	0.46	
v/s Ratio Perm	0.31	0.34	0.31							c0.45		
v/c Ratio	0.97	1.08	0.97					1.06		1.10	0.77	
Uniform Delay, d1	32.0	32.5	32.1					30.0		35.2	14.1	
Progression Factor	1.00	1.00	1.00					0.71		0.59	0.64	
Incremental Delay, d2	30.5	64.6	34.7					28.3		57.8	1.0	
Delay (s)	62.5	97.1	66.8					49.8		78.5	10.0	
Level of Service	E	F	E					D		E	A	
Approach Delay (s)		76.1			0.0			49.8			24.7	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM Average Control Delay	47.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

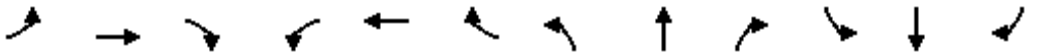


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		0.97	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1837		1770	1863	1568	1770	3407		3433	3452	
Flt Permitted	0.71	1.00		0.22	1.00	1.00	0.12	1.00		0.95	1.00	
Satd. Flow (perm)	1315	1837		409	1863	1568	220	3407		3433	3452	
Volume (vph)	450	295	30	276	65	362	56	1100	179	690	1478	64
Peak-hour factor, PHF	0.93	0.93	0.93	0.96	0.96	0.96	0.99	0.99	0.99	0.97	0.97	0.97
Adj. Flow (vph)	484	317	32	288	68	377	57	1111	181	711	1524	66
RTOR Reduction (vph)	0	4	0	0	0	200	0	14	0	0	3	0
Lane Group Flow (vph)	484	345	0	288	68	177	57	1278	0	711	1587	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	4%	2%	2%	4%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	22.0	15.0		24.0	16.0	16.0	35.0	31.8		15.6	44.2	
Effective Green, g (s)	27.2	17.2		29.2	18.2	18.2	38.4	33.8		17.0	46.2	
Actuated g/C Ratio	0.29	0.18		0.31	0.19	0.19	0.40	0.36		0.18	0.49	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	423	333		283	357	300	164	1212		614	1679	
v/s Ratio Prot	c0.12	0.19		0.12	0.04		0.02	c0.38		c0.21	0.46	
v/s Ratio Perm	c0.21			0.19		0.11	0.12					
v/c Ratio	1.14	1.04		1.02	0.19	0.59	0.35	1.05		1.16	0.95	
Uniform Delay, d1	33.0	38.9		30.0	32.2	35.0	21.2	30.6		39.0	23.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.94	1.15	
Incremental Delay, d2	89.4	58.9		58.1	0.3	2.9	1.3	41.6		81.0	7.4	
Delay (s)	122.4	97.8		88.1	32.5	37.9	22.5	72.2		117.6	34.2	
Level of Service	F	F		F	C	D	C	E		F	C	
Approach Delay (s)		112.1			57.1			70.1			60.0	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM Average Control Delay	70.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix F
No-Build Analysis



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	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1553	1770	3505	1583	1736	3432		1770	3539	1583
Flt Permitted	0.19	1.00	1.00	0.16	1.00	1.00	0.12	1.00		0.13	1.00	1.00
Satd. Flow (perm)	351	3505	1553	296	3505	1583	214	3432		248	3539	1583
Volume (vph)	129	542	341	452	1145	286	344	722	169	266	865	272
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	136	571	359	457	1157	289	355	744	174	274	892	280
RTOR Reduction (vph)	0	0	229	0	0	163	0	18	0	0	0	106
Lane Group Flow (vph)	136	571	130	457	1157	126	355	900	0	274	892	174
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	4%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	23.4	18.6	18.6	49.4	39.1	39.1	53.0	34.0		41.3	28.1	28.1
Effective Green, g (s)	27.5	21.2	21.2	52.0	41.7	41.7	55.0	36.0		45.1	30.1	30.1
Actuated g/C Ratio	0.24	0.18	0.18	0.45	0.36	0.36	0.48	0.31		0.39	0.26	0.26
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	162	646	286	477	1271	574	379	1074		296	926	414
v/s Ratio Prot	0.05	0.16		c0.22	0.33		c0.17	0.26		0.12	0.25	
v/s Ratio Perm	0.15		0.08	c0.21		0.08	c0.28			0.24		0.11
v/c Ratio	0.84	0.88	0.45	0.96	0.91	0.22	0.94	0.84		0.93	0.96	0.42
Uniform Delay, d1	38.5	45.7	41.7	32.3	34.9	25.4	33.4	36.8		29.9	41.9	35.2
Progression Factor	1.32	0.85	0.83	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	29.2	15.8	5.0	30.4	11.2	0.9	30.3	7.8		33.2	21.9	3.1
Delay (s)	80.0	54.4	39.5	62.6	46.1	26.3	63.7	44.6		63.0	63.8	38.4
Level of Service	F	D	D	E	D	C	E	D		E	E	D
Approach Delay (s)		52.7			47.1			49.9			58.7	
Approach LOS		D			D			D			E	

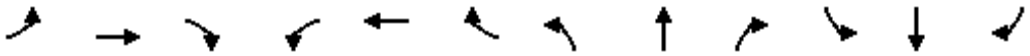
Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1553		3471	1736	1538
Flt Permitted	1.00	1.00		0.64	0.95	1.00
Satd. Flow (perm)	3505	1553		2230	1736	1538
Volume (vph)	902	86	245	1499	39	53
Peak-hour factor, PHF	0.95	0.95	0.99	0.99	0.83	0.83
Adj. Flow (vph)	949	91	247	1514	47	64
RTOR Reduction (vph)	0	15	0	0	0	58
Lane Group Flow (vph)	949	76	0	1761	47	6
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	96.5	96.5		96.5	10.5	10.5
Effective Green, g (s)	96.5	96.5		96.5	10.5	10.5
Actuated g/C Ratio	0.84	0.84		0.84	0.09	0.09
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2941	1303		1871	159	140
v/s Ratio Prot	0.27				c0.03	
v/s Ratio Perm		0.05		c0.79		0.00
v/c Ratio	0.32	0.06		0.94	0.30	0.04
Uniform Delay, d1	2.0	1.6		7.1	48.8	47.7
Progression Factor	0.40	0.05		1.98	1.00	1.00
Incremental Delay, d2	0.1	0.0		5.6	4.7	0.6
Delay (s)	0.9	0.1		19.6	53.5	48.2
Level of Service	A	A		B	D	D
Approach Delay (s)	0.8			19.6	50.4	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

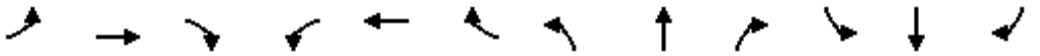
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1672	1568		1757	
Flt Permitted	0.11	1.00	1.00	0.15	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (perm)	197	3505	1568	272	3505	1583	1665	1672	1568		1757	
Volume (vph)	19	937	331	254	1339	28	308	5	114	23	11	11
Peak-hour factor, PHF	0.98	0.98	0.98	0.99	0.99	0.99	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	19	956	338	257	1353	28	342	6	127	28	13	13
RTOR Reduction (vph)	0	0	198	0	0	13	0	0	94	0	11	0
Lane Group Flow (vph)	19	956	140	257	1353	15	171	177	33	0	43	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	47.6	45.6	45.6	66.2	58.2	58.2	29.8	29.8	29.8		7.0	
Effective Green, g (s)	51.6	47.6	47.6	66.2	58.2	58.2	29.8	29.8	29.8		7.0	
Actuated g/C Ratio	0.45	0.41	0.41	0.58	0.51	0.51	0.26	0.26	0.26		0.06	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	143	1451	649	344	1774	801	431	433	406		107	
v/s Ratio Prot	0.00	0.27		c0.09	c0.39		0.10	c0.11			c0.02	
v/s Ratio Perm	0.05		0.09	0.33		0.01			0.02			
v/c Ratio	0.13	0.66	0.22	0.75	0.76	0.02	0.40	0.41	0.08		0.40	
Uniform Delay, d1	20.0	27.2	21.7	17.7	22.8	14.2	35.2	35.3	32.2		52.0	
Progression Factor	0.46	0.37	0.07	1.06	0.66	0.53	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	1.8	0.6	3.4	1.0	0.0	2.7	2.8	0.4		0.9	
Delay (s)	9.2	11.8	2.1	22.2	16.2	7.6	37.9	38.1	32.6		52.9	
Level of Service	A	B	A	C	B	A	D	D	C		D	
Approach Delay (s)		9.3			17.0			36.6			52.9	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

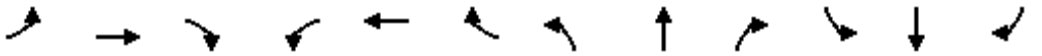
c Critical Lane Group



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
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3483			1728			1786	1583
Flt Permitted	0.08	1.00	1.00	0.13	1.00			0.98			0.96	1.00
Satd. Flow (perm)	142	3505	1583	244	3483			1728			1786	1583
Volume (vph)	246	1132	15	15	1647	77	60	18	46	137	21	556
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	259	1192	16	15	1664	78	63	19	48	147	23	598
RTOR Reduction (vph)	0	0	8	0	3	0	0	18	0	0	0	199
Lane Group Flow (vph)	259	1192	8	15	1739	0	0	112	0	0	170	399
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	58.5	51.5	51.5	47.0	45.0			16.0			20.0	20.0
Effective Green, g (s)	62.5	55.0	55.0	52.0	48.5			18.5			22.0	22.0
Actuated g/C Ratio	0.54	0.48	0.48	0.45	0.42			0.16			0.19	0.19
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	219	1676	757	157	1469			278			342	303
v/s Ratio Prot	c0.10	0.34		0.00	0.50			c0.06			0.10	
v/s Ratio Perm	c0.54		0.00	0.04								c0.25
v/c Ratio	1.18	0.71	0.01	0.10	1.18			0.40			0.50	1.32
Uniform Delay, d1	54.7	23.7	15.7	19.5	33.2			43.3			41.6	46.5
Progression Factor	0.97	0.41	0.20	1.29	0.93			1.00			1.00	1.00
Incremental Delay, d2	111.7	2.0	0.0	0.1	88.5			4.3			5.1	164.1
Delay (s)	164.8	11.6	3.2	25.2	119.3			47.6			46.6	210.6
Level of Service	F	B	A	C	F			D			D	F
Approach Delay (s)		38.5			118.5			47.6			174.3	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM Average Control Delay	98.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.5%	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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	311	761	41	364	1948	291	149	720	247	508	698	715
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	317	777	42	375	2008	300	152	735	252	535	735	753
RTOR Reduction (vph)	0	0	28	0	0	141	0	0	193	0	0	113
Lane Group Flow (vph)	317	777	14	375	2008	159	152	735	59	535	735	640
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	7.0	33.5	33.5	15.5	41.5	41.5	5.0	24.5	24.5	15.0	34.5	34.5
Effective Green, g (s)	9.0	37.0	37.0	17.0	45.0	45.0	8.0	27.0	27.0	18.0	37.0	37.0
Actuated g/C Ratio	0.08	0.32	0.32	0.15	0.39	0.39	0.07	0.23	0.23	0.16	0.32	0.32
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	269	1620	509	507	1971	619	123	831	372	537	1139	509
v/s Ratio Prot	c0.09	0.15		0.11	c0.40		c0.09	0.21		0.16	0.21	
v/s Ratio Perm			0.01			0.10			0.04			c0.40
v/c Ratio	1.18	0.48	0.03	0.74	1.02	0.26	1.24	0.88	0.16	1.00	0.65	1.26
Uniform Delay, d1	53.0	31.3	26.7	46.9	35.0	23.7	53.5	42.5	35.0	48.5	33.4	39.0
Progression Factor	1.00	1.00	1.00	1.08	0.68	0.30	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	112.0	1.0	0.1	0.5	11.7	0.1	157.7	13.2	0.9	37.6	2.8	131.4
Delay (s)	165.0	32.3	26.8	51.1	35.4	7.2	211.2	55.7	35.9	86.1	36.2	170.4
Level of Service	F	C	C	D	D	A	F	E	D	F	D	F
Approach Delay (s)		69.1			34.4			72.1			99.3	
Approach LOS		E			C			E			F	

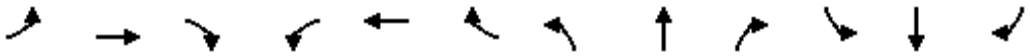
Intersection Summary			
HCM Average Control Delay	65.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

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	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.89		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1591		1770	3156		3242	3398		1770	3471	1553
Flt Permitted	0.31	1.00		0.27	1.00		0.95	1.00		0.10	1.00	1.00
Satd. Flow (perm)	579	1591		503	3156		3242	3398		191	3471	1553
Volume (vph)	164	96	241	140	75	195	530	1075	205	340	981	308
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	178	104	262	152	82	212	541	1097	209	347	1001	314
RTOR Reduction (vph)	0	91	0	0	182	0	0	15	0	0	0	197
Lane Group Flow (vph)	178	275	0	152	112	0	541	1291	0	347	1001	117
Heavy Vehicles (%)	3%	3%	8%	2%	2%	2%	8%	4%	2%	2%	4%	4%
Turn Type	pm+pt			pm+pt			Prot			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8						6		6
Actuated Green, G (s)	31.9	20.9		21.8	14.8		19.3	38.6		56.3	37.1	37.1
Effective Green, g (s)	33.3	22.3		21.8	14.8		20.7	40.5		58.2	39.0	39.0
Actuated g/C Ratio	0.32	0.21		0.21	0.14		0.20	0.39		0.55	0.37	0.37
Clearance Time (s)	5.4	5.4		4.0	4.0		5.4	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	346	338		189	445		639	1311		395	1289	577
v/s Ratio Prot	0.07	c0.17		c0.05	0.04		c0.17	c0.38		0.16	0.29	
v/s Ratio Perm	0.09			0.11						0.33		0.08
v/c Ratio	0.51	0.81		0.80	0.25		0.85	0.98		0.88	0.78	0.20
Uniform Delay, d1	27.7	39.4		37.5	40.2		40.6	31.9		29.8	29.2	22.4
Progression Factor	1.00	1.00		1.00	1.00		1.34	0.65		1.00	1.00	1.00
Incremental Delay, d2	1.3	14.0		21.4	0.3		6.6	16.5		19.3	4.6	0.8
Delay (s)	29.0	53.4		58.9	40.5		61.1	37.3		49.1	33.8	23.2
Level of Service	C	D		E	D		E	D		D	C	C
Approach Delay (s)		45.4			46.7			44.3			35.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

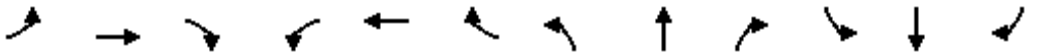
c Critical Lane Group



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	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
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)	1752	1863	1553	3400	1863	1583	3367	4940	1568	1752	4919	
Flt Permitted	0.37	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	689	1863	1553	3400	1863	1583	3367	4940	1568	193	4919	
Volume (vph)	72	123	97	406	343	350	323	1482	162	219	1220	41
Peak-hour factor, PHF	0.95	0.95	0.95	0.98	0.98	0.98	0.94	0.94	0.94	0.97	0.97	0.97
Adj. Flow (vph)	76	129	102	414	350	357	344	1577	172	226	1258	42
RTOR Reduction (vph)	0	0	16	0	0	262	0	0	108	0	3	0
Lane Group Flow (vph)	76	129	86	414	350	95	344	1577	64	226	1297	0
Heavy Vehicles (%)	3%	2%	4%	3%	2%	2%	4%	5%	3%	3%	5%	3%
Turn Type	pm+pt		pm+ov	Prot		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	24.7	17.3	30.5	16.6	26.5	26.5	13.2	36.9	36.9	47.2	36.3	
Effective Green, g (s)	29.3	19.6	32.8	18.0	27.9	27.9	13.2	38.8	38.8	50.8	38.2	
Actuated g/C Ratio	0.28	0.19	0.31	0.17	0.27	0.27	0.13	0.37	0.37	0.48	0.36	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.4	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	290	348	544	583	495	421	423	1825	579	280	1790	
v/s Ratio Prot	0.02	0.07	0.02	c0.12	c0.19		c0.10	c0.32		0.10	0.26	
v/s Ratio Perm	0.05		0.04			0.06			0.04	0.29		
v/c Ratio	0.26	0.37	0.16	0.71	0.71	0.23	0.81	0.86	0.11	0.81	0.72	
Uniform Delay, d1	28.7	37.3	26.1	41.0	34.9	30.1	44.7	30.7	21.8	24.5	28.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.46	1.69	0.68	
Incremental Delay, d2	0.5	0.7	0.1	4.1	4.6	0.3	7.0	3.5	0.2	10.9	1.7	
Delay (s)	29.2	38.0	26.3	45.1	39.4	30.4	50.5	34.2	32.0	52.2	21.2	
Level of Service	C	D	C	D	D	C	D	C	C	D	C	
Approach Delay (s)		31.9			38.6			36.7			25.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

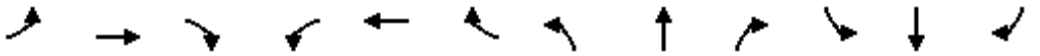
c Critical Lane Group



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				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1752		1538	1736	3438			4940	1553
Flt Permitted				0.95		1.00	0.24	1.00			1.00	1.00
Satd. Flow (perm)				1752		1538	446	3438			4940	1553
Volume (vph)	0	0	0	176	0	252	606	1947	0	0	880	1046
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.92	0.91	0.98	0.98	0.92	0.92	0.99	0.99
Adj. Flow (vph)	0	0	0	193	0	277	618	1987	0	0	889	1057
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	266
Lane Group Flow (vph)	0	0	0	193	0	251	618	1987	0	0	889	791
Heavy Vehicles (%)	2%	2%	2%	3%	2%	5%	4%	5%	2%	2%	5%	4%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				16.0		16.0	77.4	77.4			50.4	50.4
Effective Green, g (s)				17.7		17.7	79.3	79.3			52.3	52.3
Actuated g/C Ratio				0.17		0.17	0.76	0.76			0.50	0.50
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				295		259	619	2597			2461	774
v/s Ratio Prot							c0.22	0.58			0.18	
v/s Ratio Perm				0.11		c0.16	c0.53					0.51
v/c Ratio				0.65		0.97	1.00	0.77			0.36	1.02
Uniform Delay, d1				40.8		43.4	17.9	7.5			16.1	26.4
Progression Factor				1.00		1.00	1.47	0.35			0.30	0.84
Incremental Delay, d2				5.1		47.0	22.2	0.9			0.3	34.4
Delay (s)				45.9		90.3	48.5	3.5			5.2	56.6
Level of Service				D		F	D	A			A	E
Approach Delay (s)		0.0			72.1			14.2			33.1	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	150.5%	ICU Level of Service	H
Analysis Period (min)	15		

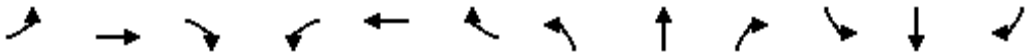
c Critical Lane Group



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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.98	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1649	1563	1490					4881		1736	3471	
Flt Permitted	0.95	0.96	1.00					1.00		0.08	1.00	
Satd. Flow (perm)	1649	1563	1490					4881		149	3471	
Volume (vph)	896	0	591	0	0	0	0	1664	275	252	845	0
Peak-hour factor, PHF	0.99	0.92	0.99	0.92	0.92	0.92	0.92	0.99	0.99	0.99	0.99	0.92
Adj. Flow (vph)	905	0	597	0	0	0	0	1681	278	255	854	0
RTOR Reduction (vph)	0	5	109	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	472	495	421	0	0	0	0	1937	0	255	854	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	4%	4%	4%	4%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	33.4	33.4	33.4					43.4		60.7	60.4	
Effective Green, g (s)	35.0	35.0	35.0					45.0		62.0	62.0	
Actuated g/C Ratio	0.33	0.33	0.33					0.43		0.59	0.59	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	550	521	497					2092		284	2050	
v/s Ratio Prot								0.40		c0.11	0.25	
v/s Ratio Perm	0.29	0.32	0.28							c0.42		
v/c Ratio	0.86	0.95	0.85					0.93		0.90	0.42	
Uniform Delay, d1	32.7	34.1	32.5					28.4		37.9	11.7	
Progression Factor	1.00	1.00	1.00					0.61		0.75	0.34	
Incremental Delay, d2	12.6	26.9	12.7					2.9		27.0	0.6	
Delay (s)	45.3	61.0	45.2					20.1		55.5	4.6	
Level of Service	D	E	D					C		E	A	
Approach Delay (s)		50.5			0.0			20.1			16.3	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	150.5%	ICU Level of Service	H
Analysis Period (min)	15		

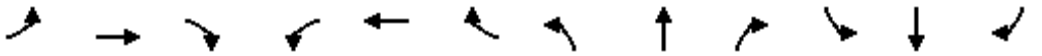
c Critical Lane Group



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		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1796		1770	1863	1583	1770	3482		3433	3393	
Flt Permitted	0.65	1.00		0.56	1.00	1.00	0.14	1.00		0.95	1.00	
Satd. Flow (perm)	1207	1796		1036	1863	1583	268	3482		3433	3393	
Volume (vph)	200	80	25	185	156	533	24	1205	59	363	830	243
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.97	0.97	0.97	0.96	0.96	0.96
Adj. Flow (vph)	208	83	26	206	173	592	25	1242	61	378	865	253
RTOR Reduction (vph)	0	12	0	0	0	113	0	3	0	0	26	0
Lane Group Flow (vph)	208	97	0	206	173	479	25	1300	0	378	1092	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	25.4	21.4		41.0	30.0	30.0	38.2	35.8		10.6	44.0	
Effective Green, g (s)	30.6	23.6		43.2	32.2	32.2	41.6	37.8		12.0	46.0	
Actuated g/C Ratio	0.29	0.22		0.41	0.31	0.31	0.40	0.36		0.11	0.44	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	389	404		535	571	485	161	1254		392	1486	
v/s Ratio Prot	c0.04	0.05		0.06	0.09		0.01	c0.37		c0.11	0.32	
v/s Ratio Perm	0.12			0.10		c0.30	0.06					
v/c Ratio	0.53	0.24		0.39	0.30	0.99	0.16	1.04		0.96	0.73	
Uniform Delay, d1	30.0	33.4		20.7	27.8	36.2	20.8	33.6		46.3	24.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.05	0.71	
Incremental Delay, d2	1.4	0.3		0.5	0.3	37.3	0.5	35.4		31.7	2.7	
Delay (s)	31.5	33.7		21.2	28.1	73.5	21.2	69.0		80.3	20.1	
Level of Service	C	C		C	C	E	C	E		F	C	
Approach Delay (s)		32.2			54.3			68.1			35.3	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.3%	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	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1538	1736	3505	1583	1719	3413		1770	3505	1583
Flt Permitted	0.11	1.00	1.00	0.10	1.00	1.00	0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	214	3505	1538	183	3505	1583	190	3413		219	3505	1583
Volume (vph)	333	1221	562	288	737	344	479	900	260	297	943	164
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	343	1259	579	297	760	355	499	938	271	300	953	166
RTOR Reduction (vph)	0	0	239	0	0	195	0	19	0	0	0	90
Lane Group Flow (vph)	343	1259	340	297	760	160	499	1190	0	300	953	76
Heavy Vehicles (%)	2%	3%	5%	4%	3%	2%	5%	2%	3%	2%	3%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	65.4	44.4	44.4	52.8	37.3	37.3	67.0	46.0		47.2	32.0	32.0
Effective Green, g (s)	68.0	47.0	47.0	56.9	39.9	39.9	69.0	48.0		51.0	34.0	34.0
Actuated g/C Ratio	0.47	0.32	0.32	0.39	0.28	0.28	0.48	0.33		0.35	0.23	0.23
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0		5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	1136	499	254	964	436	417	1130		259	822	371
v/s Ratio Prot	c0.16	c0.36		c0.14	0.22		c0.26	0.35		0.14	0.27	
v/s Ratio Perm	0.29		0.22	0.32		0.10	c0.31			0.27		0.05
v/c Ratio	0.96	1.11	0.68	1.17	0.79	0.37	1.20	1.05		1.16	1.16	0.20
Uniform Delay, d1	41.8	49.0	42.5	66.2	48.6	42.4	59.2	48.5		66.2	55.5	44.6
Progression Factor	1.05	0.64	0.44	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	27.5	57.8	4.9	110.1	6.5	2.4	109.7	42.0		105.6	85.1	1.2
Delay (s)	71.5	89.0	23.5	176.2	55.2	44.7	168.8	90.5		171.7	140.6	45.9
Level of Service	E	F	C	F	E	D	F	F		F	F	D
Approach Delay (s)		68.9			78.0			113.4			136.1	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM Average Control Delay	96.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	115.6%	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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3505	1553		3492	1736	1538
Flt Permitted	1.00	1.00		0.59	0.95	1.00
Satd. Flow (perm)	3505	1553		2059	1736	1538
Volume (vph)	1964	70	75	1363	63	161
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.83	0.83
Adj. Flow (vph)	2067	74	77	1405	76	194
RTOR Reduction (vph)	0	14	0	0	0	29
Lane Group Flow (vph)	2067	60	0	1482	76	165
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	118.3	118.3		118.3	18.7	18.7
Effective Green, g (s)	118.3	118.3		118.3	18.7	18.7
Actuated g/C Ratio	0.82	0.82		0.82	0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2860	1267		1680	224	198
v/s Ratio Prot	0.59				0.04	
v/s Ratio Perm		0.04		c0.72		c0.11
v/c Ratio	0.72	0.05		0.88	0.34	0.83
Uniform Delay, d1	6.0	2.6		8.8	57.5	61.6
Progression Factor	0.13	0.00		3.01	1.00	1.00
Incremental Delay, d2	0.3	0.0		3.1	4.1	32.1
Delay (s)	1.1	0.0		29.5	61.6	93.7
Level of Service	A	A		C	E	F
Approach Delay (s)	1.0			29.5	84.7	
Approach LOS	A			C	F	

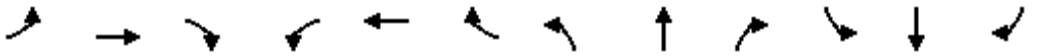
Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

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	1.00	0.95	1.00	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1678	1568		1751	
Flt Permitted	0.15	1.00	1.00	0.05	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (perm)	280	3505	1568	87	3505	1583	1665	1678	1568		1751	
Volume (vph)	46	1871	375	153	1217	50	395	20	138	114	42	54
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.95	0.95	0.95	0.86	0.86	0.86
Adj. Flow (vph)	48	1949	391	156	1242	51	416	21	145	133	49	63
RTOR Reduction (vph)	0	0	104	0	0	21	0	0	98	0	9	0
Lane Group Flow (vph)	48	1949	287	156	1242	30	212	225	47	0	236	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	84.0	80.0	80.0	93.0	85.0	85.0	19.0	19.0	19.0		19.0	
Effective Green, g (s)	88.0	82.0	82.0	94.0	85.0	85.0	19.0	19.0	19.0		19.0	
Actuated g/C Ratio	0.61	0.57	0.57	0.65	0.59	0.59	0.13	0.13	0.13		0.13	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	232	1982	887	160	2055	928	218	220	205		229	
v/s Ratio Prot	0.01	0.56		c0.06	0.35		0.13	c0.13			c0.13	
v/s Ratio Perm	0.12		0.18	c0.57		0.02			0.03			
v/c Ratio	0.21	0.98	0.32	0.98	0.60	0.03	0.97	1.02	0.23		1.03	
Uniform Delay, d1	14.4	30.8	16.7	49.4	19.2	12.7	62.7	63.0	56.4		63.0	
Progression Factor	0.52	0.41	0.08	0.96	1.28	1.77	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	11.5	0.5	42.0	0.4	0.0	54.2	66.7	2.6		68.0	
Delay (s)	7.5	24.3	1.9	89.5	25.1	22.4	117.0	129.7	59.0		131.0	
Level of Service	A	C	A	F	C	C	F	F	E		F	
Approach Delay (s)		20.3			31.9			107.5			131.0	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

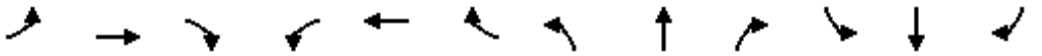
c Critical Lane Group



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
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98			0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	1770	3505	1583	1770	3452			1719			1787	1583
Flt Permitted	0.06	1.00	1.00	0.07	1.00			0.98			0.96	1.00
Satd. Flow (perm)	116	3505	1583	123	3452			1719			1787	1583
Volume (vph)	519	1960	68	52	1400	170	59	29	70	130	24	316
Peak-hour factor, PHF	1.00	1.00	1.00	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Adj. Flow (vph)	519	1960	68	53	1429	173	67	33	80	137	25	333
RTOR Reduction (vph)	0	0	18	0	6	0	0	20	0	0	0	292
Lane Group Flow (vph)	519	1960	50	53	1596	0	0	160	0	0	162	41
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6								4
Actuated Green, G (s)	93.0	83.5	83.5	61.0	57.0			16.0			16.0	16.0
Effective Green, g (s)	96.5	87.0	87.0	66.0	60.5			18.5			18.0	18.0
Actuated g/C Ratio	0.67	0.60	0.60	0.46	0.42			0.13			0.12	0.12
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5			6.5			6.0	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0			2.0			2.0	2.0
Lane Grp Cap (vph)	442	2103	950	118	1440			219			222	197
v/s Ratio Prot	c0.26	0.56		0.02	0.46			c0.09			c0.09	
v/s Ratio Perm	c0.52		0.03	0.19								0.03
v/c Ratio	1.17	0.93	0.05	0.45	1.11			0.73			0.73	0.21
Uniform Delay, d1	58.7	26.3	12.0	30.7	42.2			60.8			61.2	57.1
Progression Factor	1.12	0.42	0.04	1.14	0.56			1.00			1.00	1.00
Incremental Delay, d2	89.6	4.8	0.0	0.7	56.3			19.2			18.9	2.4
Delay (s)	155.5	15.9	0.6	35.7	79.9			80.1			80.1	59.5
Level of Service	F	B	A	D	E			F			F	E
Approach Delay (s)		43.9			78.5			80.1			66.3	
Approach LOS		D			E			F			E	

Intersection Summary			
HCM Average Control Delay	59.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.6%	ICU Level of Service	F
Analysis Period (min)	15		

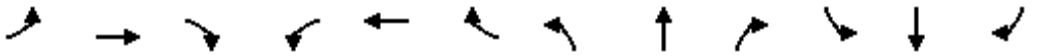
c Critical Lane Group



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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	1583
Volume (vph)	448	1489	56	329	1057	441	161	588	393	654	509	212
Peak-hour factor, PHF	0.98	0.98	0.98	1.00	1.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	457	1519	57	329	1057	441	168	612	409	674	525	219
RTOR Reduction (vph)	0	0	28	0	0	265	0	0	178	0	0	155
Lane Group Flow (vph)	457	1519	29	329	1057	176	168	612	231	674	525	64
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	20.4	46.8	46.8	15.2	41.1	41.1	16.8	28.1	28.1	28.4	39.7	39.7
Effective Green, g (s)	22.4	50.3	50.3	16.7	44.6	44.6	19.8	30.6	30.6	31.4	42.2	42.2
Actuated g/C Ratio	0.15	0.35	0.35	0.12	0.31	0.31	0.14	0.21	0.21	0.22	0.29	0.29
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.5
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0
Lane Grp Cap (vph)	530	1747	549	395	1549	487	242	747	334	743	1030	461
v/s Ratio Prot	c0.13	c0.30		0.10	0.21		0.09	c0.17		c0.20	0.15	
v/s Ratio Perm			0.02			0.11			0.15			0.04
v/c Ratio	0.86	0.87	0.05	0.83	0.68	0.36	0.69	0.82	0.69	0.91	0.51	0.14
Uniform Delay, d1	59.8	44.3	31.5	62.8	44.0	39.1	59.7	54.6	52.9	55.4	42.8	38.0
Progression Factor	1.00	1.00	1.00	0.77	0.88	2.74	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.1	6.2	0.2	1.4	0.2	0.2	6.8	9.8	11.3	14.4	1.8	0.6
Delay (s)	72.9	50.5	31.7	49.7	38.8	107.5	66.5	64.3	64.1	69.8	44.6	38.6
Level of Service	E	D	C	D	D	F	E	E	E	E	D	D
Approach Delay (s)		55.0			57.4			64.6			55.6	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	57.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	145.0	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
Lane Util. Factor	1.00	1.00		1.00	0.95		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.87		1.00	0.86		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1527		1770	3053		3335	3451		1770	3539	1568
Flt Permitted	0.20	1.00		0.25	1.00		0.95	1.00		0.14	1.00	1.00
Satd. Flow (perm)	369	1527		466	3053		3335	3451		266	3539	1568
Volume (vph)	427	80	423	285	40	430	1181	1013	200	360	1097	895
Peak-hour factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.98	0.98	0.98
Adj. Flow (vph)	445	83	441	300	42	453	1243	1066	211	367	1119	913
RTOR Reduction (vph)	0	182	0	0	268	0	0	16	0	0	0	392
Lane Group Flow (vph)	445	342	0	300	227	0	1243	1261	0	367	1119	521
Heavy Vehicles (%)	3%	2%	10%	2%	2%	2%	5%	2%	2%	2%	2%	3%
Turn Type	pm+pt			pm+pt			Prot			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8						6		6
Actuated Green, G (s)	37.6	21.6		28.0	16.0		24.6	36.1		42.1	26.1	26.1
Effective Green, g (s)	39.0	23.0		28.0	16.0		26.0	38.0		44.0	28.0	28.0
Actuated g/C Ratio	0.37	0.22		0.27	0.15		0.25	0.36		0.42	0.27	0.27
Clearance Time (s)	5.4	5.4		4.0	4.0		5.4	5.9		4.0	5.9	5.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	387	334		273	465		826	1249		341	944	418
v/s Ratio Prot	c0.21	0.22		0.13	0.07		c0.37	0.37		0.16	0.32	
v/s Ratio Perm	c0.22			0.17						0.29		c0.33
v/c Ratio	1.15	1.02		1.10	0.89dr		1.50	1.01		1.08	1.19	1.25
Uniform Delay, d1	28.8	41.0		48.7	40.8		39.5	33.5		29.9	38.5	38.5
Progression Factor	1.00	1.00		1.00	1.00		0.64	0.97		1.00	1.00	1.00
Incremental Delay, d2	93.3	55.5		83.5	0.8		228.9	15.6		70.5	94.2	129.9
Delay (s)	122.1	96.5		132.2	41.6		254.2	48.0		100.5	132.7	168.4
Level of Service	F	F		F	D		F	D		F	F	F
Approach Delay (s)		108.3			75.8			149.7			141.4	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	131.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	123.4%	ICU Level of Service	H
Analysis Period (min)	15		

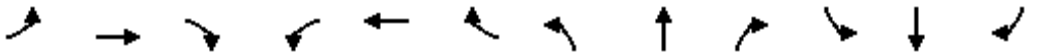
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
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)	1752	1845	1538	3400	1863	1583	3400	4940	1583	1770	4836	
Flt Permitted	0.24	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	438	1845	1538	3400	1863	1583	3400	4940	1583	203	4836	
Volume (vph)	204	201	150	700	329	591	406	1572	155	380	1431	151
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	219	216	161	737	346	622	414	1604	158	384	1445	153
RTOR Reduction (vph)	0	0	4	0	0	245	0	0	101	0	12	0
Lane Group Flow (vph)	219	216	157	737	346	377	414	1604	57	384	1586	0
Heavy Vehicles (%)	3%	3%	5%	3%	2%	2%	3%	5%	2%	2%	6%	3%
Turn Type	pm+pt		pm+ov	Prot		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	29.7	16.0	29.0	19.6	21.9	21.9	13.0	30.8	30.8	50.1	34.8	
Effective Green, g (s)	34.3	18.3	31.3	21.0	23.3	23.3	13.0	32.7	32.7	53.7	36.7	
Actuated g/C Ratio	0.33	0.17	0.30	0.20	0.22	0.22	0.12	0.31	0.31	0.51	0.35	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.4	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	343	322	517	680	413	351	421	1538	493	358	1690	
v/s Ratio Prot	0.10	0.12	0.04	c0.22	0.19		0.12	0.32		c0.17	0.33	
v/s Ratio Perm	0.11		0.06			c0.24			0.04	c0.38		
v/c Ratio	0.64	0.67	0.30	1.08	0.84	1.07	0.98	1.04	0.12	1.07	0.94	
Uniform Delay, d1	27.9	40.5	28.4	42.0	39.0	40.8	45.9	36.2	25.8	32.0	33.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.10	1.65	0.60	0.82	
Incremental Delay, d2	3.9	5.4	0.3	59.4	13.8	69.1	26.6	28.8	0.2	38.4	1.4	
Delay (s)	31.7	45.9	28.8	101.4	52.8	109.9	67.4	68.4	42.9	57.7	28.5	
Level of Service	C	D	C	F	D	F	E	E	D	E	C	
Approach Delay (s)		36.1			94.7			66.4			34.1	
Approach LOS		D			F			E			C	

Intersection Summary			
HCM Average Control Delay	61.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

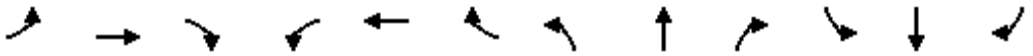
c Critical Lane Group



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
Lane Util. Factor				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1538	1752	3505			4988	1538
Flt Permitted				0.95		1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1770		1538	176	3505			4988	1538
Volume (vph)	0	0	0	439	0	311	646	2049	0	0	1864	666
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.92	0.98	0.99	0.99	0.92	0.92	1.00	1.00
Adj. Flow (vph)	0	0	0	448	0	317	653	2070	0	0	1864	666
RTOR Reduction (vph)	0	0	0	0	0	15	0	0	0	0	0	330
Lane Group Flow (vph)	0	0	0	448	0	302	653	2070	0	0	1864	336
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	3%	3%	2%	2%	4%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				22.3		22.3	71.1	71.1			36.1	36.1
Effective Green, g (s)				24.0		24.0	73.0	73.0			38.0	38.0
Actuated g/C Ratio				0.23		0.23	0.70	0.70			0.36	0.36
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				405		352	588	2437			1805	557
v/s Ratio Prot							c0.33	0.59			0.37	
v/s Ratio Perm				c0.25		0.20	c0.45					0.22
v/c Ratio				1.11		0.86	1.11	0.85			1.03	0.60
Uniform Delay, d1				40.5		38.9	31.3	11.9			33.5	27.3
Progression Factor				1.00		1.00	1.16	0.18			0.58	1.12
Incremental Delay, d2				76.6		18.4	52.4	0.4			23.7	2.2
Delay (s)				117.1		57.2	88.8	2.5			43.2	32.9
Level of Service				F		E	F	A			D	C
Approach Delay (s)		0.0			92.3			23.2			40.5	
Approach LOS		A			F			C			D	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	147.1%	ICU Level of Service	H
Analysis Period (min)	15		

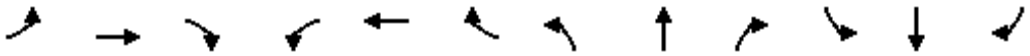
c Critical Lane Group



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	
Lane Util. Factor	0.95	0.91	0.95					0.91		1.00	0.95	
Frt	1.00	0.96	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.97	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1649	1539	1490					4849		1719	3505	
Flt Permitted	0.95	0.97	1.00					1.00		0.10	1.00	
Satd. Flow (perm)	1649	1539	1490					4849		172	3505	
Volume (vph)	1054	0	754	0	0	0	0	1672	509	568	1801	0
Peak-hour factor, PHF	1.00	0.92	1.00	0.92	0.92	0.92	0.92	1.00	1.00	0.99	0.99	0.92
Adj. Flow (vph)	1054	0	754	0	0	0	0	1672	509	574	1819	0
RTOR Reduction (vph)	0	13	13	0	0	0	0	52	0	0	0	0
Lane Group Flow (vph)	602	628	552	0	0	0	0	2129	0	574	1819	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	3%	4%	5%	3%	2%
Turn Type	Perm		Perm							pm+pt		
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	31.4	31.4	31.4					36.4		62.7	62.4	
Effective Green, g (s)	33.0	33.0	33.0					38.0		64.0	64.0	
Actuated g/C Ratio	0.31	0.31	0.31					0.36		0.61	0.61	
Clearance Time (s)	5.6	5.6	5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	518	484	468					1755		429	2136	
v/s Ratio Prot								0.44		c0.28	0.52	
v/s Ratio Perm	0.37	0.41	0.37							c0.53		
v/c Ratio	1.16	1.30	1.18					1.21		1.34	0.85	
Uniform Delay, d1	36.0	36.0	36.0					33.5		38.2	16.6	
Progression Factor	1.00	1.00	1.00					0.92		0.61	0.51	
Incremental Delay, d2	92.6	148.5	101.0					96.3		153.6	0.4	
Delay (s)	128.6	184.5	137.0					127.2		176.8	8.9	
Level of Service	F	F	F					F		F	A	
Approach Delay (s)		151.0			0.0			127.2			49.2	
Approach LOS		F			A			F			D	

Intersection Summary			
HCM Average Control Delay	104.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	147.1%	ICU Level of Service	H
Analysis Period (min)	15		

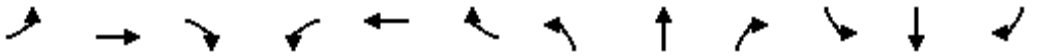
c Critical Lane Group



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	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		0.97	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1837		1770	1863	1568	1770	3408		3433	3451	
Flt Permitted	0.64	1.00		0.22	1.00	1.00	0.10	1.00		0.95	1.00	
Satd. Flow (perm)	1176	1837		409	1863	1568	192	3408		3433	3451	
Volume (vph)	510	332	34	311	74	411	63	1260	202	783	1693	78
Peak-hour factor, PHF	0.95	0.95	0.95	0.98	0.98	0.98	1.00	1.00	1.00	0.99	0.99	0.99
Adj. Flow (vph)	537	349	36	317	76	419	63	1260	202	791	1710	79
RTOR Reduction (vph)	0	3	0	0	0	206	0	12	0	0	3	0
Lane Group Flow (vph)	537	382	0	317	76	213	63	1450	0	791	1786	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	4%	2%	2%	4%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2					
Actuated Green, G (s)	28.0	18.0		24.0	16.0	16.0	40.0	36.8		17.6	51.2	
Effective Green, g (s)	33.2	20.2		29.2	18.2	18.2	43.4	38.8		19.0	53.2	
Actuated g/C Ratio	0.32	0.19		0.28	0.17	0.17	0.41	0.37		0.18	0.51	
Clearance Time (s)	7.0	6.2		7.0	6.2	6.2	5.4	6.0		5.4	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	443	353		256	323	272	148	1259		621	1749	
v/s Ratio Prot	c0.15	0.21		0.13	0.04		0.02	c0.43		c0.23	0.52	
v/s Ratio Perm	c0.23			0.21		0.14	0.16					
v/c Ratio	1.21	1.08		1.24	0.24	0.78	0.43	1.15		1.27	1.02	
Uniform Delay, d1	34.8	42.4		35.2	37.4	41.5	25.8	33.1		43.0	25.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.99	1.14	
Incremental Delay, d2	114.8	71.4		136.0	0.4	13.7	2.0	77.8		127.3	17.9	
Delay (s)	149.6	113.8		171.2	37.8	55.2	27.8	110.9		169.9	47.4	
Level of Service	F	F		F	D	E	C	F		F	D	
Approach Delay (s)		134.6			98.9			107.5			84.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	100.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1553	3433	3505	1583	3367	5085	1568	1770	5085	1583
Flt Permitted	0.14	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	255	3505	1553	3433	3505	1583	3367	5085	1568	355	5085	1583
Volume (vph)	129	542	341	452	1145	286	344	722	169	266	865	272
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	136	571	359	457	1157	289	355	744	174	274	892	280
RTOR Reduction (vph)	0	0	240	0	0	174	0	0	140	0	0	122
Lane Group Flow (vph)	136	571	119	457	1157	115	355	744	34	274	892	158
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	4%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2			6			8	4		4
Actuated Green, G (s)	32.4	26.6	26.6	14.3	35.1	35.1	11.2	16.7	16.7	32.5	19.0	19.0
Effective Green, g (s)	36.5	29.2	29.2	15.8	37.7	37.7	13.0	18.7	18.7	36.3	21.0	21.0
Actuated g/C Ratio	0.38	0.31	0.31	0.17	0.40	0.40	0.14	0.20	0.20	0.38	0.22	0.22
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0	6.0	5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	214	1077	477	571	1391	628	461	1001	309	364	1124	350
v/s Ratio Prot	0.05	0.16		c0.13	c0.33		0.11	0.15		c0.12	c0.18	
v/s Ratio Perm	0.19		0.08			0.07			0.02	0.17		0.10
v/c Ratio	0.64	0.53	0.25	0.80	0.83	0.18	0.77	0.74	0.11	0.75	0.79	0.45
Uniform Delay, d1	21.4	27.2	24.7	38.1	25.8	18.6	39.6	35.9	31.3	22.6	35.0	32.0
Progression Factor	1.53	0.47	0.13	1.00	1.00	1.00	0.96	0.58	1.06	1.00	1.00	1.00
Incremental Delay, d2	5.9	1.8	1.2	7.9	5.9	0.6	6.8	4.3	0.6	8.5	5.8	4.1
Delay (s)	38.7	14.5	4.5	46.0	31.7	19.3	44.7	25.0	33.8	31.1	40.7	36.2
Level of Service	D	B	A	D	C	B	D	C	C	C	D	D
Approach Delay (s)		14.2			33.3			31.7			38.0	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1553		3471	1736	1538
Flt Permitted	1.00	1.00		0.64	0.95	1.00
Satd. Flow (perm)	3505	1553		2245	1736	1538
Volume (vph)	902	86	245	1499	39	53
Peak-hour factor, PHF	0.95	0.95	0.99	0.99	0.83	0.83
Adj. Flow (vph)	949	91	247	1514	47	64
RTOR Reduction (vph)	0	15	0	0	0	59
Lane Group Flow (vph)	949	76	0	1761	47	5
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	79.1	79.1		79.1	7.9	7.9
Effective Green, g (s)	79.1	79.1		79.1	7.9	7.9
Actuated g/C Ratio	0.83	0.83		0.83	0.08	0.08
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2918	1293		1869	144	128
v/s Ratio Prot	0.27				c0.03	
v/s Ratio Perm		0.05		c0.78		0.00
v/c Ratio	0.33	0.06		0.94	0.33	0.04
Uniform Delay, d1	1.8	1.4		6.2	41.0	40.1
Progression Factor	0.22	0.06		2.22	1.00	1.00
Incremental Delay, d2	0.0	0.0		6.7	5.9	0.6
Delay (s)	0.4	0.1		20.4	47.0	40.7
Level of Service	A	A		C	D	D
Approach Delay (s)	0.4			20.4	43.3	
Approach LOS	A			C	D	

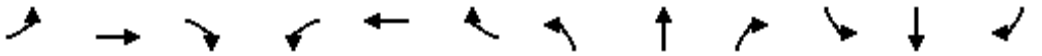
Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1672	1568		1757	
Flt Permitted	0.12	1.00	1.00	0.11	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (perm)	230	3505	1568	203	3505	1583	1665	1672	1568		1757	
Volume (vph)	19	937	331	254	1339	28	308	5	114	23	11	11
Peak-hour factor, PHF	0.98	0.98	0.98	0.99	0.99	0.99	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	19	956	338	257	1353	28	342	6	127	28	13	13
RTOR Reduction (vph)	0	0	223	0	0	16	0	0	89	0	12	0
Lane Group Flow (vph)	19	956	115	257	1353	12	171	177	38	0	42	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	32.4	30.4	30.4	49.4	41.4	41.4	28.5	28.5	28.5		5.1	
Effective Green, g (s)	36.4	32.4	32.4	49.4	41.4	41.4	28.5	28.5	28.5		5.1	
Actuated g/C Ratio	0.38	0.34	0.34	0.52	0.44	0.44	0.30	0.30	0.30		0.05	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	153	1195	535	318	1527	690	500	502	470		94	
v/s Ratio Prot	0.01	0.27		c0.11	c0.39		0.10	c0.11			c0.02	
v/s Ratio Perm	0.04		0.07	0.31		0.01			0.02			
v/c Ratio	0.12	0.80	0.22	0.81	0.89	0.02	0.34	0.35	0.08		0.44	
Uniform Delay, d1	20.9	28.4	22.3	22.3	24.6	15.2	25.9	26.0	23.9		43.6	
Progression Factor	0.70	0.50	0.20	1.14	0.90	0.73	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	4.9	0.8	6.0	3.2	0.0	1.9	1.9	0.3		1.2	
Delay (s)	14.7	19.1	5.3	31.6	25.3	11.1	27.8	28.0	24.2		44.8	
Level of Service	B	B	A	C	C	B	C	C	C		D	
Approach Delay (s)		15.5			26.1			26.9			44.8	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

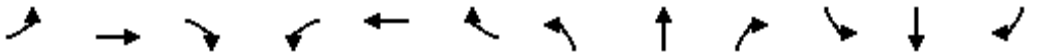
c Critical Lane Group



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
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00		1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	5036	1583	1770	5036	1583		1728			1786	2787
Flt Permitted	0.11	1.00	1.00	0.17	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	204	5036	1583	322	5036	1583		1728			1786	2787
Volume (vph)	246	1132	15	15	1647	77	60	18	46	137	21	556
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	259	1192	16	15	1664	78	63	19	48	147	23	598
RTOR Reduction (vph)	0	0	9	0	0	51	0	23	0	0	0	319
Lane Group Flow (vph)	259	1192	7	15	1664	27	0	107	0	0	170	279
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases	2		2	6		6						4
Actuated Green, G (s)	42.5	35.5	35.5	31.0	29.0	29.0		16.0			16.0	23.0
Effective Green, g (s)	46.5	39.0	39.0	36.0	32.5	32.5		18.5			18.0	28.0
Actuated g/C Ratio	0.49	0.41	0.41	0.38	0.34	0.34		0.19			0.19	0.29
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5	7.5		6.5			6.0	7.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0		2.0			2.0	2.0
Lane Grp Cap (vph)	265	2067	650	175	1723	542		337			338	821
v/s Ratio Prot	c0.10	0.24		0.00	0.33			c0.06			c0.10	0.04
v/s Ratio Perm	c0.38		0.00	0.03		0.02						0.06
v/c Ratio	0.98	0.58	0.01	0.09	0.97	0.05		0.32			0.50	0.34
Uniform Delay, d1	25.5	21.6	16.6	18.8	30.7	20.9		32.8			34.5	26.3
Progression Factor	0.98	0.46	0.41	1.50	1.05	2.28		1.00			1.00	1.00
Incremental Delay, d2	40.5	0.9	0.0	0.1	12.0	0.1		2.5			5.3	0.1
Delay (s)	65.5	10.8	6.9	28.2	44.2	47.8		35.3			39.8	26.3
Level of Service	E	B	A	C	D	D		D			D	C
Approach Delay (s)		20.4			44.3			35.3			29.3	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

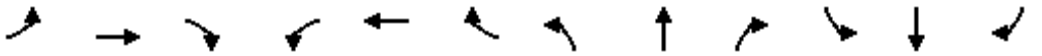
c Critical Lane Group



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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Volume (vph)	311	761	41	364	1948	291	149	720	247	508	698	715
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	317	777	42	375	2008	300	152	735	252	535	735	753
RTOR Reduction (vph)	0	0	28	0	0	141	0	0	202	0	0	27
Lane Group Flow (vph)	317	777	14	375	2008	159	152	735	50	535	735	726
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	6.0	27.3	27.3	13.7	34.5	34.5	6.0	16.5	16.5	11.0	21.5	27.5
Effective Green, g (s)	8.0	30.8	30.8	15.2	38.0	38.0	9.0	19.0	19.0	14.0	24.0	32.0
Actuated g/C Ratio	0.08	0.32	0.32	0.16	0.40	0.40	0.09	0.20	0.20	0.15	0.25	0.34
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	2.0
Lane Grp Cap (vph)	289	1633	513	549	2014	633	168	708	317	506	894	1056
v/s Ratio Prot	c0.09	0.15		0.11	c0.40		0.09	c0.21		c0.16	0.21	0.06
v/s Ratio Perm			0.01			0.10			0.03			0.20
v/c Ratio	1.10	0.48	0.03	0.68	1.00	0.25	0.90	1.04	0.16	1.06	0.82	0.69
Uniform Delay, d1	43.5	25.6	21.9	37.6	28.4	19.0	42.6	38.0	31.4	40.5	33.5	27.2
Progression Factor	1.00	1.00	1.00	1.46	0.39	0.03	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.4	1.0	0.1	1.9	15.8	0.6	42.1	44.1	1.1	56.0	8.4	1.5
Delay (s)	124.9	26.6	22.0	56.9	26.8	1.2	84.7	82.1	32.5	96.5	41.9	28.7
Level of Service	F	C	C	E	C	A	F	F	C	F	D	C
Approach Delay (s)		53.9			28.1			71.5			51.4	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

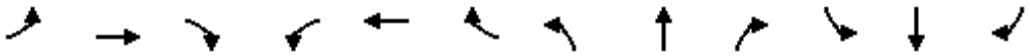
c Critical Lane Group



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	4.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1495	3433	1863	1583	3242	4988	1583	1770	4988	2733
Flt Permitted	0.51	1.00	1.00	0.69	1.00	1.00	0.95	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1818	1845	1495	2493	1863	1583	3242	4988	1583	328	4988	2733
Volume (vph)	164	96	241	140	75	195	530	1075	205	340	981	308
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	178	104	262	152	82	212	541	1097	209	347	1001	314
RTOR Reduction (vph)	0	0	32	0	0	189	0	0	127	0	0	163
Lane Group Flow (vph)	178	104	230	152	82	23	541	1097	82	347	1001	151
Heavy Vehicles (%)	3%	3%	8%	2%	2%	2%	8%	4%	2%	2%	4%	4%
Turn Type	pm+pt		pm+ov	pm+pt		Perm	Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)	23.0	13.2	34.5	17.6	10.5	10.5	21.3	35.3	35.3	52.8	32.7	42.5
Effective Green, g (s)	25.7	14.6	37.3	17.6	10.5	10.5	22.7	37.2	37.2	54.7	34.6	45.8
Actuated g/C Ratio	0.27	0.15	0.39	0.19	0.11	0.11	0.24	0.39	0.39	0.58	0.36	0.48
Clearance Time (s)	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.9	5.9	4.0	5.9	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	678	284	650	532	206	175	775	1953	620	494	1817	1433
v/s Ratio Prot	c0.03	0.06	c0.08	0.02	0.04		c0.17	c0.22		0.15	0.20	0.01
v/s Ratio Perm	0.04		0.07	0.03		0.01			0.05	c0.26		0.04
v/c Ratio	0.26	0.37	0.35	0.29	0.40	0.13	0.70	0.56	0.13	0.70	0.55	0.11
Uniform Delay, d1	26.8	36.1	20.3	33.0	39.3	38.1	33.0	22.5	18.5	13.7	24.0	13.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.60	0.29	0.05	1.78	0.50	0.80
Incremental Delay, d2	0.2	0.8	0.3	0.3	1.3	0.3	1.6	0.7	0.3	3.0	0.8	0.0
Delay (s)	27.0	36.9	20.7	33.3	40.6	38.5	54.4	7.2	1.3	27.3	12.8	10.8
Level of Service	C	D	C	C	D	D	D	A	A	C	B	B
Approach Delay (s)		25.8			37.1			20.3			15.4	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.0%	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	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
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)	1752	1863	1553	3400	1863	1583	3367	4940	1568	1752	4919	
Flt Permitted	0.40	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	735	1863	1553	3400	1863	1583	3367	4940	1568	236	4919	
Volume (vph)	72	123	97	406	343	350	323	1482	162	219	1220	41
Peak-hour factor, PHF	0.95	0.95	0.95	0.98	0.98	0.98	0.94	0.94	0.94	0.97	0.97	0.97
Adj. Flow (vph)	76	129	102	414	350	357	344	1577	172	226	1258	42
RTOR Reduction (vph)	0	0	17	0	0	259	0	0	112	0	3	0
Lane Group Flow (vph)	76	129	85	414	350	98	344	1577	60	226	1297	0
Heavy Vehicles (%)	3%	2%	4%	3%	2%	2%	4%	5%	3%	3%	5%	3%
Turn Type	pm+pt		pm+ov	Prot		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	23.6	16.5	28.6	15.4	24.8	24.8	12.1	31.4	31.4	37.8	29.4	
Effective Green, g (s)	28.2	18.8	30.9	16.8	26.2	26.2	12.1	33.3	33.3	41.4	31.3	
Actuated g/C Ratio	0.30	0.20	0.33	0.18	0.28	0.28	0.13	0.35	0.35	0.44	0.33	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.4	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	319	369	571	601	514	437	429	1732	550	264	1621	
v/s Ratio Prot	0.02	0.07	0.02	c0.12	c0.19		c0.10	c0.32		0.09	0.26	
v/s Ratio Perm	0.05		0.04			0.06			0.04	0.28		
v/c Ratio	0.24	0.35	0.15	0.69	0.68	0.23	0.80	0.91	0.11	0.86	0.80	
Uniform Delay, d1	24.7	32.8	22.7	36.7	30.7	26.6	40.3	29.4	20.8	21.1	29.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.01	1.68	1.75	1.05	
Incremental Delay, d2	0.4	0.6	0.1	3.3	3.7	0.3	6.1	5.3	0.2	21.1	3.9	
Delay (s)	25.1	33.4	22.8	39.9	34.4	26.8	45.2	35.1	35.3	58.2	34.3	
Level of Service	C	C	C	D	C	C	D	D	D	E	C	
Approach Delay (s)		27.8			34.0			36.8			37.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.8%	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				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1752		1538	1736	3438			4940	1553
Flt Permitted				0.95		1.00	0.24	1.00			1.00	1.00
Satd. Flow (perm)				1752		1538	432	3438			4940	1553
Volume (vph)	0	0	0	176	0	252	606	1947	0	0	880	1046
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.92	0.91	0.98	0.98	0.92	0.92	0.99	0.99
Adj. Flow (vph)	0	0	0	193	0	277	618	1987	0	0	889	1057
RTOR Reduction (vph)	0	0	0	0	0	22	0	0	0	0	0	294
Lane Group Flow (vph)	0	0	0	193	0	255	618	1987	0	0	889	763
Heavy Vehicles (%)	2%	2%	2%	3%	2%	5%	4%	5%	2%	2%	5%	4%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				15.9		15.9	67.5	67.5			42.4	42.4
Effective Green, g (s)				17.6		17.6	69.4	69.4			44.3	44.3
Actuated g/C Ratio				0.19		0.19	0.73	0.73			0.47	0.47
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				325		285	605	2512			2304	724
v/s Ratio Prot							c0.23	0.58			0.18	
v/s Ratio Perm				0.11		c0.17	c0.52					0.49
v/c Ratio				0.59		0.89	1.02	0.79			0.39	1.05
Uniform Delay, d1				35.4		37.8	17.1	8.2			16.5	25.3
Progression Factor				1.00		1.00	1.50	0.21			0.28	1.10
Incremental Delay, d2				2.9		27.9	31.0	1.3			0.4	44.5
Delay (s)				38.3		65.7	56.6	3.0			5.0	72.4
Level of Service				D		E	E	A			A	E
Approach Delay (s)		0.0			54.4			15.7			41.6	
Approach LOS		A			D			B			D	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	145.2%	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	
Lane Util. Factor	0.97		0.88					0.91		0.97	0.95	
Frt	1.00		0.85					0.98		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3367		2760					4881		3367	3471	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3367		2760					4881		3367	3471	
Volume (vph)	896	0	591	0	0	0	0	1664	275	252	845	0
Peak-hour factor, PHF	0.99	0.92	0.99	0.92	0.92	0.92	0.92	0.99	0.99	0.99	0.99	0.92
Adj. Flow (vph)	905	0	597	0	0	0	0	1681	278	255	854	0
RTOR Reduction (vph)	0	0	204	0	0	0	0	24	0	0	0	0
Lane Group Flow (vph)	905	0	393	0	0	0	0	1935	0	255	854	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	4%	4%	4%	4%	2%
Turn Type	custom		custom							Prot		
Protected Phases								2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	27.8		27.8					42.0		8.7	56.0	
Effective Green, g (s)	29.4		29.4					43.6		10.0	57.6	
Actuated g/C Ratio	0.31		0.31					0.46		0.11	0.61	
Clearance Time (s)	5.6		5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	1042		854					2240		354	2105	
v/s Ratio Prot								c0.40		c0.08	0.25	
v/s Ratio Perm	c0.27		0.14									
v/c Ratio	0.87		0.46					0.86		0.72	0.41	
Uniform Delay, d1	31.0		26.4					23.0		41.1	9.8	
Progression Factor	1.00		1.00					0.65		0.83	0.57	
Incremental Delay, d2	7.8		0.4					2.1		6.6	0.5	
Delay (s)	38.8		26.8					17.0		40.5	6.1	
Level of Service	D		C					B		D	A	
Approach Delay (s)		34.0			0.0			17.0			14.1	
Approach LOS		C			A			B			B	

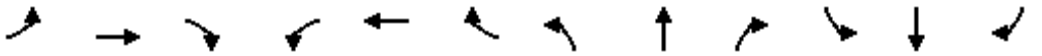
Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	145.2%	ICU Level of Service	H
Analysis Period (min)	15		

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	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1796		1770	1863	1583	1770	3505	1583	3433	3505	1583
Flt Permitted	0.95	1.00		0.43	1.00	1.00	0.33	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1796		795	1863	1583	610	3505	1583	3433	3505	1583
Volume (vph)	200	80	25	185	156	533	24	1205	59	363	830	243
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.97	0.97	0.97	0.96	0.96	0.96
Adj. Flow (vph)	208	83	26	206	173	592	25	1242	61	378	865	253
RTOR Reduction (vph)	0	12	0	0	0	9	0	0	38	0	0	116
Lane Group Flow (vph)	208	97	0	206	173	583	25	1242	23	378	865	137
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Turn Type	Prot			pm+pt		pm+ov	pm+pt		Perm	Prot		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases				8		8	2		2			6
Actuated Green, G (s)	4.0	8.2		26.2	15.2	32.6	35.4	33.8	33.8	17.4	49.6	49.6
Effective Green, g (s)	7.0	10.4		28.4	17.4	36.2	38.8	35.8	35.8	18.8	51.6	51.6
Actuated g/C Ratio	0.07	0.11		0.30	0.18	0.38	0.41	0.38	0.38	0.20	0.54	0.54
Clearance Time (s)	7.0	6.2		7.0	6.2	5.4	5.4	6.0	6.0	5.4	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	253	197		381	341	670	286	1321	597	679	1904	860
v/s Ratio Prot	c0.06	0.05		0.08	0.09	c0.17	0.00	c0.35		0.11	0.25	
v/s Ratio Perm				0.08		0.20	0.03		0.01			0.09
v/c Ratio	0.82	0.49		0.54	0.51	0.87	0.09	0.94	0.04	0.56	0.45	0.16
Uniform Delay, d1	43.4	39.8		26.6	34.9	27.2	16.9	28.6	18.7	34.3	13.2	10.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.92	0.78
Incremental Delay, d2	18.9	1.9		1.6	1.2	11.6	0.1	14.1	0.1	0.9	0.7	0.4
Delay (s)	62.3	41.7		28.2	36.1	38.8	17.0	42.6	18.8	34.2	12.8	8.9
Level of Service	E	D		C	D	D	B	D	B	C	B	A
Approach Delay (s)		55.2			36.1			41.1			17.5	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1538	3367	3505	1583	3335	5085	1568	1770	5036	1583
Flt Permitted	0.18	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	335	3505	1538	3367	3505	1583	3335	5085	1568	310	5036	1583
Volume (vph)	333	1221	562	288	737	344	479	900	260	297	943	164
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	343	1259	579	297	760	355	499	938	271	300	953	166
RTOR Reduction (vph)	0	0	229	0	0	234	0	0	169	0	0	133
Lane Group Flow (vph)	343	1259	350	297	760	121	499	938	102	300	953	33
Heavy Vehicles (%)	2%	3%	5%	4%	3%	2%	5%	2%	3%	2%	3%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2			6			8	4		4
Actuated Green, G (s)	61.4	45.4	45.4	10.5	38.2	38.2	18.2	23.3	23.3	38.9	22.0	22.0
Effective Green, g (s)	64.0	48.0	48.0	12.0	40.8	40.8	20.0	25.3	25.3	42.7	24.0	24.0
Actuated g/C Ratio	0.53	0.40	0.40	0.10	0.34	0.34	0.17	0.21	0.21	0.36	0.20	0.20
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0	6.0	5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	408	1402	615	337	1192	538	556	1072	331	338	1007	317
v/s Ratio Prot	c0.13	c0.36		0.09	0.22		c0.15	0.18		0.14	c0.19	
v/s Ratio Perm	0.31		0.23			0.08			0.07	0.18		0.02
v/c Ratio	0.84	0.90	0.57	0.88	0.64	0.22	0.90	0.88	0.31	0.89	0.95	0.10
Uniform Delay, d1	21.1	33.7	28.0	53.3	33.4	28.3	49.0	45.8	40.0	31.7	47.4	39.2
Progression Factor	1.26	0.57	0.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.8	6.4	2.4	22.5	2.6	1.0	17.1	10.0	2.4	23.3	18.0	0.7
Delay (s)	36.5	25.7	11.8	75.8	36.0	29.3	66.0	55.8	42.4	54.9	65.4	39.9
Level of Service	D	C	B	E	D	C	E	E	D	D	E	D
Approach Delay (s)		23.7			42.7			56.7			60.2	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3505	1553		3492	1736	1538
Flt Permitted	1.00	1.00		0.60	0.95	1.00
Satd. Flow (perm)	3505	1553		2117	1736	1538
Volume (vph)	1964	70	75	1363	63	161
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.83	0.83
Adj. Flow (vph)	2067	74	77	1405	76	194
RTOR Reduction (vph)	0	16	0	0	0	26
Lane Group Flow (vph)	2067	58	0	1482	76	168
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	94.6	94.6		94.6	17.4	17.4
Effective Green, g (s)	94.6	94.6		94.6	17.4	17.4
Actuated g/C Ratio	0.79	0.79		0.79	0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2763	1224		1669	252	223
v/s Ratio Prot	0.59				0.04	
v/s Ratio Perm		0.04		c0.70		c0.11
v/c Ratio	0.75	0.05		0.93dl	0.30	0.75
Uniform Delay, d1	6.6	2.8		9.0	45.9	49.3
Progression Factor	0.37	0.01		2.57	1.00	1.00
Incremental Delay, d2	0.3	0.0		4.6	3.1	20.9
Delay (s)	2.7	0.0		27.7	48.9	70.2
Level of Service	A	A		C	D	E
Approach Delay (s)	2.6			27.7	64.2	
Approach LOS	A			C	E	

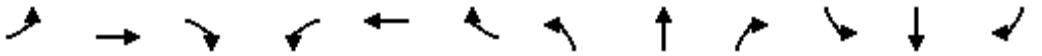
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1678	1568		1751	
Flt Permitted	0.13	1.00	1.00	0.06	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (perm)	249	3505	1568	112	3505	1583	1665	1678	1568		1751	
Volume (vph)	46	1871	375	153	1217	50	395	20	138	114	42	54
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.95	0.95	0.95	0.86	0.86	0.86
Adj. Flow (vph)	48	1949	391	156	1242	51	416	21	145	133	49	63
RTOR Reduction (vph)	0	0	126	0	0	23	0	0	111	0	10	0
Lane Group Flow (vph)	48	1949	265	156	1242	28	212	225	34	0	235	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	68.0	64.0	64.0	71.0	66.0	66.0	16.0	16.0	16.0		16.0	
Effective Green, g (s)	72.0	66.0	66.0	72.0	66.0	66.0	16.0	16.0	16.0		16.0	
Actuated g/C Ratio	0.60	0.55	0.55	0.60	0.55	0.55	0.13	0.13	0.13		0.13	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	225	1928	862	149	1928	871	222	224	209		233	
v/s Ratio Prot	0.01	0.56		c0.05	0.35		0.13	c0.13			c0.13	
v/s Ratio Perm	0.12		0.17	c0.58		0.02			0.02			
v/c Ratio	0.21	1.01	0.31	1.05	0.64	0.03	0.95	1.00	0.16		1.01	
Uniform Delay, d1	13.2	27.0	14.6	59.2	18.8	12.4	51.6	52.0	46.1		52.0	
Progression Factor	0.66	0.43	0.15	0.98	1.35	1.69	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	20.4	0.7	63.5	0.5	0.0	49.8	61.3	1.7		60.7	
Delay (s)	8.9	32.1	2.9	121.4	25.8	20.9	101.4	113.3	47.7		112.7	
Level of Service	A	C	A	F	C	C	F	F	D		F	
Approach Delay (s)		26.8			35.9			92.6			112.7	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM Average Control Delay	42.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

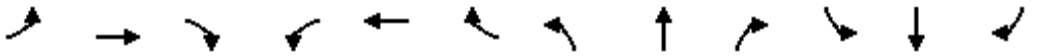
c Critical Lane Group



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
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00		1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	5036	1583	1770	5036	1583		1719			1787	2787
Flt Permitted	0.10	1.00	1.00	0.11	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	184	5036	1583	204	5036	1583		1719			1787	2787
Volume (vph)	519	1960	68	52	1400	170	59	29	70	130	24	316
Peak-hour factor, PHF	1.00	1.00	1.00	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Adj. Flow (vph)	519	1960	68	53	1429	173	67	33	80	137	25	333
RTOR Reduction (vph)	0	0	31	0	0	109	0	24	0	0	0	197
Lane Group Flow (vph)	519	1960	37	53	1429	64	0	156	0	0	162	136
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases	2		2	6		6						4
Actuated Green, G (s)	68.0	58.5	58.5	37.0	33.0	33.0		16.0			16.0	44.0
Effective Green, g (s)	71.5	62.0	62.0	42.0	36.5	36.5		18.5			18.0	49.0
Actuated g/C Ratio	0.60	0.52	0.52	0.35	0.30	0.30		0.15			0.15	0.41
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5	7.5		6.5			6.0	7.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0		2.0			2.0	2.0
Lane Grp Cap (vph)	519	2602	818	143	1532	481		265			268	1138
v/s Ratio Prot	c0.26	0.39		0.02	0.28			c0.09			c0.09	0.03
v/s Ratio Perm	c0.34		0.02	0.11		0.04						0.02
v/c Ratio	1.00	0.75	0.05	0.37	0.93	0.13		0.59			0.60	0.12
Uniform Delay, d1	36.5	22.9	14.4	26.6	40.6	30.3		47.2			47.7	22.1
Progression Factor	0.79	0.46	0.13	1.18	0.66	0.68		1.00			1.00	1.00
Incremental Delay, d2	26.5	0.9	0.0	0.4	8.5	0.4		9.3			9.7	0.0
Delay (s)	55.2	11.5	1.9	31.8	35.1	20.8		56.5			57.4	22.1
Level of Service	E	B	A	C	D	C		E			E	C
Approach Delay (s)		20.1			33.5			56.5			33.7	
Approach LOS		C			C			E			C	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Volume (vph)	448	1489	56	329	1057	441	161	588	393	654	509	212
Peak-hour factor, PHF	0.98	0.98	0.98	1.00	1.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	457	1519	57	329	1057	441	168	612	409	674	525	219
RTOR Reduction (vph)	0	0	33	0	0	266	0	0	182	0	0	109
Lane Group Flow (vph)	457	1519	24	329	1057	175	168	612	227	674	525	110
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	16.7	37.7	37.7	12.3	32.8	32.8	14.4	20.6	20.6	22.9	29.1	45.8
Effective Green, g (s)	18.7	41.2	41.2	13.8	36.3	36.3	17.4	23.1	23.1	25.9	31.6	50.3
Actuated g/C Ratio	0.16	0.34	0.34	0.12	0.30	0.30	0.14	0.19	0.19	0.22	0.26	0.42
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	2.0
Lane Grp Cap (vph)	535	1729	543	395	1523	479	257	681	305	741	932	1261
v/s Ratio Prot	c0.13	c0.30		0.10	0.21		0.09	c0.17		c0.20	0.15	0.01
v/s Ratio Perm			0.01			0.11			0.14			0.03
v/c Ratio	0.85	0.88	0.04	0.83	0.69	0.36	0.65	0.90	0.75	0.91	0.56	0.09
Uniform Delay, d1	49.3	37.0	26.3	52.0	36.9	32.8	48.5	47.3	45.7	45.9	38.2	21.0
Progression Factor	1.00	1.00	1.00	1.24	0.57	1.57	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.1	6.7	0.1	8.2	1.5	1.2	4.5	17.1	15.2	14.7	2.5	0.0
Delay (s)	61.5	43.8	26.4	72.9	22.7	52.8	53.0	64.4	60.9	60.6	40.7	21.0
Level of Service	E	D	C	E	C	D	D	E	E	E	D	C
Approach Delay (s)		47.2			39.0			61.6			47.1	
Approach LOS		D			D			E			D	

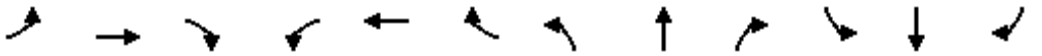
Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

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	4.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1863	1468	3433	1863	1583	3335	5085	1583	1770	5085	2760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	3400	1863	1468	3433	1863	1583	3335	5085	1583	477	5085	2760
Volume (vph)	427	80	423	285	40	430	1181	1013	200	360	1097	895
Peak-hour factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.98	0.98	0.98
Adj. Flow (vph)	445	83	441	300	42	453	1243	1066	211	367	1119	913
RTOR Reduction (vph)	0	0	18	0	0	12	0	0	139	0	0	290
Lane Group Flow (vph)	445	83	423	300	42	441	1243	1066	72	367	1119	623
Heavy Vehicles (%)	3%	2%	10%	2%	2%	2%	5%	2%	2%	2%	2%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			2	6		6
Actuated Green, G (s)	17.8	9.2	51.0	15.2	6.6	33.8	41.8	34.1	34.1	45.3	18.1	35.9
Effective Green, g (s)	19.2	10.6	53.8	15.2	6.6	33.8	43.2	36.0	36.0	47.2	20.0	39.2
Actuated g/C Ratio	0.18	0.10	0.51	0.14	0.06	0.32	0.41	0.34	0.34	0.45	0.19	0.37
Clearance Time (s)	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.9	5.9	4.0	5.9	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	622	188	808	497	117	570	1372	1743	543	549	969	1136
v/s Ratio Prot	c0.13	0.04	c0.22	0.09	0.02	c0.20	c0.37	0.21		0.17	c0.22	0.10
v/s Ratio Perm			0.07			0.08			0.05	0.13		0.13
v/c Ratio	0.72	0.44	0.52	0.60	0.36	0.77	0.91	0.61	0.13	0.67	1.15	0.55
Uniform Delay, d1	40.3	44.4	17.1	42.1	47.2	32.1	29.0	28.7	23.8	20.1	42.5	25.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.94	1.22	1.00	1.00	1.00
Incremental Delay, d2	3.9	1.7	0.6	2.1	1.9	6.5	4.0	0.7	0.2	3.1	81.5	0.5
Delay (s)	44.2	46.1	17.7	44.1	49.1	38.6	17.4	27.5	29.2	23.2	124.0	26.5
Level of Service	D	D	B	D	D	D	B	C	C	C	F	C
Approach Delay (s)		32.3			41.2			22.7			71.5	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

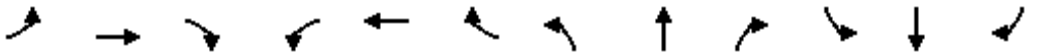
c Critical Lane Group



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	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1538	3400	1863	1583	3400	4940	1583	3433	4893	1568
Flt Permitted	0.29	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	535	1845	1538	3400	1863	1583	3400	4940	1583	3433	4893	1568
Volume (vph)	204	201	150	700	329	591	406	1572	155	380	1431	151
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	219	216	161	737	346	622	414	1604	158	384	1445	153
RTOR Reduction (vph)	0	0	4	0	0	61	0	0	101	0	0	102
Lane Group Flow (vph)	219	216	157	737	346	561	414	1604	57	384	1445	51
Heavy Vehicles (%)	3%	3%	5%	3%	2%	2%	3%	5%	2%	2%	6%	3%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases	4		4			8			2			6
Actuated Green, G (s)	28.4	14.8	28.9	21.6	22.8	35.3	14.1	32.8	32.8	12.5	32.9	32.9
Effective Green, g (s)	33.0	17.1	31.2	23.0	24.2	38.4	14.1	34.7	34.7	14.2	34.8	34.8
Actuated g/C Ratio	0.31	0.16	0.30	0.22	0.23	0.37	0.13	0.33	0.33	0.14	0.33	0.33
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.7	4.0	5.9	5.9	5.7	5.9	5.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	352	300	516	745	429	639	457	1633	523	464	1622	520
v/s Ratio Prot	0.09	0.12	0.04	c0.22	0.19	c0.12	0.12	c0.32		0.11	0.30	
v/s Ratio Perm	0.10		0.06			0.24			0.04			0.03
v/c Ratio	0.62	0.72	0.31	0.99	0.81	0.88	0.91	0.98	0.11	0.83	0.89	0.10
Uniform Delay, d1	28.6	41.7	28.5	40.9	38.2	31.1	44.8	34.8	24.4	44.2	33.3	24.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.18	0.94	0.89	0.69	1.14	3.20
Incremental Delay, d2	3.4	8.2	0.3	29.9	10.6	13.0	12.2	12.0	0.2	6.7	4.5	0.2
Delay (s)	32.0	49.9	28.9	70.8	48.8	44.1	65.1	44.8	22.1	37.2	42.6	77.7
Level of Service	C	D	C	E	D	D	E	D	C	D	D	E
Approach Delay (s)		37.6			56.6			47.0			44.3	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

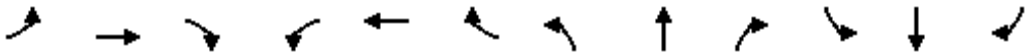
c Critical Lane Group



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
Lane Util. Factor				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1538	1752	3505			4988	1538
Flt Permitted				0.95		1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1770		1538	176	3505			4988	1538
Volume (vph)	0	0	0	439	0	311	646	2049	0	0	1864	666
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.92	0.98	0.99	0.99	0.92	0.92	1.00	1.00
Adj. Flow (vph)	0	0	0	448	0	317	653	2070	0	0	1864	666
RTOR Reduction (vph)	0	0	0	0	0	15	0	0	0	0	0	330
Lane Group Flow (vph)	0	0	0	448	0	302	653	2070	0	0	1864	336
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	3%	3%	2%	2%	4%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				22.3		22.3	71.1	71.1			36.1	36.1
Effective Green, g (s)				24.0		24.0	73.0	73.0			38.0	38.0
Actuated g/C Ratio				0.23		0.23	0.70	0.70			0.36	0.36
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				405		352	588	2437			1805	557
v/s Ratio Prot							c0.33	0.59			0.37	
v/s Ratio Perm				c0.25		0.20	c0.45					0.22
v/c Ratio				1.11		0.86	1.11	0.85			1.03	0.60
Uniform Delay, d1				40.5		38.9	31.3	11.9			33.5	27.3
Progression Factor				1.00		1.00	1.15	0.16			0.76	0.74
Incremental Delay, d2				76.6		18.4	52.4	0.4			24.9	2.7
Delay (s)				117.1		57.2	88.4	2.3			50.3	22.8
Level of Service				F		E	F	A			D	C
Approach Delay (s)		0.0			92.3			22.9			43.1	
Approach LOS		A			F			C			D	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	140.3%	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	0.97		0.88					0.91		0.97	0.95	
Frt	1.00		0.85					0.96		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3367		2760					4849		3335	3505	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3367		2760					4849		3335	3505	
Volume (vph)	1054	0	754	0	0	0	0	1672	509	568	1801	0
Peak-hour factor, PHF	1.00	0.92	1.00	0.92	0.92	0.92	0.92	1.00	1.00	0.99	0.99	0.92
Adj. Flow (vph)	1054	0	754	0	0	0	0	1672	509	574	1819	0
RTOR Reduction (vph)	0	0	27	0	0	0	0	52	0	0	0	0
Lane Group Flow (vph)	1054	0	727	0	0	0	0	2129	0	574	1819	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	3%	4%	5%	3%	2%
Turn Type	custom		custom							Prot		
Protected Phases								2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	29.4		29.4					43.1		16.0	64.4	
Effective Green, g (s)	31.0		31.0					44.7		17.3	66.0	
Actuated g/C Ratio	0.30		0.30					0.43		0.16	0.63	
Clearance Time (s)	5.6		5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	994		815					2064		549	2203	
v/s Ratio Prot								c0.44		c0.17	0.52	
v/s Ratio Perm	c0.31		0.26									
v/c Ratio	1.06		0.89					1.03		1.05	0.83	
Uniform Delay, d1	37.0		35.4					30.2		43.8	15.1	
Progression Factor	1.00		1.00					0.61		0.66	0.69	
Incremental Delay, d2	46.0		12.1					20.2		25.9	0.3	
Delay (s)	83.0		47.5					38.6		55.0	10.7	
Level of Service	F		D					D		D	B	
Approach Delay (s)		68.2			0.0			38.6			21.3	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.3%	ICU Level of Service	H
Analysis Period (min)	15		

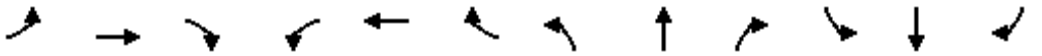
c Critical Lane Group

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	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1837		1770	1863	1568	1770	3471	1583	3433	3471	1583
Flt Permitted	0.95	1.00		0.27	1.00	1.00	0.12	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1837		497	1863	1568	215	3471	1583	3433	3471	1583
Volume (vph)	510	332	34	311	74	411	63	1260	202	783	1693	78
Peak-hour factor, PHF	0.95	0.95	0.95	0.98	0.98	0.98	1.00	1.00	1.00	0.99	0.99	0.99
Adj. Flow (vph)	537	349	36	317	76	419	63	1260	202	791	1710	79
RTOR Reduction (vph)	0	3	0	0	0	4	0	0	117	0	0	33
Lane Group Flow (vph)	537	382	0	317	76	415	63	1260	85	791	1710	46
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	4%	2%	2%	4%	2%
Turn Type	Prot			pm+pt		pm+ov	pm+pt		Perm	Prot		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases				8		8	2		2			6
Actuated Green, G (s)	15.4	19.2		21.8	12.8	32.4	35.8	32.6	32.6	19.6	49.0	49.0
Effective Green, g (s)	18.4	21.4		27.0	15.0	36.0	39.2	34.6	34.6	21.0	51.0	51.0
Actuated g/C Ratio	0.18	0.20		0.26	0.14	0.34	0.37	0.33	0.33	0.20	0.49	0.49
Clearance Time (s)	7.0	6.2		7.0	6.2	5.4	5.4	6.0	6.0	5.4	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	596	374		273	266	597	148	1144	522	687	1686	769
v/s Ratio Prot	c0.16	c0.21		c0.13	0.04	0.14	0.02	c0.36		c0.23	0.49	
v/s Ratio Perm				0.17		0.13	0.14		0.05			0.03
v/c Ratio	0.90	1.02		1.16	0.29	0.70	0.43	1.10	0.16	1.15	1.01	0.06
Uniform Delay, d1	42.4	41.8		36.6	40.2	29.8	26.8	35.2	24.9	42.0	27.0	14.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.03	1.30
Incremental Delay, d2	16.8	52.0		105.3	0.6	3.5	2.0	58.9	0.7	77.1	19.2	0.1
Delay (s)	59.2	93.8		141.9	40.8	33.3	28.8	94.1	25.6	117.0	47.1	18.7
Level of Service	E	F		F	D	C	C	F	C	F	D	B
Approach Delay (s)		73.6			76.4			82.3			67.6	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM Average Control Delay	73.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix G
Build Analysis



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	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1553	3433	3505	1583	3367	5085	1568	1770	5085	1583
Flt Permitted	0.11	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	205	3505	1553	3433	3505	1583	3367	5085	1568	295	5085	1583
Volume (vph)	133	555	369	452	1162	289	378	732	169	285	911	278
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	140	584	388	457	1174	292	390	755	174	294	939	287
RTOR Reduction (vph)	0	0	243	0	0	161	0	0	140	0	0	132
Lane Group Flow (vph)	140	584	145	457	1174	131	390	755	34	294	939	155
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	4%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2			6			8	4		4
Actuated Green, G (s)	41.6	33.7	33.7	19.2	45.0	45.0	14.9	20.2	20.2	41.3	23.3	23.3
Effective Green, g (s)	45.7	36.3	36.3	20.7	47.6	47.6	16.7	22.2	22.2	45.1	25.3	25.3
Actuated g/C Ratio	0.40	0.32	0.32	0.18	0.41	0.41	0.15	0.19	0.19	0.39	0.22	0.22
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0	6.0	5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	209	1106	490	618	1451	655	489	982	303	370	1119	348
v/s Ratio Prot	0.05	0.17		c0.13	c0.33		0.12	0.15		c0.14	c0.18	
v/s Ratio Perm	0.21		0.09			0.08			0.02	0.18		0.10
v/c Ratio	0.67	0.53	0.30	0.74	0.81	0.20	0.80	0.77	0.11	0.79	0.84	0.45
Uniform Delay, d1	25.2	32.3	29.7	44.6	29.7	21.5	47.5	44.0	38.3	27.2	42.9	38.8
Progression Factor	1.42	0.69	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.7	1.7	1.5	4.6	5.0	0.7	8.8	5.8	0.7	11.2	7.6	4.1
Delay (s)	43.3	24.1	17.2	49.2	34.7	22.2	56.3	49.7	39.0	38.4	50.5	42.9
Level of Service	D	C	B	D	C	C	E	D	D	D	D	D
Approach Delay (s)		24.1			36.2			50.3			46.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		0.99	0.95	1.00
Satd. Flow (prot)	3505	1553		3471	1736	1538
Flt Permitted	1.00	1.00		0.63	0.95	1.00
Satd. Flow (perm)	3505	1553		2202	1736	1538
Volume (vph)	943	86	250	1549	39	57
Peak-hour factor, PHF	0.95	0.95	0.99	0.99	0.83	0.83
Adj. Flow (vph)	993	91	253	1565	47	69
RTOR Reduction (vph)	0	13	0	0	0	64
Lane Group Flow (vph)	993	78	0	1818	47	5
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	98.6	98.6		98.6	8.4	8.4
Effective Green, g (s)	98.6	98.6		98.6	8.4	8.4
Actuated g/C Ratio	0.86	0.86		0.86	0.07	0.07
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	3005	1332		1888	127	112
v/s Ratio Prot	0.28				c0.03	
v/s Ratio Perm		0.05		c0.83		0.00
v/c Ratio	0.33	0.06		0.96	0.37	0.04
Uniform Delay, d1	1.6	1.2		6.7	50.8	49.6
Progression Factor	0.23	0.04		2.13	1.00	1.00
Incremental Delay, d2	0.1	0.0		9.6	8.1	0.8
Delay (s)	0.4	0.1		23.9	58.9	50.3
Level of Service	A	A		C	E	D
Approach Delay (s)	0.4			23.9	53.8	
Approach LOS	A			C	D	

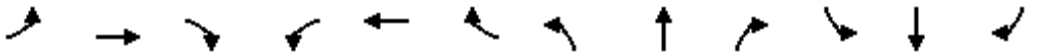
Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

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	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1672	1568		1757	
Flt Permitted	0.10	1.00	1.00	0.14	1.00	1.00	0.95	0.95	1.00		0.97	
Satd. Flow (perm)	178	3505	1568	260	3505	1583	1665	1672	1568		1757	
Volume (vph)	19	974	331	257	1387	28	308	5	118	23	11	11
Peak-hour factor, PHF	0.98	0.98	0.98	0.99	0.99	0.99	0.90	0.90	0.90	0.83	0.83	0.83
Adj. Flow (vph)	19	994	338	260	1401	28	342	6	131	28	13	13
RTOR Reduction (vph)	0	0	194	0	0	13	0	0	98	0	11	0
Lane Group Flow (vph)	19	994	144	260	1401	15	171	177	33	0	43	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	49.0	47.0	47.0	67.2	59.2	59.2	28.8	28.8	28.8		7.0	
Effective Green, g (s)	53.0	49.0	49.0	67.2	59.2	59.2	28.8	28.8	28.8		7.0	
Actuated g/C Ratio	0.46	0.43	0.43	0.58	0.51	0.51	0.25	0.25	0.25		0.06	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	137	1493	668	336	1804	815	417	419	393		107	
v/s Ratio Prot	0.00	0.28		c0.10	c0.40		0.10	c0.11			c0.02	
v/s Ratio Perm	0.06		0.09	0.36		0.01			0.02			
v/c Ratio	0.14	0.67	0.22	0.77	0.78	0.02	0.41	0.42	0.08		0.40	
Uniform Delay, d1	19.7	26.4	20.9	17.9	22.6	13.7	36.0	36.1	33.0		52.0	
Progression Factor	0.30	0.25	0.02	1.04	0.68	0.54	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	2.1	0.7	4.0	1.0	0.0	3.0	3.1	0.4		0.9	
Delay (s)	6.1	8.8	1.0	22.6	16.4	7.4	39.0	39.2	33.4		52.9	
Level of Service	A	A	A	C	B	A	D	D	C		D	
Approach Delay (s)		6.8			17.2			37.5			52.9	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

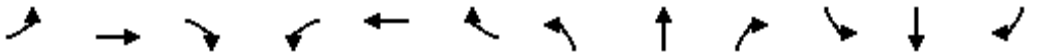
c Critical Lane Group



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
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00		1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	5036	1583	1770	5036	1583		1725			1785	2787
Flt Permitted	0.08	1.00	1.00	0.21	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	148	5036	1583	389	5036	1583		1725			1785	2787
Volume (vph)	246	1162	15	16	1692	79	60	18	49	141	21	556
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	259	1223	16	16	1709	80	63	19	52	152	23	598
RTOR Reduction (vph)	0	0	8	0	0	44	0	20	0	0	0	228
Lane Group Flow (vph)	259	1223	8	16	1709	36	0	114	0	0	175	370
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases	2		2	6		6						4
Actuated Green, G (s)	63.0	55.5	55.5	44.8	42.8	42.8		16.0			16.0	29.2
Effective Green, g (s)	66.5	59.0	59.0	49.8	46.3	46.3		18.5			18.0	34.2
Actuated g/C Ratio	0.58	0.51	0.51	0.43	0.40	0.40		0.16			0.16	0.30
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5	7.5		6.5			6.0	7.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0		2.0			2.0	2.0
Lane Grp Cap (vph)	314	2584	812	210	2028	637		278			279	829
v/s Ratio Prot	c0.12	0.24		0.00	0.34			c0.07			c0.10	0.06
v/s Ratio Perm	c0.36		0.01	0.03		0.02						0.07
v/c Ratio	0.82	0.47	0.01	0.08	0.84	0.06		0.41			0.63	0.45
Uniform Delay, d1	32.3	18.0	13.7	18.7	31.1	21.0		43.3			45.4	32.7
Progression Factor	1.02	0.72	0.82	0.87	0.78	0.77		1.00			1.00	1.00
Incremental Delay, d2	11.9	0.5	0.0	0.0	3.5	0.1		4.4			10.2	0.1
Delay (s)	44.8	13.4	11.3	16.3	27.7	16.3		47.8			55.6	32.9
Level of Service	D	B	B	B	C	B		D			E	C
Approach Delay (s)		18.8			27.1			47.8			38.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

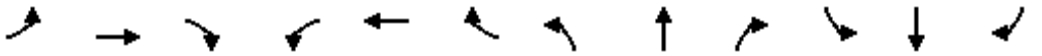
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Volume (vph)	311	773	41	371	1968	308	149	720	254	520	698	715
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	317	789	42	382	2029	318	152	735	259	547	735	753
RTOR Reduction (vph)	0	0	28	0	0	148	0	0	205	0	0	46
Lane Group Flow (vph)	317	789	14	382	2029	170	152	735	54	547	735	707
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	9.0	35.9	35.9	16.1	42.5	42.5	9.8	21.5	21.5	15.0	26.7	35.7
Effective Green, g (s)	11.0	39.4	39.4	17.6	46.0	46.0	12.8	24.0	24.0	18.0	29.2	40.2
Actuated g/C Ratio	0.10	0.34	0.34	0.15	0.40	0.40	0.11	0.21	0.21	0.16	0.25	0.35
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	2.0
Lane Grp Cap (vph)	328	1725	542	525	2014	633	197	739	330	537	899	1071
v/s Ratio Prot	c0.09	0.16		0.11	c0.40		0.09	c0.21		c0.16	0.21	0.06
v/s Ratio Perm			0.01			0.11			0.03			0.19
v/c Ratio	0.97	0.46	0.03	0.73	1.01	0.27	0.77	0.99	0.16	1.02	0.82	0.66
Uniform Delay, d1	51.8	29.5	25.1	46.4	34.5	23.2	49.7	45.4	37.3	48.5	40.4	31.6
Progression Factor	1.00	1.00	1.00	1.41	0.52	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.1	0.9	0.1	3.2	19.1	0.8	15.5	31.8	1.1	43.6	8.2	1.1
Delay (s)	91.9	30.3	25.2	68.5	37.1	2.2	65.2	77.3	38.3	92.1	48.6	32.8
Level of Service	F	C	C	E	D	A	E	E	D	F	D	C
Approach Delay (s)		47.2			37.5			66.9			54.4	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		

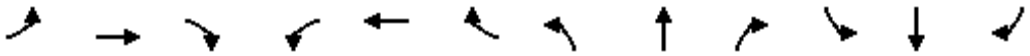
c Critical Lane Group



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	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1845	1495	3433	1863	1583	3242	4988	1583	1770	4988	2733
Flt Permitted	0.50	1.00	1.00	0.69	1.00	1.00	0.95	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	1788	1845	1495	2493	1863	1583	3242	4988	1583	319	4988	2733
Volume (vph)	165	96	241	140	75	195	530	1117	205	340	1052	313
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	179	104	262	152	82	212	541	1140	209	347	1073	319
RTOR Reduction (vph)	0	0	28	0	0	189	0	0	122	0	0	160
Lane Group Flow (vph)	179	104	234	152	82	23	541	1140	87	347	1073	160
Heavy Vehicles (%)	3%	3%	8%	2%	2%	2%	8%	4%	2%	2%	4%	4%
Turn Type	pm+pt		pm+ov	pm+pt		Perm	Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)	24.0	13.8	35.7	17.8	10.7	10.7	21.9	39.5	39.5	56.8	36.5	46.7
Effective Green, g (s)	26.3	15.2	38.5	17.8	10.7	10.7	23.3	41.4	41.4	58.7	38.4	50.0
Actuated g/C Ratio	0.26	0.15	0.38	0.18	0.11	0.11	0.23	0.41	0.41	0.59	0.38	0.50
Clearance Time (s)	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.9	5.9	4.0	5.9	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	657	280	635	510	199	169	755	2065	655	482	1915	1476
v/s Ratio Prot	c0.03	0.06	c0.09	0.02	0.04		c0.17	c0.23		0.15	0.22	0.01
v/s Ratio Perm	0.04		0.07	0.03		0.01			0.05	c0.28		0.05
v/c Ratio	0.27	0.37	0.37	0.30	0.41	0.13	0.72	0.55	0.13	0.72	0.56	0.11
Uniform Delay, d1	28.8	38.1	22.0	35.3	41.7	40.5	35.3	22.3	18.2	14.7	24.2	13.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.57	0.28	0.05	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.8	0.4	0.3	1.4	0.4	2.0	0.6	0.2	5.1	1.2	0.0
Delay (s)	29.0	38.9	22.4	35.7	43.1	40.8	57.3	6.9	1.2	19.8	25.4	13.2
Level of Service	C	D	C	D	D	D	E	A	A	B	C	B
Approach Delay (s)		27.7			39.5			20.7			22.0	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

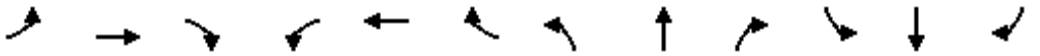
c Critical Lane Group



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	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
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)	1752	1863	1553	3400	1863	1583	3367	4940	1568	1752	4920	
Flt Permitted	0.39	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	716	1863	1553	3400	1863	1583	3367	4940	1568	206	4920	
Volume (vph)	72	123	97	406	343	351	323	1524	162	223	1287	42
Peak-hour factor, PHF	0.95	0.95	0.95	0.98	0.98	0.98	0.94	0.94	0.94	0.97	0.97	0.97
Adj. Flow (vph)	76	129	102	414	350	358	344	1621	172	230	1327	43
RTOR Reduction (vph)	0	0	16	0	0	261	0	0	109	0	3	0
Lane Group Flow (vph)	76	129	86	414	350	97	344	1621	63	230	1367	0
Heavy Vehicles (%)	3%	2%	4%	3%	2%	2%	4%	5%	3%	3%	5%	3%
Turn Type	pm+pt		pm+ov	Prot		Perm	Prot		Perm	pm+pt		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		
Actuated Green, G (s)	23.9	16.7	28.4	16.1	25.6	25.6	11.7	34.7	34.7	43.1	33.9	
Effective Green, g (s)	28.5	19.0	30.7	17.5	27.0	27.0	11.7	36.6	36.6	46.7	35.8	
Actuated g/C Ratio	0.28	0.19	0.31	0.18	0.27	0.27	0.12	0.37	0.37	0.47	0.36	
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.4	4.0	5.9	5.9	5.7	5.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	302	354	539	595	503	427	394	1808	574	265	1761	
v/s Ratio Prot	0.02	0.07	0.02	c0.12	c0.19		c0.10	c0.33		0.09	0.28	
v/s Ratio Perm	0.05		0.04			0.06			0.04	0.31		
v/c Ratio	0.25	0.36	0.16	0.70	0.70	0.23	0.87	0.90	0.11	0.87	0.78	
Uniform Delay, d1	26.9	35.2	25.3	38.7	32.8	28.4	43.4	29.9	20.9	23.5	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.01	1.64	1.72	0.95	
Incremental Delay, d2	0.4	0.6	0.1	3.5	4.2	0.3	11.4	4.4	0.2	22.6	3.1	
Delay (s)	27.3	35.9	25.4	42.3	37.0	28.7	53.0	34.5	34.5	63.1	30.1	
Level of Service	C	D	C	D	D	C	D	C	C	E	C	
Approach Delay (s)		30.3			36.3			37.5			34.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

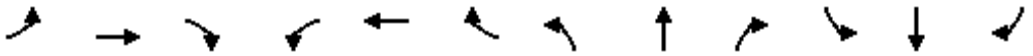
c Critical Lane Group



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				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1752		1538	1736	3438			4940	1553
Flt Permitted				0.95		1.00	0.23	1.00			1.00	1.00
Satd. Flow (perm)				1752		1538	425	3438			4940	1553
Volume (vph)	0	0	0	176	0	265	606	1977	0	0	911	1079
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.92	0.91	0.98	0.98	0.92	0.92	0.99	0.99
Adj. Flow (vph)	0	0	0	193	0	291	618	2017	0	0	920	1090
RTOR Reduction (vph)	0	0	0	0	0	23	0	0	0	0	0	277
Lane Group Flow (vph)	0	0	0	193	0	268	618	2017	0	0	920	813
Heavy Vehicles (%)	2%	2%	2%	3%	2%	5%	4%	5%	2%	2%	5%	4%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				16.0		16.0	72.4	72.4			47.4	47.4
Effective Green, g (s)				17.7		17.7	74.3	74.3			49.3	49.3
Actuated g/C Ratio				0.18		0.18	0.74	0.74			0.49	0.49
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				310		272	591	2554			2435	766
v/s Ratio Prot							c0.22	0.59			0.19	
v/s Ratio Perm				0.11		c0.17	c0.56					0.52
v/c Ratio				0.62		0.99	1.05	0.79			0.38	1.06
Uniform Delay, d1				38.1		41.0	17.6	8.0			15.8	25.4
Progression Factor				1.00		1.00	1.50	0.17			0.33	1.21
Incremental Delay, d2				3.9		50.0	38.1	1.2			0.3	45.9
Delay (s)				41.9		91.1	64.6	2.6			5.6	76.6
Level of Service				D		F	E	A			A	E
Approach Delay (s)		0.0			71.5			17.1			44.1	
Approach LOS		A			E			B			D	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	148.8%	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	0.97		0.88					0.91		0.97	0.95	
Frt	1.00		0.85					0.98		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3367		2760					4882		3367	3471	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3367		2760					4882		3367	3471	
Volume (vph)	916	0	591	0	0	0	0	1674	275	270	859	0
Peak-hour factor, PHF	0.99	0.92	0.99	0.92	0.92	0.92	0.92	0.99	0.99	0.99	0.99	0.92
Adj. Flow (vph)	925	0	597	0	0	0	0	1691	278	273	868	0
RTOR Reduction (vph)	0	0	197	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	925	0	400	0	0	0	0	1947	0	273	868	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	4%	4%	4%	4%	2%
Turn Type	custom		custom							Prot		
Protected Phases								2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	29.7		29.7					44.1		9.7	59.1	
Effective Green, g (s)	31.3		31.3					45.7		11.0	60.7	
Actuated g/C Ratio	0.31		0.31					0.46		0.11	0.61	
Clearance Time (s)	5.6		5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	1054		864					2231		370	2107	
v/s Ratio Prot								c0.40		c0.08	0.25	
v/s Ratio Perm	c0.27		0.14									
v/c Ratio	0.88		0.46					0.87		0.74	0.41	
Uniform Delay, d1	32.5		27.6					24.5		43.1	10.3	
Progression Factor	1.00		1.00					0.67		0.85	0.55	
Incremental Delay, d2	8.4		0.4					2.3		7.0	0.6	
Delay (s)	40.9		28.0					18.7		43.6	6.2	
Level of Service	D		C					B		D	A	
Approach Delay (s)		35.9			0.0			18.7			15.1	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.8%	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	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1796		1770	1863	1583	1770	3505	1583	3433	3505	1583
Flt Permitted	0.95	1.00		0.44	1.00	1.00	0.32	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1796		812	1863	1583	604	3505	1583	3433	3505	1583
Volume (vph)	200	80	25	185	156	535	24	1213	59	366	841	244
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.97	0.97	0.97	0.96	0.96	0.96
Adj. Flow (vph)	208	83	26	206	173	594	25	1251	61	381	876	254
RTOR Reduction (vph)	0	11	0	0	0	9	0	0	36	0	0	110
Lane Group Flow (vph)	208	98	0	206	173	585	25	1251	25	381	876	144
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	3%	2%
Turn Type	Prot			pm+pt		pm+ov	pm+pt		Perm	Prot		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases				8		8	2		2			6
Actuated Green, G (s)	4.0	9.4		25.2	15.3	33.4	39.6	38.0	38.0	18.1	54.5	54.5
Effective Green, g (s)	7.0	11.6		28.5	17.5	37.0	43.0	40.0	40.0	19.5	56.5	56.5
Actuated g/C Ratio	0.07	0.12		0.28	0.18	0.37	0.43	0.40	0.40	0.20	0.56	0.56
Clearance Time (s)	7.0	6.2		7.0	6.2	5.4	5.4	6.0	6.0	5.4	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	240	208		355	326	649	295	1402	633	669	1980	894
v/s Ratio Prot	c0.06	0.05		0.07	0.09	c0.18	0.00	c0.36		0.11	0.25	
v/s Ratio Perm				0.09		0.19	0.03		0.02			0.09
v/c Ratio	0.87	0.47		0.58	0.53	0.90	0.08	0.89	0.04	0.57	0.44	0.16
Uniform Delay, d1	46.0	41.3		29.1	37.5	29.8	16.5	28.0	18.3	36.4	12.6	10.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.01	0.83	0.48
Incremental Delay, d2	26.3	1.7		2.4	1.7	15.8	0.1	9.0	0.1	1.0	0.7	0.3
Delay (s)	72.3	43.0		31.5	39.2	45.5	16.6	37.0	18.4	37.9	11.1	5.3
Level of Service	E	D		C	D	D	B	D	B	D	B	A
Approach Delay (s)		62.2			41.4			35.7			16.9	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	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	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3505	1538	3367	3505	1583	3335	5085	1568	1770	5036	1583
Flt Permitted	0.13	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	240	3505	1538	3367	3505	1583	3335	5085	1568	310	5036	1583
Volume (vph)	344	1235	611	288	767	355	543	927	260	313	977	175
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	355	1273	630	297	791	366	566	966	271	316	987	177
RTOR Reduction (vph)	0	0	234	0	0	257	0	0	166	0	0	142
Lane Group Flow (vph)	355	1273	396	297	791	109	566	966	105	316	987	35
Heavy Vehicles (%)	2%	3%	5%	4%	3%	2%	5%	2%	3%	2%	3%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2			6			8	4		4
Actuated Green, G (s)	60.0	44.0	44.0	10.5	33.3	33.3	19.6	24.4	24.4	39.2	22.0	22.0
Effective Green, g (s)	62.6	46.6	46.6	12.0	35.9	35.9	21.4	26.4	26.4	43.0	24.0	24.0
Actuated g/C Ratio	0.52	0.39	0.39	0.10	0.30	0.30	0.18	0.22	0.22	0.36	0.20	0.20
Clearance Time (s)	5.5	6.6	6.6	5.5	6.6	6.6	5.8	6.0	6.0	5.8	6.0	6.0
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	415	1361	597	337	1049	474	595	1119	345	342	1007	317
v/s Ratio Prot	c0.16	c0.36		0.09	0.23		c0.17	0.19		0.15	c0.20	
v/s Ratio Perm	0.28		0.26			0.07			0.07	0.18		0.02
v/c Ratio	0.86	0.94	0.66	0.88	0.75	0.23	0.95	0.86	0.30	0.92	0.98	0.11
Uniform Delay, d1	30.1	35.3	30.2	53.3	38.1	31.7	48.8	45.1	39.1	32.1	47.8	39.3
Progression Factor	0.81	0.92	1.09	1.00	1.00	1.00	0.83	1.02	1.57	1.00	1.00	1.00
Incremental Delay, d2	11.1	9.6	3.9	22.5	5.0	1.1	20.2	6.6	1.6	29.8	24.0	0.7
Delay (s)	35.3	42.1	36.8	75.8	43.1	32.8	60.8	52.6	63.0	61.9	71.7	40.0
Level of Service	D	D	D	E	D	C	E	D	E	E	E	D
Approach Delay (s)		39.6			47.2			56.8			65.8	
Approach LOS		D			D			E			E	

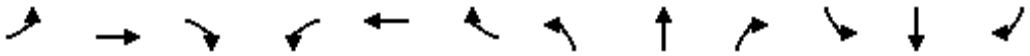
Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		

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
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3505	1553		3492	1736	1538
Flt Permitted	1.00	1.00		0.58	0.95	1.00
Satd. Flow (perm)	3505	1553		2038	1736	1538
Volume (vph)	2040	70	81	1440	63	168
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.83	0.83
Adj. Flow (vph)	2147	74	84	1485	76	202
RTOR Reduction (vph)	0	15	0	0	0	24
Lane Group Flow (vph)	2147	59	0	1569	76	178
Heavy Vehicles (%)	3%	4%	5%	3%	4%	5%
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	95.9	95.9		95.9	16.1	16.1
Effective Green, g (s)	95.9	95.9		95.9	16.1	16.1
Actuated g/C Ratio	0.80	0.80		0.80	0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2801	1241		1629	233	206
v/s Ratio Prot	0.61				0.04	
v/s Ratio Perm		0.04		c0.77		c0.12
v/c Ratio	0.77	0.05		1.09dl	0.33	0.86
Uniform Delay, d1	6.2	2.5		10.5	47.0	50.9
Progression Factor	0.57	0.00		1.16	1.00	1.00
Incremental Delay, d2	0.1	0.0		11.3	3.7	35.1
Delay (s)	3.7	0.0		23.5	50.7	85.9
Level of Service	A	A		C	D	F
Approach Delay (s)	3.5			23.5	76.3	
Approach LOS	A			C	E	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

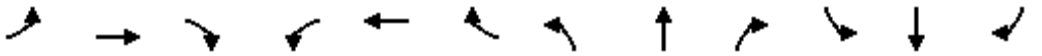
dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group



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	0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (prot)	1770	3505	1568	1752	3505	1583	1665	1678	1568		1751	
Flt Permitted	0.12	1.00	1.00	0.06	1.00	1.00	0.95	0.96	1.00		0.97	
Satd. Flow (perm)	215	3505	1568	112	3505	1583	1665	1678	1568		1751	
Volume (vph)	46	1940	375	160	1287	50	395	20	145	114	42	54
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.95	0.95	0.95	0.86	0.86	0.86
Adj. Flow (vph)	48	2021	391	163	1313	51	416	21	153	133	49	63
RTOR Reduction (vph)	0	0	121	0	0	23	0	0	110	0	10	0
Lane Group Flow (vph)	48	2021	270	163	1313	28	212	225	43	0	235	0
Heavy Vehicles (%)	2%	3%	3%	3%	3%	2%	3%	2%	3%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases	2		2	6		6			8			
Actuated Green, G (s)	68.0	64.0	64.0	71.0	66.0	66.0	16.0	16.0	16.0		16.0	
Effective Green, g (s)	72.0	66.0	66.0	72.0	66.0	66.0	16.0	16.0	16.0		16.0	
Actuated g/C Ratio	0.60	0.55	0.55	0.60	0.55	0.55	0.13	0.13	0.13		0.13	
Clearance Time (s)	6.0	6.0	6.0	5.0	4.0	4.0	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)	207	1928	862	149	1928	871	222	224	209		233	
v/s Ratio Prot	0.01	0.58		c0.05	0.37		0.13	c0.13			c0.13	
v/s Ratio Perm	0.13		0.17	c0.60		0.02			0.03			
v/c Ratio	0.23	1.05	0.31	1.09	0.68	0.03	0.95	1.00	0.21		1.01	
Uniform Delay, d1	14.0	27.0	14.7	59.2	19.4	12.4	51.6	52.0	46.3		52.0	
Progression Factor	0.64	0.41	0.14	0.90	1.27	1.68	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	31.7	0.7	71.2	0.5	0.0	49.8	61.3	2.2		60.7	
Delay (s)	9.1	42.8	2.7	124.6	25.1	20.7	101.4	113.3	48.5		112.7	
Level of Service	A	D	A	F	C	C	F	F	D		F	
Approach Delay (s)		35.8			35.6			92.2			112.7	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		

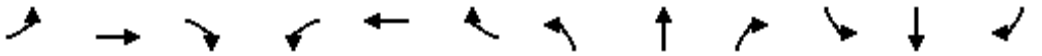
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.91	1.00	1.00	0.91	1.00		1.00			1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	1770	5036	1583	1770	5036	1583		1717			1787	2787
Flt Permitted	0.10	1.00	1.00	0.11	1.00	1.00		0.98			0.96	1.00
Satd. Flow (perm)	184	5036	1583	204	5036	1583		1717			1787	2787
Volume (vph)	519	2020	68	56	1459	177	59	29	73	136	24	316
Peak-hour factor, PHF	1.00	1.00	1.00	0.98	0.98	0.98	0.88	0.88	0.88	0.95	0.95	0.95
Adj. Flow (vph)	519	2020	68	57	1489	181	67	33	83	143	25	333
RTOR Reduction (vph)	0	0	30	0	0	110	0	25	0	0	0	197
Lane Group Flow (vph)	519	2020	38	57	1489	71	0	158	0	0	168	136
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases	2		2	6		6						4
Actuated Green, G (s)	68.0	58.4	58.4	37.1	33.0	33.0		16.0			16.0	44.0
Effective Green, g (s)	71.5	61.9	61.9	42.1	36.5	36.5		18.5			18.0	49.0
Actuated g/C Ratio	0.60	0.52	0.52	0.35	0.30	0.30		0.15			0.15	0.41
Clearance Time (s)	7.0	7.5	7.5	5.5	7.5	7.5		6.5			6.0	7.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0		2.0			2.0	2.0
Lane Grp Cap (vph)	519	2598	817	145	1532	481		265			268	1138
v/s Ratio Prot	c0.26	0.40		0.02	0.30			c0.09			c0.09	0.03
v/s Ratio Perm	c0.34		0.02	0.12		0.04						0.02
v/c Ratio	1.00	0.78	0.05	0.39	0.97	0.15		0.60			0.63	0.12
Uniform Delay, d1	36.6	23.5	14.4	26.8	41.2	30.4		47.3			47.8	22.1
Progression Factor	0.81	0.46	0.12	1.12	0.77	0.64		1.00			1.00	1.00
Incremental Delay, d2	25.3	1.0	0.0	0.4	12.9	0.4		9.6			10.6	0.0
Delay (s)	54.7	11.8	1.8	30.4	44.6	19.9		56.9			58.5	22.1
Level of Service	D	B	A	C	D	B		E			E	C
Approach Delay (s)		20.1			41.6			56.9			34.3	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5036	1583	3433	5036	1583	1770	3539	1583	3433	3539	2787
Volume (vph)	448	1513	56	342	1081	463	161	588	405	677	509	212
Peak-hour factor, PHF	0.98	0.98	0.98	1.00	1.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	457	1544	57	342	1081	463	168	612	422	698	525	219
RTOR Reduction (vph)	0	0	33	0	0	266	0	0	182	0	0	109
Lane Group Flow (vph)	457	1544	24	342	1081	197	168	612	240	698	525	110
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	16.7	37.6	37.6	12.4	32.8	32.8	14.4	20.5	20.5	23.0	29.1	45.8
Effective Green, g (s)	18.7	41.1	41.1	13.9	36.3	36.3	17.4	23.0	23.0	26.0	31.6	50.3
Actuated g/C Ratio	0.16	0.34	0.34	0.12	0.30	0.30	0.14	0.19	0.19	0.22	0.26	0.42
Clearance Time (s)	6.0	7.5	7.5	5.5	7.5	7.5	7.0	6.5	6.5	7.0	6.5	6.0
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	5.0	2.0	5.0	2.0
Lane Grp Cap (vph)	535	1725	542	398	1523	479	257	678	303	744	932	1261
v/s Ratio Prot	c0.13	c0.31		0.10	0.21		0.09	c0.17		c0.20	0.15	0.01
v/s Ratio Perm			0.02			0.12			0.15			0.03
v/c Ratio	0.85	0.90	0.04	0.86	0.71	0.41	0.65	0.90	0.79	0.94	0.56	0.09
Uniform Delay, d1	49.3	37.4	26.3	52.1	37.2	33.3	48.5	47.4	46.2	46.2	38.2	21.0
Progression Factor	1.00	1.00	1.00	1.25	0.57	1.40	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.1	7.7	0.2	9.2	1.5	1.4	4.5	17.6	18.9	19.0	2.5	0.0
Delay (s)	61.5	45.1	26.5	74.4	22.5	48.2	53.0	65.0	65.1	65.3	40.7	21.0
Level of Service	E	D	C	E	C	D	D	E	E	E	D	C
Approach Delay (s)		48.2			38.2			63.3			49.6	
Approach LOS		D			D			E			D	

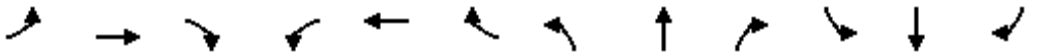
Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	4.0
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	1.00	0.91	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1863	1468	3433	1863	1583	3335	5085	1583	1770	5085	2760
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	3400	1863	1468	3433	1863	1583	3335	5085	1583	413	5085	2760
Volume (vph)	432	80	423	285	40	430	1181	1099	200	360	1179	897
Peak-hour factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.98	0.98	0.98
Adj. Flow (vph)	450	83	441	300	42	453	1243	1157	211	367	1203	915
RTOR Reduction (vph)	0	0	10	0	0	7	0	0	133	0	0	230
Lane Group Flow (vph)	450	83	431	300	42	446	1243	1157	78	367	1203	685
Heavy Vehicles (%)	3%	2%	10%	2%	2%	2%	5%	2%	2%	2%	2%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Perm	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			2	6		6
Actuated Green, G (s)	18.1	9.7	59.4	15.8	7.4	40.4	49.7	42.2	42.2	57.1	24.1	42.2
Effective Green, g (s)	19.5	11.1	62.2	15.8	7.4	40.4	51.1	44.1	44.1	59.0	26.0	45.5
Actuated g/C Ratio	0.16	0.09	0.52	0.13	0.06	0.34	0.43	0.37	0.37	0.49	0.22	0.38
Clearance Time (s)	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.9	5.9	4.0	5.9	5.4
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	3.0
Lane Grp Cap (vph)	553	172	810	452	115	586	1420	1869	582	576	1102	1139
v/s Ratio Prot	c0.13	0.04	c0.23	0.09	0.02	c0.21	c0.37	0.23		0.18	c0.24	0.10
v/s Ratio Perm			0.07			0.07			0.05	0.14		0.15
v/c Ratio	0.81	0.48	0.53	0.66	0.37	0.76	0.88	0.62	0.13	0.64	1.09	0.60
Uniform Delay, d1	48.5	51.7	19.2	49.6	54.0	35.5	31.5	31.1	25.2	19.6	47.0	30.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.73	1.12	2.67	1.11	0.80	1.00
Incremental Delay, d2	8.9	2.1	0.7	3.7	2.0	5.8	2.8	0.7	0.2	1.7	52.2	0.6
Delay (s)	57.4	53.8	19.9	53.2	56.0	41.3	26.0	35.3	67.5	23.5	89.8	30.6
Level of Service	E	D	B	D	E	D	C	D	E	C	F	C
Approach Delay (s)		40.1			46.6			33.5			58.2	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM Average Control Delay	44.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

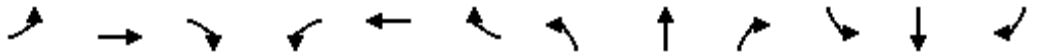
c Critical Lane Group



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	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1845	1538	3400	1863	1583	3400	4940	1583	3433	4893	1568
Flt Permitted	0.28	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	511	1845	1538	3400	1863	1583	3400	4940	1583	3433	4893	1568
Volume (vph)	205	201	150	700	329	594	406	1657	155	382	1513	151
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	220	216	161	737	346	625	414	1691	158	386	1528	153
RTOR Reduction (vph)	0	0	4	0	0	43	0	0	84	0	0	90
Lane Group Flow (vph)	220	216	157	737	346	582	414	1691	74	386	1528	63
Heavy Vehicles (%)	3%	3%	5%	3%	2%	2%	3%	5%	2%	2%	6%	3%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		Perm	Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases	4		4			8			2			6
Actuated Green, G (s)	29.8	15.4	31.0	24.6	25.6	40.7	15.6	41.6	41.6	15.1	42.8	42.8
Effective Green, g (s)	34.4	17.7	33.3	26.0	27.0	43.8	15.6	43.5	43.5	16.8	44.7	44.7
Actuated g/C Ratio	0.29	0.15	0.28	0.22	0.22	0.36	0.13	0.36	0.36	0.14	0.37	0.37
Clearance Time (s)	6.3	6.3	4.0	5.4	5.4	5.7	4.0	5.9	5.9	5.7	5.9	5.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	319	272	478	737	419	631	442	1791	574	481	1823	584
v/s Ratio Prot	0.10	0.12	0.04	c0.22	0.19	c0.13	0.12	c0.34		0.11	0.31	
v/s Ratio Perm	0.10		0.06			0.24			0.05			0.04
v/c Ratio	0.69	0.79	0.33	1.00	0.83	0.92	0.94	0.94	0.13	0.80	0.84	0.11
Uniform Delay, d1	35.3	49.4	34.5	47.0	44.3	36.5	51.7	37.1	25.6	50.0	34.4	24.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.16	0.84	0.65	0.69	0.88	1.69
Incremental Delay, d2	6.1	14.7	0.4	33.2	12.5	19.1	15.7	6.2	0.2	5.4	2.7	0.2
Delay (s)	41.4	64.1	34.9	80.2	56.8	55.5	75.7	37.4	16.9	40.1	33.1	41.7
Level of Service	D	E	C	F	E	E	E	D	B	D	C	D
Approach Delay (s)		47.8			66.4			43.0			35.0	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	47.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

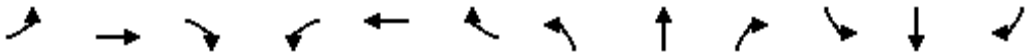
c Critical Lane Group



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
Lane Util. Factor				1.00		1.00	1.00	0.95			0.91	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770		1538	1752	3505			4988	1538
Flt Permitted				0.95		1.00	0.09	1.00			1.00	1.00
Satd. Flow (perm)				1770		1538	158	3505			4988	1538
Volume (vph)	0	0	0	439	0	334	646	2107	0	0	1906	702
Peak-hour factor, PHF	0.92	0.92	0.92	0.98	0.92	0.98	0.99	0.99	0.92	0.92	1.00	1.00
Adj. Flow (vph)	0	0	0	448	0	341	653	2128	0	0	1906	702
RTOR Reduction (vph)	0	0	0	0	0	13	0	0	0	0	0	332
Lane Group Flow (vph)	0	0	0	448	0	328	653	2128	0	0	1906	370
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	3%	3%	2%	2%	4%	5%
Turn Type				custom		custom	pm+pt					Perm
Protected Phases							5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				26.6		26.6	81.8	81.8			40.7	40.7
Effective Green, g (s)				28.3		28.3	83.7	83.7			42.6	42.6
Actuated g/C Ratio				0.24		0.24	0.70	0.70			0.36	0.36
Clearance Time (s)				5.7		5.7	5.6	5.9			5.9	5.9
Vehicle Extension (s)				3.0		3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				417		363	603	2445			1771	546
v/s Ratio Prot							c0.33	0.61			0.38	
v/s Ratio Perm				c0.25		0.21	c0.42					0.24
v/c Ratio				1.07		0.90	1.08	0.87			1.08	0.68
Uniform Delay, d1				45.8		44.5	43.7	14.0			38.7	32.9
Progression Factor				1.00		1.00	1.08	0.26			0.76	0.69
Incremental Delay, d2				65.4		24.8	40.5	0.4			41.2	3.9
Delay (s)				111.2		69.4	87.6	4.1			70.5	26.5
Level of Service				F		E	F	A			E	C
Approach Delay (s)		0.0			93.1			23.7			58.7	
Approach LOS		A			F			C			E	

Intersection Summary			
HCM Average Control Delay	47.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	144.0%	ICU Level of Service	H
Analysis Period (min)	15		

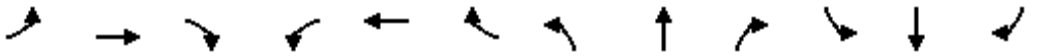
c Critical Lane Group



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	
Lane Util. Factor	0.97		0.88					0.91		0.97	0.95	
Frt	1.00		0.85					0.97		1.00	1.00	
Flt Protected	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (prot)	3367		2760					4850		3335	3505	
Flt Permitted	0.95		1.00					1.00		0.95	1.00	
Satd. Flow (perm)	3367		2760					4850		3335	3505	
Volume (vph)	1091	0	754	0	0	0	0	1692	509	592	1821	0
Peak-hour factor, PHF	1.00	0.92	1.00	0.92	0.92	0.92	0.92	1.00	1.00	0.99	0.99	0.92
Adj. Flow (vph)	1091	0	754	0	0	0	0	1692	509	598	1839	0
RTOR Reduction (vph)	0	0	26	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	1091	0	728	0	0	0	0	2156	0	598	1839	0
Heavy Vehicles (%)	4%	2%	3%	2%	2%	2%	2%	3%	4%	5%	3%	2%
Turn Type	custom		custom							Prot		
Protected Phases								2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	34.4		34.4					50.0		19.1	74.4	
Effective Green, g (s)	36.0		36.0					51.6		20.4	76.0	
Actuated g/C Ratio	0.30		0.30					0.43		0.17	0.63	
Clearance Time (s)	5.6		5.6					5.6		5.3	5.6	
Vehicle Extension (s)	3.0		3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	1010		828					2086		567	2220	
v/s Ratio Prot								c0.44		c0.18	0.52	
v/s Ratio Perm	c0.32		0.26									
v/c Ratio	1.08		0.88					1.03		1.05	0.83	
Uniform Delay, d1	42.0		39.9					34.2		49.8	17.0	
Progression Factor	1.00		1.00					0.77		0.64	0.75	
Incremental Delay, d2	52.6		10.5					21.5		29.2	0.4	
Delay (s)	94.6		50.4					48.0		60.9	13.1	
Level of Service	F		D					D		E	B	
Approach Delay (s)		76.5			0.0			48.0			24.8	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	144.0%	ICU Level of Service	H
Analysis Period (min)	15		

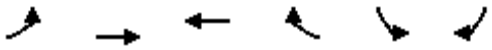
c Critical Lane Group



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	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1837		1770	1863	1568	1770	3471	1583	3433	3471	1583
Flt Permitted	0.95	1.00		0.26	1.00	1.00	0.10	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	1837		478	1863	1568	183	3471	1583	3433	3471	1583
Volume (vph)	511	332	34	311	74	416	63	1275	202	790	1707	78
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	532	346	35	317	76	424	63	1275	202	790	1707	78
RTOR Reduction (vph)	0	3	0	0	0	5	0	0	101	0	0	29
Lane Group Flow (vph)	532	378	0	317	76	419	63	1275	101	790	1707	49
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	4%	2%	2%	4%	2%
Turn Type	Prot			pm+pt		pm+ov	pm+pt		Perm	Prot		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases				8		8	2		2			6
Actuated Green, G (s)	19.6	22.0		24.4	13.4	37.0	42.0	38.8	38.8	23.6	59.2	59.2
Effective Green, g (s)	22.6	24.2		29.6	15.6	40.6	45.4	40.8	40.8	25.0	61.2	61.2
Actuated g/C Ratio	0.19	0.20		0.25	0.13	0.34	0.38	0.34	0.34	0.21	0.51	0.51
Clearance Time (s)	7.0	6.2		7.0	6.2	5.4	5.4	6.0	6.0	5.4	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	5.0	5.0	3.0	5.0	5.0
Lane Grp Cap (vph)	640	370		269	242	583	130	1180	538	715	1770	807
v/s Ratio Prot	0.16	c0.21		c0.14	0.04	0.15	0.02	c0.37		c0.23	0.49	
v/s Ratio Perm				0.15		0.12	0.17		0.06			0.03
v/c Ratio	0.83	1.02		1.18	0.31	0.72	0.48	1.08	0.19	1.10	0.96	0.06
Uniform Delay, d1	46.9	47.9		42.4	47.3	34.7	29.2	39.6	27.9	47.5	28.3	14.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.28	1.55
Incremental Delay, d2	9.0	52.3		112.0	0.7	4.2	2.8	50.8	0.8	58.1	9.0	0.1
Delay (s)	55.9	100.2		154.4	48.1	39.0	32.0	90.4	28.7	101.9	45.1	23.1
Level of Service	E	F		F	D	D	C	F	C	F	D	C
Approach Delay (s)		74.4			84.6			79.9			61.9	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM Average Control Delay	71.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		

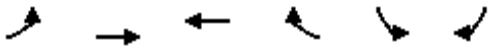
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	51	1006	1775	60	48	48
Peak Hour Factor	0.95	0.95	0.99	0.99	0.85	0.85
Hourly flow rate (vph)	54	1059	1793	61	56	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		723	690			
pX, platoon unblocked	0.70				0.73	0.70
vC, conflicting volume	1854				2430	896
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1792				2399	434
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	78				0	86
cM capacity (veh/h)	240				16	402

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	407	706	896	896	61	56	56
Volume Left	54	0	0	0	0	56	0
Volume Right	0	0	0	0	61	0	56
cSH	240	1700	1700	1700	1700	16	402
Volume to Capacity	0.22	0.42	0.53	0.53	0.04	3.59	0.14
Queue Length 95th (ft)	21	0	0	0	0	Err	12
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	Err	15.4
Lane LOS	A					F	C
Approach Delay (s)	3.3		0.0			5007.2	
Approach LOS						F	

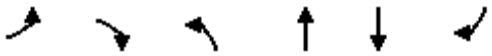
Intersection Summary			
Average Delay	184.9		
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	1055	1809	0	0	27
Peak Hour Factor	0.92	0.95	0.99	0.92	0.92	0.85
Hourly flow rate (vph)	0	1111	1827	0	0	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1009	404			
pX, platoon unblocked	0.70				0.71	0.70
vC, conflicting volume	1827				2383	914
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1754				2439	452
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	92
cM capacity (veh/h)	248				19	389

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	555	555	914	914	32
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	32
cSH	1700	1700	1700	1700	389
Volume to Capacity	0.33	0.33	0.54	0.54	0.08
Queue Length 95th (ft)	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	15.1
Lane LOS					C
Approach Delay (s)	0.0		0.0		15.1
Approach LOS					C

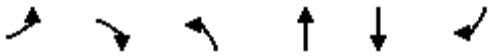
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	6	12	2	1158	1421	7
Peak Hour Factor	0.80	0.80	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	8	15	2	1194	1465	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1213		
pX, platoon unblocked	0.83					
vC, conflicting volume	2070	736	1472			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2084	736	1472			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	80	96	100			
cM capacity (veh/h)	38	361	454			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	22	2	597	597	977	496
Volume Left	8	2	0	0	0	0
Volume Right	15	0	0	0	0	7
cSH	94	454	1700	1700	1700	1700
Volume to Capacity	0.24	0.00	0.35	0.35	0.57	0.29
Queue Length 95th (ft)	22	0	0	0	0	0
Control Delay (s)	55.2	13.0	0.0	0.0	0.0	0.0
Lane LOS	F	B				
Approach Delay (s)	55.2	0.0			0.0	
Approach LOS	F					

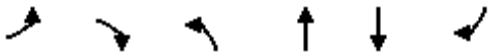
Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	14	27	9	1147	1419	13
Peak Hour Factor	0.85	0.85	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	16	32	9	1182	1463	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				782		
pX, platoon unblocked	0.83					
vC, conflicting volume	2073	731	1476			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2087	731	1476			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	55	91	98			
cM capacity (veh/h)	37	364	452			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	48	9	591	591	731	731	13
Volume Left	16	9	0	0	0	0	0
Volume Right	32	0	0	0	0	0	13
cSH	91	452	1700	1700	1700	1700	1700
Volume to Capacity	0.53	0.02	0.35	0.35	0.43	0.43	0.01
Queue Length 95th (ft)	59	2	0	0	0	0	0
Control Delay (s)	83.0	13.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B					
Approach Delay (s)	83.0	0.1			0.0		
Approach LOS	F						

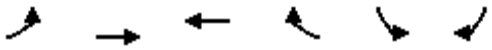
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	10	29	9	1146	1445	8
Peak Hour Factor	0.80	0.80	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	12	36	9	1181	1490	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				541		
pX, platoon unblocked	0.84					
vC, conflicting volume	2099	745	1498			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2118	745	1498			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	65	90	98			
cM capacity (veh/h)	36	357	444			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	9	591	591	745	745	8
Volume Left	12	9	0	0	0	0	0
Volume Right	36	0	0	0	0	0	8
cSH	107	444	1700	1700	1700	1700	1700
Volume to Capacity	0.45	0.02	0.35	0.35	0.44	0.44	0.00
Queue Length 95th (ft)	49	2	0	0	0	0	0
Control Delay (s)	63.7	13.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B					
Approach Delay (s)	63.7	0.1			0.0		
Approach LOS	F						

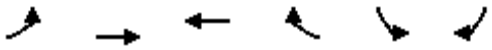
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	121	2079	1390	114	117	83
Peak Hour Factor	0.97	0.97	0.97	0.97	0.90	0.90
Hourly flow rate (vph)	125	2143	1433	118	130	92
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		723	690			
pX, platoon unblocked	0.81				0.33	0.81
vC, conflicting volume	1551				2754	716
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1443				2533	409
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	67				0	81
cM capacity (veh/h)	376				5	477

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SB 1	SB 2
Volume Total	839	1429	716	716	118	130	92
Volume Left	125	0	0	0	0	130	0
Volume Right	0	0	0	0	118	0	92
cSH	376	1700	1700	1700	1700	5	477
Volume to Capacity	0.33	0.84	0.42	0.42	0.07	26.48	0.19
Queue Length 95th (ft)	36	0	0	0	0	Err	18
Control Delay (s)	12.3	0.0	0.0	0.0	0.0	Err	14.3
Lane LOS	B					F	B
Approach Delay (s)	4.5		0.0			5855.4	
Approach LOS						F	

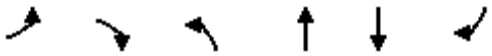
Intersection Summary			
Average Delay	324.6		
Intersection Capacity Utilization	115.9%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	2199	1475	0	0	36
Peak Hour Factor	0.92	0.97	0.97	0.92	0.92	0.85
Hourly flow rate (vph)	0	2267	1521	0	0	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1009	404			
pX, platoon unblocked	0.80				0.68	0.80
vC, conflicting volume	1521				2654	760
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1399				2067	445
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	91
cM capacity (veh/h)	386				32	447

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	1134	1134	760	760	42
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	42
cSH	1700	1700	1700	1700	447
Volume to Capacity	0.67	0.67	0.45	0.45	0.09
Queue Length 95th (ft)	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	13.9
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.9
Approach LOS					B

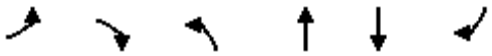
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	13	5	8	1610	1444	7
Peak Hour Factor	0.80	0.80	0.96	0.96	0.99	0.99
Hourly flow rate (vph)	16	6	8	1677	1459	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1213		
pX, platoon unblocked	0.79					
vC, conflicting volume	2317	733	1466			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2403	733	1466			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	24	98	98			
cM capacity (veh/h)	21	363	457			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	22	8	839	839	972	493
Volume Left	16	8	0	0	0	0
Volume Right	6	0	0	0	0	7
cSH	29	457	1700	1700	1700	1700
Volume to Capacity	0.78	0.02	0.49	0.49	0.57	0.29
Queue Length 95th (ft)	63	1	0	0	0	0
Control Delay (s)	293.8	13.0	0.0	0.0	0.0	0.0
Lane LOS	F	B				
Approach Delay (s)	293.8	0.1			0.0	
Approach LOS	F					

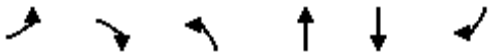
Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	54.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	23	35	22	1596	1414	33
Peak Hour Factor	0.85	0.85	0.96	0.96	0.99	0.99
Hourly flow rate (vph)	27	41	23	1662	1428	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				782		
pX, platoon unblocked	0.79					
vC, conflicting volume	2305	714	1462			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2386	714	1462			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	89	95			
cM capacity (veh/h)	21	374	458			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	23	831	831	714	714	33
Volume Left	27	23	0	0	0	0	0
Volume Right	41	0	0	0	0	0	33
cSH	50	458	1700	1700	1700	1700	1700
Volume to Capacity	1.38	0.05	0.49	0.49	0.42	0.42	0.02
Queue Length 95th (ft)	159	4	0	0	0	0	0
Control Delay (s)	391.3	13.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B					
Approach Delay (s)	391.3	0.2			0.0		
Approach LOS	F						

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	54.2%	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)	14	31	20	1601	1433	19
Peak Hour Factor	0.85	0.85	0.96	0.96	0.99	0.99
Hourly flow rate (vph)	16	36	21	1668	1447	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				541		
pX, platoon unblocked	0.79					
vC, conflicting volume	2323	724	1467			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2407	724	1467			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	21	90	95			
cM capacity (veh/h)	21	368	456			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	21	834	834	724	724	19
Volume Left	16	21	0	0	0	0	0
Volume Right	36	0	0	0	0	0	19
cSH	59	456	1700	1700	1700	1700	1700
Volume to Capacity	0.89	0.05	0.49	0.49	0.43	0.43	0.01
Queue Length 95th (ft)	102	4	0	0	0	0	0
Control Delay (s)	199.0	13.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B					
Approach Delay (s)	199.0	0.2			0.0		
Approach LOS	F						

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

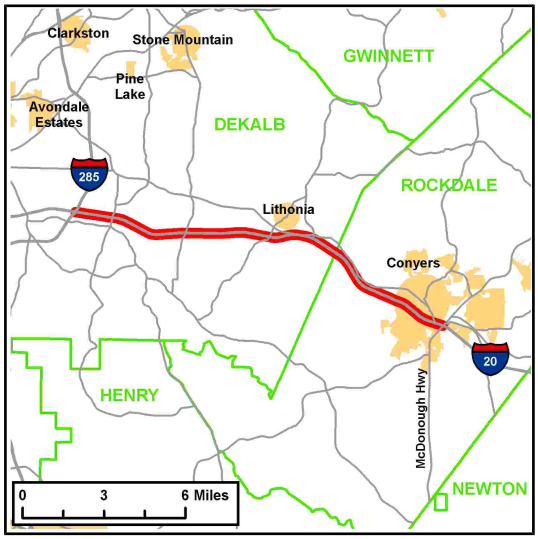
Appendix H
Programmed Infrastructure Improvements

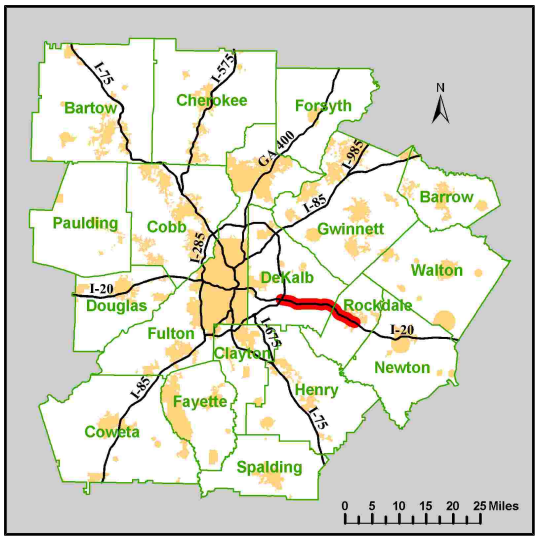
AR-305

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST ITS - COMMUNICATION AND SURVEILLANCE FROM I-285 EAST (DEKALB) TO SR 138/SR 20 (ROCKDALE)
GDOT Project No.	714085-
Federal ID No.	NH-20-2(179)
Status	Long Range
Detailed Description and Justification	The addition of fiber optic cable, surveillance cameras and changeable message signs from I-285 East to SR 20/138 interchange.
Service Type	ITS-Smart Corridor
Sponsor	GDOT
Jurisdiction	Multi-County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	14.9 miles (not applicable for all project types)
Network Year	2020 (required if modeled for conformity)
Completion Date	2020
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	National Highway System	2005	$0,000	$0,000	$0,000	$0,000	$0,000
CST	GRV BONDS (GARVEE Bond Program)	LR 2014-2020	$24,715,176	$0,000	$0,000	$24,715,176	$0,000
				$0,000	$0,000	$24,715,176	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

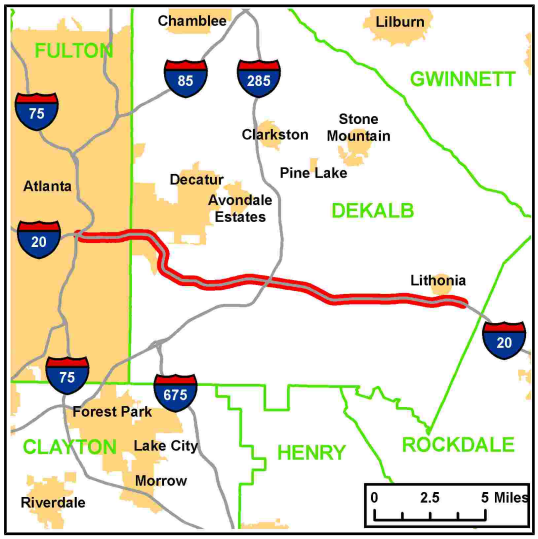
Report Generated: 3/9/2007

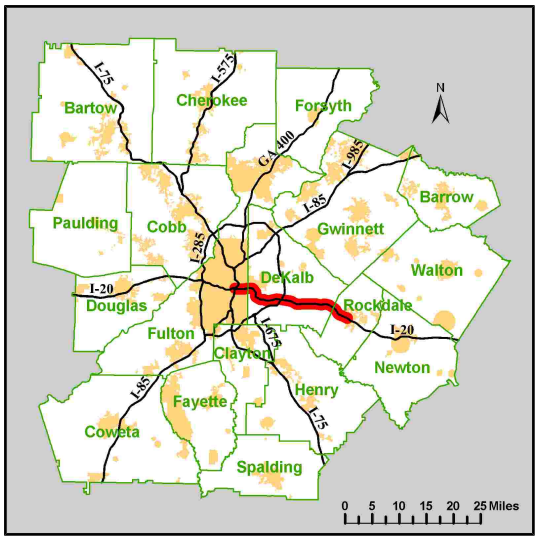
AR-904A

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST BUS RAPID TRANSIT (BRT) FROM STONECREST MALL (DEKALB COUNTY) TO DOWNTOWN ATLANTA [SPLIT FUNDED - SEE AR-904B]
GDOT Project No.	N/A
Federal ID No.	
Status	Long Range
Detailed Description and Justification	None
Service Type	Fixed Guideway Transit Capital
Sponsor	MARTA
Jurisdiction	Multi-County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	20 miles (not applicable for all project types)
Network Year	2025 (required if modeled for conformity)
Completion Date	2025
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
CST	New Starts (50/50)	LR 2021-2030	$482,750,000	$232,750,000	$0,000	$0,000	$250,000,000
				$232,750,000	$0,000	$0,000	$250,000,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

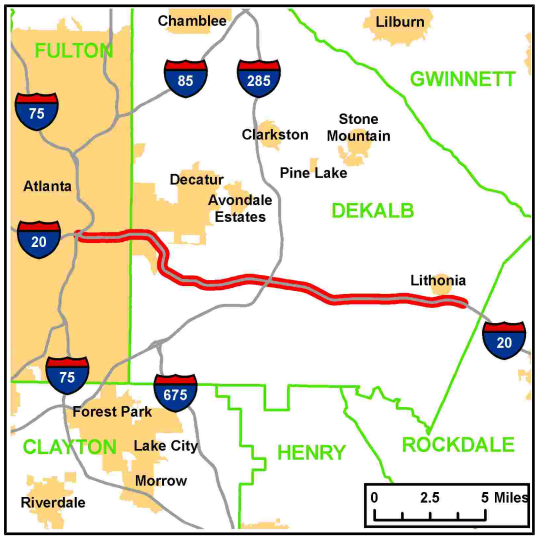
Report Generated: 3/9/2007

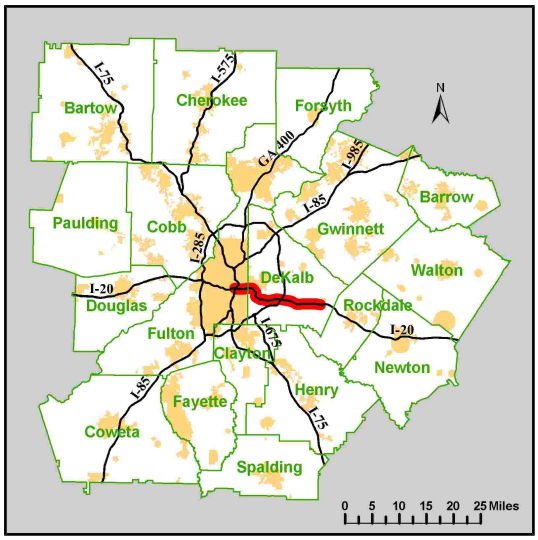
AR-904B

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST BUS RAPID TRANSIT (BRT) FROM STONECREST MALL (DEKALB COUNTY) TO DOWNTOWN ATLANTA [SPLIT FUNDED - SEE AR-904A]
GDOT Project No.	N/A
Federal ID No.	
Status	Long Range
Detailed Description and Justification	None
Service Type	Fixed Guideway Transit Capital
Sponsor	MARTA
Jurisdiction	Multi-County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	20 miles (not applicable for all project types)
Network Year	2025 (required if modeled for conformity)
Completion Date	2025
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
CST	Bus - New (80/20)	LR 2021-2030	$17,250,000	$17,250,000	$0,000	$0,000	$0,000
				$17,250,000	$0,000	$0,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

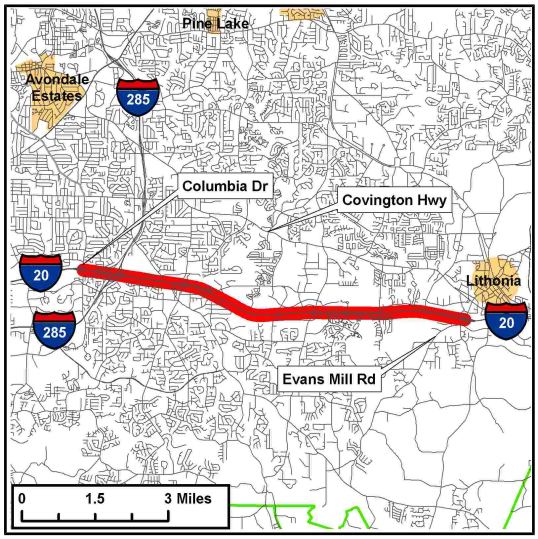
Report Generated: 3/9/2007

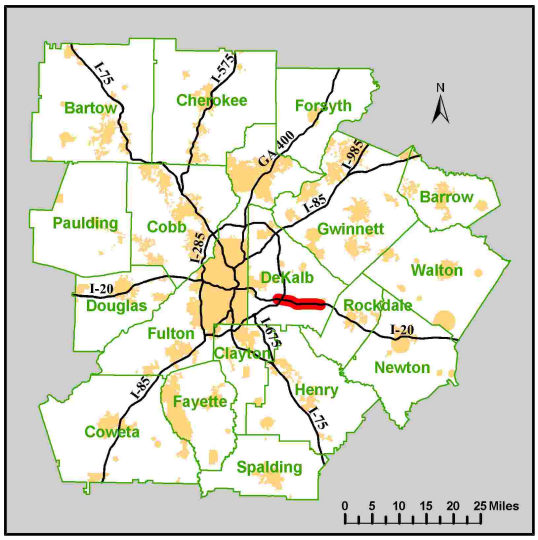
AR-H-250

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST HOV LANES FROM COLUMBIA DRIVE TO EVANS MILL ROAD IN DEKALB COUNTY
GDOT Project No.	0000715
Federal ID No.	NHS-0000-00(715)
Status	Programmed
Detailed Description and Justification	Addition of 1 HOV lane in both directions for 8 miles from Columbia Drive to Evans Mill Road. Dedicated HOV-only ramps will be provided but have not been determined at this time. The HOV lanes will be barrier-separated with median breaks in certain locations to allow for ingress and egress from the HOV lanes as well as emergency vehicle access.
Service Type	HOV Lanes
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	0 (applicable for road projects only)
Planned Thru Lane	2/4 (applicable for road projects only)
Corridor Length	8 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2012
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	National Highway System	2005	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	GRV BONDS (GARVEE Bond Program)	2008	$12,000,000	$0,000	$0,000	$12,000,000	$0,000
CST	GRV BONDS (GARVEE Bond Program)	2010	$110,000,000	$0,000	$0,000	$110,000,000	$0,000
				$0,000	$0,000	$122,000,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

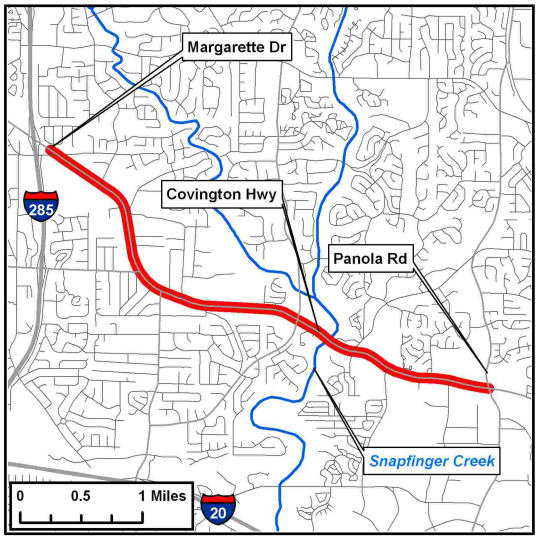
Report Generated: 3/9/2007

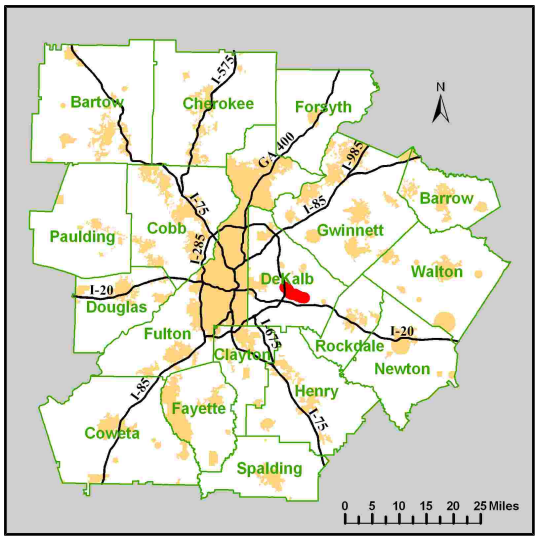
DK-031B

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	US 278 (COVINGTON HIGHWAY): PHASE II FROM MARGARETTE DRIVE TO PANOLA ROAD [SEE ALSO OTHER DK-031 SERIES LINE ITEMS]
GDOT Project No.	0007680
Federal ID No.	CSSTP-0007-00(680)
Status	Programmed
Detailed Description and Justification	Addition of 5ft ADA compliant sidewalks along both sides of SR 12/Covington Highway from Margarette Drive to Panola Road
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	4.5 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2013
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2006	$1,000,000	$0,000	$0,000	$0,000	$1,000,000
CST	FEDAID-2012-2030	LR 2012-2020	$2,500,000	$2,000,000	$0,000	$0,000	$500,000
				$2,000,000	$0,000	$0,000	$1,500,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

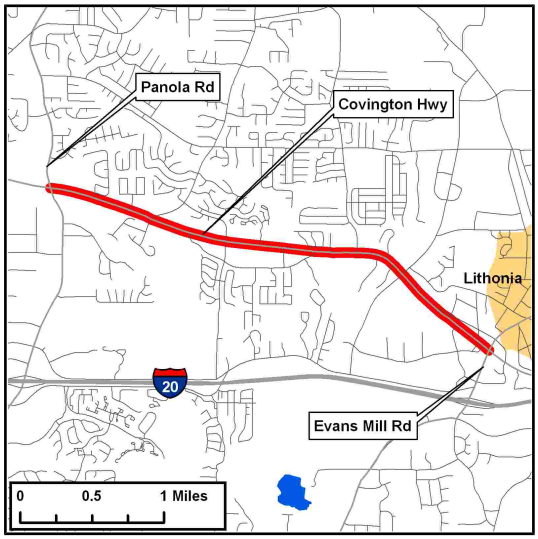
Report Generated: 3/9/2007

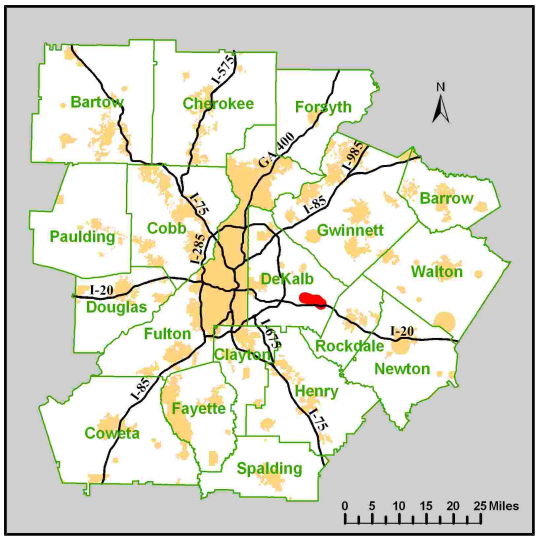
DK-031C

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	US 278 (COVINGTON HIGHWAY): PHASE III FROM PANOLA ROAD TO EVANS MILL ROAD [SEE ALSO OTHER DK-031 SERIES LINE ITEMS]
GDOT Project No.	0007681
Federal ID No.	CSSTP-0007-00(681)
Status	Programmed
Detailed Description and Justification	Addition of 5ft ADA compliant sidewalks along both sides of SR 12/Covington Highway from Panola Road to Evans Mill Road and widening Covington Hwy from a 4-lane section to a 5-lane section with bike lanes from DeKalb Medical Parkway to Wellington Circle.
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	3.6 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2013
Analysis Level	





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2006	$1,000,000	$0,000	$0,000	$0,000	$1,000,000
CST	Local Jurisdiction/Municipality Funds	LR 2012-2020	$3,000,000	$0,000	$0,000	$0,000	$3,000,000
				$0,000	$0,000	$0,000	$4,000,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

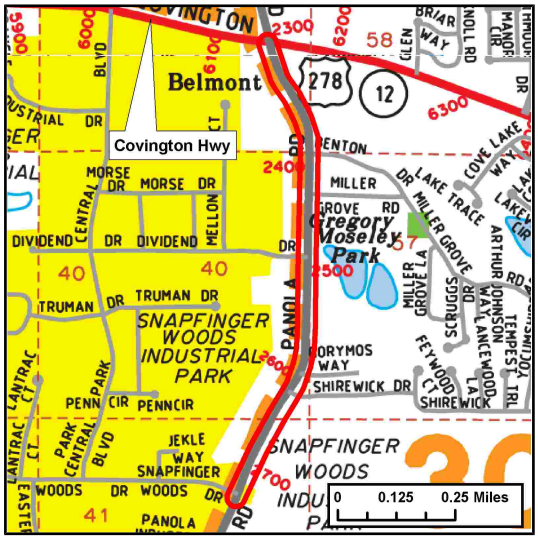
Report Generated: 3/9/2007

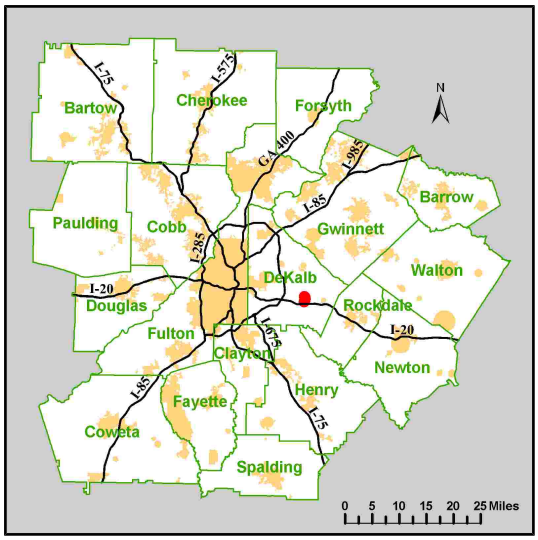
DK-065E

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	PANOLA ROAD: SEGMENT 5 FROM SNAPFINGER WOODS DRIVE TO SR 12 (COVINGTON HIGHWAY) - DESIGN PHASE WILL INCLUDE ACCESS MANAGEMENT PLAN [SEE ALSO OTHER DK-065 SERIES LINE ITEMS]
GDOT Project No.	0006890
Federal ID No.	CSSTP-0006-00(890)
Status	Programmed
Detailed Description and Justification	Project will include road widening from 4 to 6 lanes, intersection improvements as appropriate, bicycle lanes (through the use of signage) and pedestrian features to improve roadway operations by promoting alternative modes of transportation thereby improving mobility and accessibility.
Service Type	Roadway Capacity
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	4 (applicable for road projects only)
Planned Thru Lane	6 (applicable for road projects only)
Corridor Length	1.02 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2011
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2007	$303,000	$0,000	$0,000	$0,000	$303,000
CST	STP - Urban (>200K) (ARC)	2010	$3,030,000	$2,424,000	$0,000	$0,000	$606,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

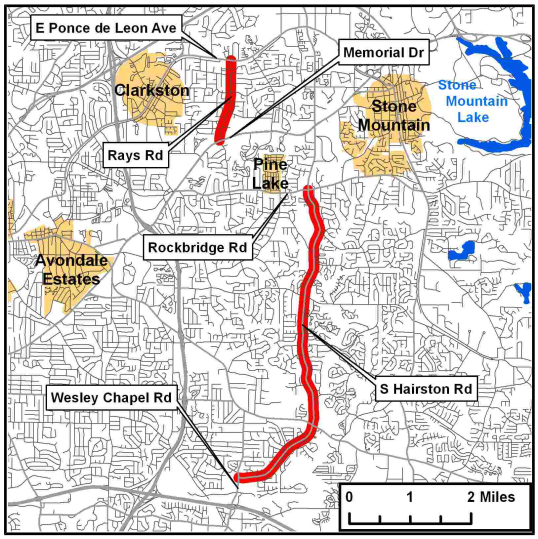
Report Generated: 3/9/2007

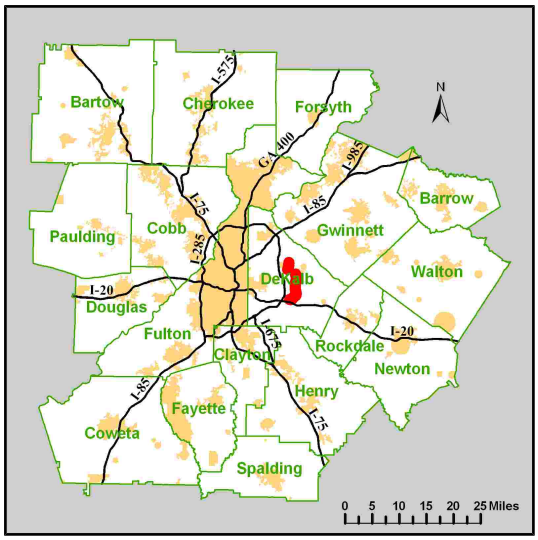
DK-320A3

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SIDEWALKS ALONG EIGHTEEN (18) CORRIDORS PROGRAM: PHASE IC - RAYS AND SOUTH HAIRSTON ROADS [SEE ALSO DK-320A1-2, C]
GDOT Project No.	0008217
Federal ID No.	CSSTP-0008-00(217)
Status	Programmed
Detailed Description and Justification	Sidewalks along Rays Road from Memorial Drive to East Ponce De Leon Road (1.36 miles); and along South Hairston Road from Rockbridge Road to Wesley Chapel Road (5.59 miles).
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	6.95 miles (not applicable for all project types)
Network Year	2010 (required if modeled for conformity)
Completion Date	2010
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2006	$1,000,000	$0,000	$0,000	$0,000	$1,000,000
CST	STP - Urban (>200K) (ARC)	2008	$1,600,000	$1,280,000	$0,000	$0,000	$320,000
				$1,280,000	$0,000	$0,000	$1,320,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

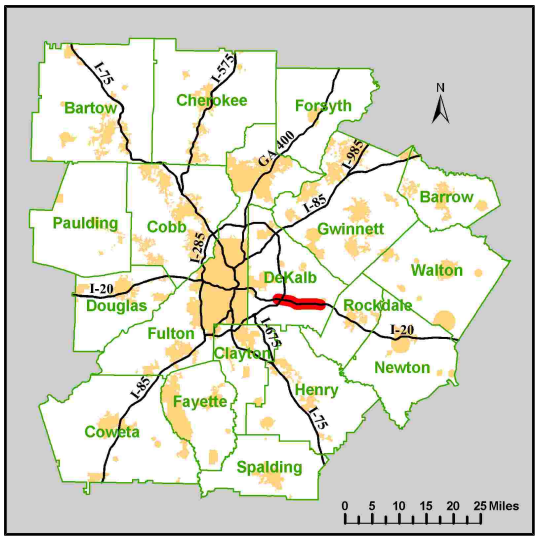
Report Generated: 3/9/2007

DK-AR-009A

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST FROM COLUMBIA DRIVE TO EVANS MILL ROAD - INCLUDES ASSOCIATED COLLECTOR/DISTRIBUTOR LANES
GDOT Project No.	713610-
Federal ID No.	NH-IM-20-2(166)
Status	Programmed
Detailed Description and Justification	Roadway capacity and interchange project along I-20 East from Columbia Drive to Evans Mill Road. Will include the addition of 2 lanes (one in each direction) and associated collector/distributor lanes.
Service Type	Roadway Capacity
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	6 (applicable for road projects only)
Planned Thru Lane	8 (applicable for road projects only)
Corridor Length	8 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2014
Analysis Level	In the Region's Air Quality Conformity Analysis



Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	National Highway System	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	National Highway System	2008	$5,400,000	$4,320,000	$1,080,000	$0,000	$0,000
CST	National Highway System	LR 2012-2020	$19,000,000	$15,200,000	$3,800,000	$0,000	$0,000
				$19,520,000	$4,880,000	$0,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

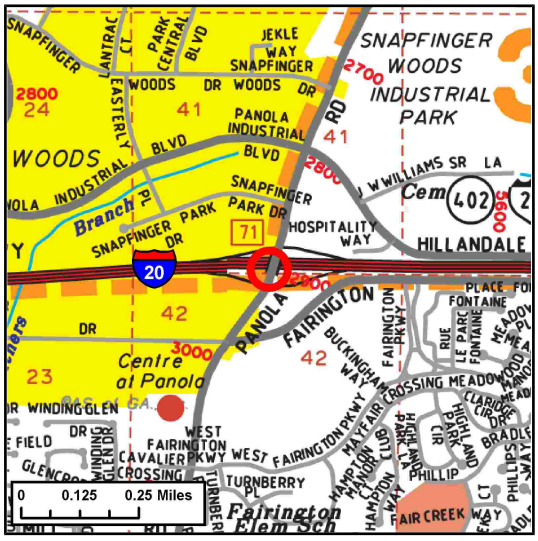
Report Generated: 3/9/2007

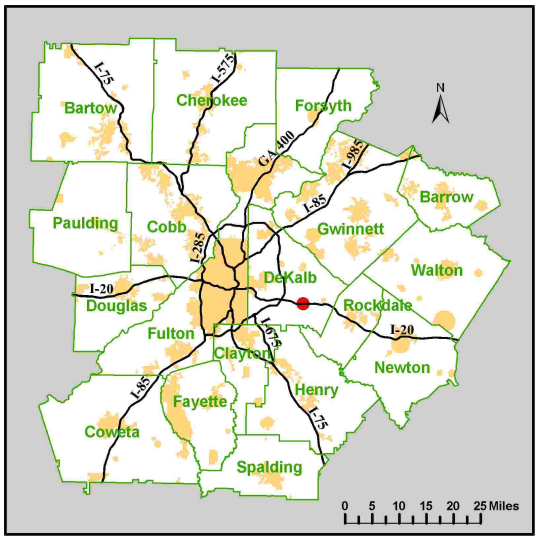
DK-AR-242

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	I-20 EAST AT PANOLA ROAD
GDOT Project No.	0002868
Federal ID No.	NHS-0002-00(868)
Status	Programmed
Detailed Description and Justification	The scope of the project is Interchange Rehabilitation - the single left turn lane from NB Panola Road to WB I-20 would be converted to a double left turn lane.
Service Type	Interchange Capacity
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	N/A miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2015
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	National Highway System	2008	$5,250,000	$4,200,000	$1,050,000	$0,000	$0,000
ROW	FEDAID-2012-2030	LR 2012-2020	$1,200,000	$960,000	$240,000	$0,000	$0,000
CST	FEDAID-2012-2030	LR 2012-2020	$12,000,000	$9,600,000	$2,400,000	$0,000	$0,000
				$14,760,000	$3,690,000	$0,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

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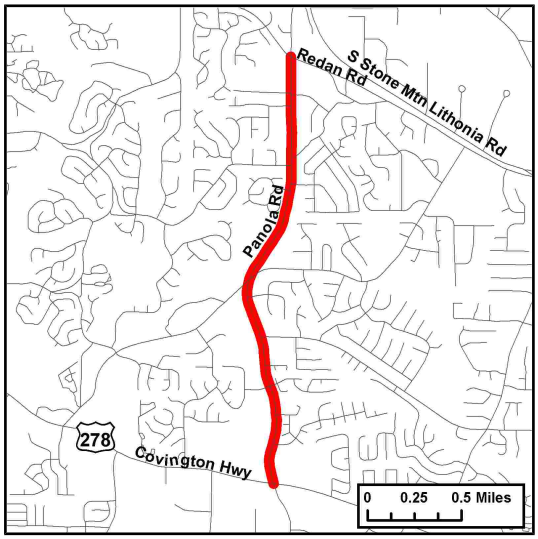
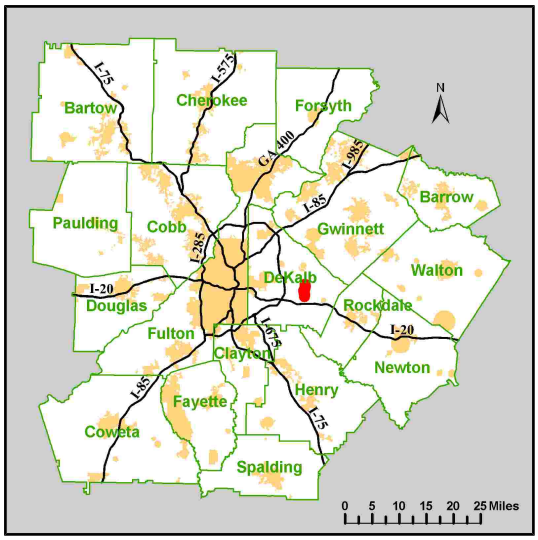
DK-AR-BP014

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	PANOLA ROAD FROM US 278 (COVINGTON HIGHWAY) TO REDAN ROAD
GDOT Project No.	0007095
Federal ID No.	CSSTP-0007-00(095)
Status	Programmed
Detailed Description and Justification	This project is a multi-use facility that include sidewalks and bike lanes along Panola Road from Redan Road to Covington Road. Project to include bike lanes and pedestrian features to improve roadway operations by promoting alternative modes of transportation and improve mobility and accessibility. A portion of this roadway is currently a MARTA bus route including service from Redan and Panola to the Indian Creek MARTA Station and Stonecrest Mall Activity Center. Panola Road is identified in the DeKalb County Pedestrian/Bicycle Master Plan as an on street bicycle facility.
Service Type	Bicycle/Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	2.2 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2011
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	2007	$150,000	$0,000	$0,000	$0,000	$150,000
ROW	Local Jurisdiction/Municipality Funds	2008	$30,000	$0,000	$0,000	$0,000	$30,000
CST	FEDAID-2012-2030	LR 2012-2020	$1,434,000	$1,147,200	$0,000	$0,000	$286,800
				$1,147,200	$0,000	$0,000	$466,800

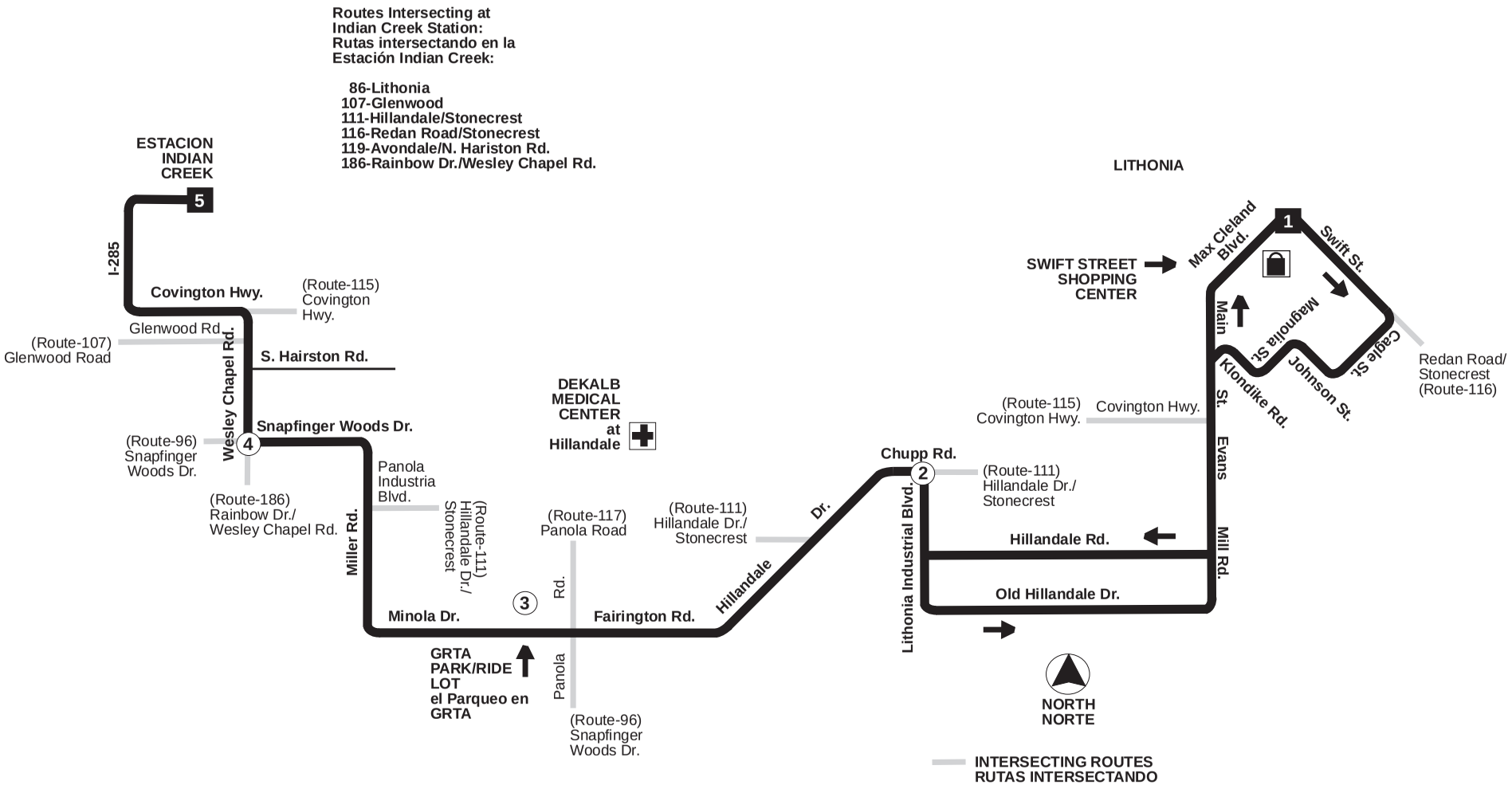
PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

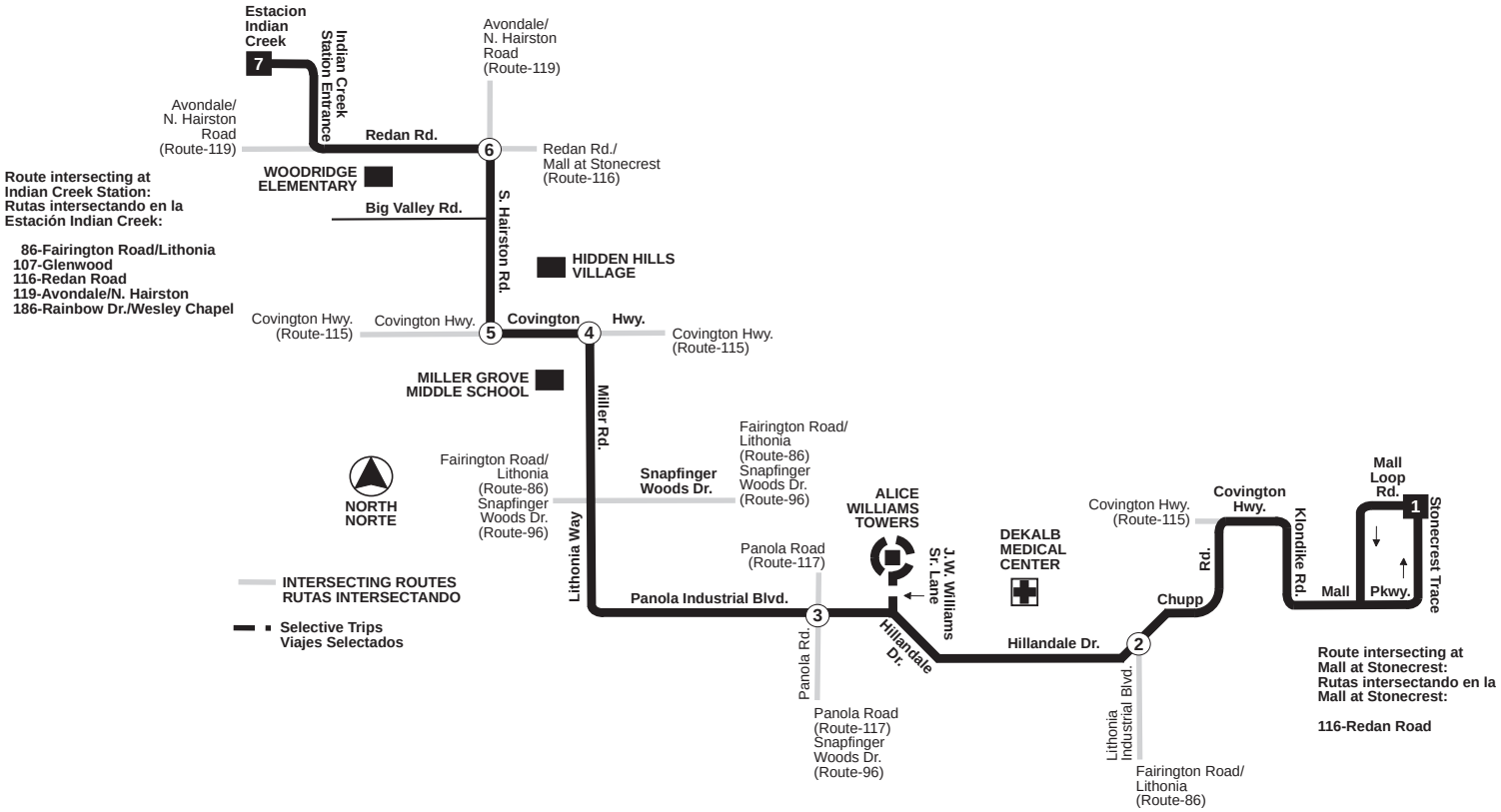
? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

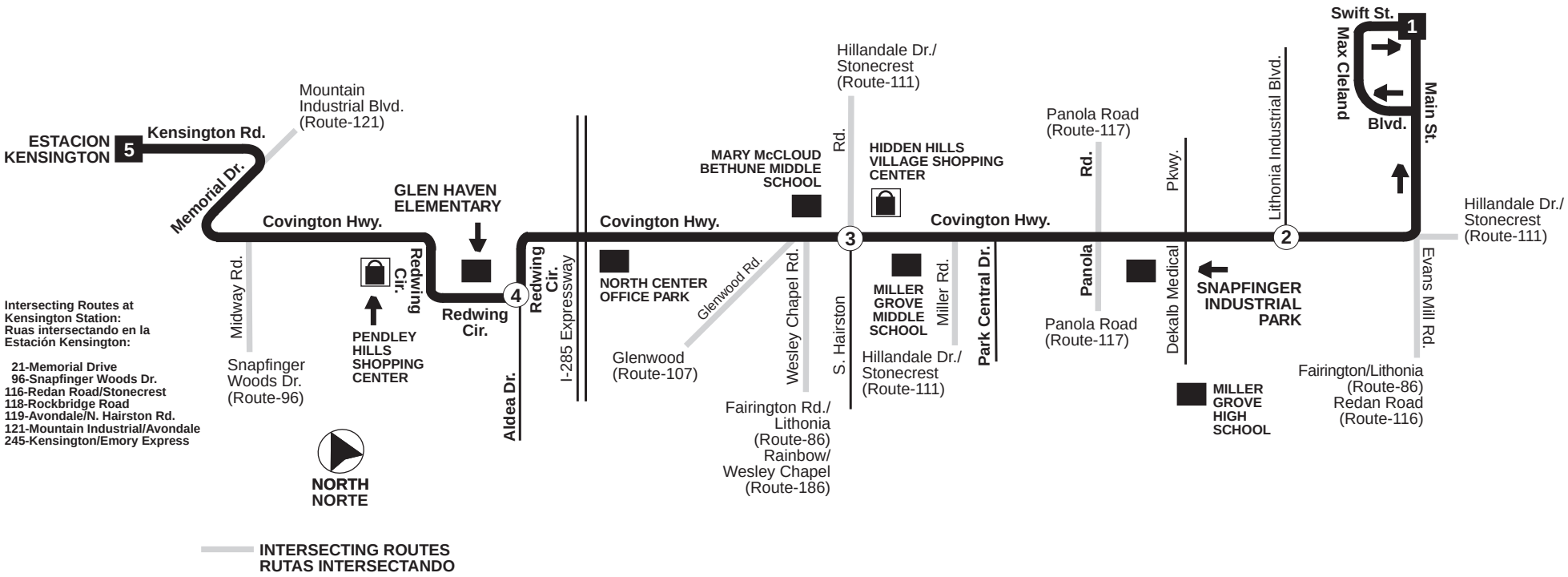
ARC

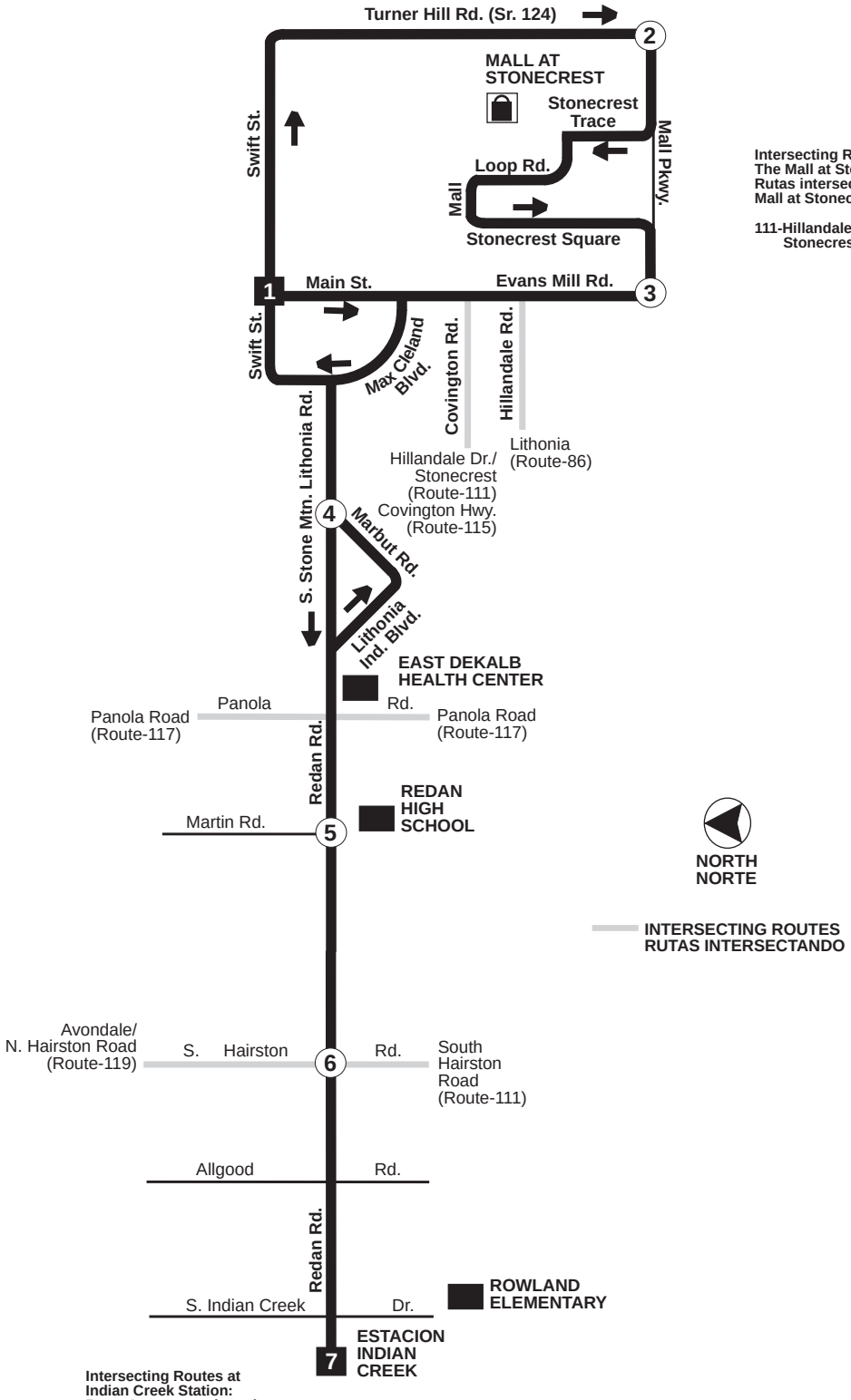
Report Generated: 3/9/2007

Appendix I
Area Bus Routes


Routes Intersecting at
Indian Creek Station:
Rutas intersectando en la
Estación Indian Creek:
86-Lithonia
107-Glenwood
111-Hillandale/Stonecrest
116-Redan Road/Stonecrest
119-Avondale/N. Hariston Rd.
186-Rainbow Dr./Wesley Chapel Rd.
ESTACION
INDIAN
CREEK
5
I-285
Covington Hwy.
(Route-115)
Covington
Hwy.
Glenwood Rd.
(Route-107)
Glenwood Road
Wesley Chapel Rd.
S. Hairston Rd.
Snapfinger Woods Dr.
4
(Route-96)
Snapfinger
Woods Dr.
(Route-186)
Rainbow Dr./
Wesley Chapel Rd.
Miller Rd.
Panola
Industria
Blvd.
(Route-111)
Hillandale Dr./
Stonecrest
DEKALB
MEDICAL
CENTER
at
Hillandale
(Route-117)
Panola Road
Rd.
Panola
3
Minola Dr.
Fairington Rd.
GRTA
PARK/RIDE
LOT
el Parqueo en
GRTA
(Route-96)
Snapfinger
Woods Dr.
(Route-111)
Hillandale Dr./
Stonecrest
Hillandale Dr.
Chupp Rd.
2
(Route-111)
Hillandale Dr./
Stonecrest
Lithonia Industrial Blvd.
Hillandale Rd.
Old Hillandale Dr.
LITHONIA
SWIFT STREET
SHOPPING
CENTER
Max Cleland
Blvd.
1
Swift St.
Magnolia St.
Eagle St.
Johnson St.
Klondike Rd.
Main St.
Evans Mill Rd.
(Route-115)
Covington Hwy.
Covington Hwy.
Redan Road/
Stonecrest
(Route-116)
NORTH
NORTE
INTERSECTING ROUTES
RUTAS INTERSECTANDO


Estacion Indian Creek
7
Indian Creek Station Entrance
Avondale/ N. Hairston Road (Route-119)
Avondale/ N. Hairston Road (Route-119)
Redan Rd.
6
Redan Rd./ Mall at Stonecrest (Route-116)
WOODRIDGE ELEMENTARY
Big Valley Rd.
S. Hairston Rd.
HIDDEN HILLS VILLAGE
Route intersecting at Indian Creek Station:
Rutas intersectando en la Estación Indian Creek:
86-Fairington Road/Lithonia
107-Glenwood
116-Redan Road
119-Avondale/N. Hairston
186-Rainbow Dr./Wesley Chapel
Covington Hwy. (Route-115)
Covington Hwy.
5
Covington
4
Hwy.
Covington Hwy. (Route-115)
MILLER GROVE MIDDLE SCHOOL
Miller Rd.
Fairington Road/ Lithonia (Route-86) Snapfinger Woods Dr. (Route-96)
NORTH NORTE
Fairington Road/ Lithonia (Route-86) Snapfinger Woods Dr. (Route-96)
Snapfinger Woods Dr.
ALICE WILLIAMS TOWERS
Panola Road (Route-117)
J.W. Williams Sr. Lane
DEKALB MEDICAL CENTER
Lithonia Way
Panola Industrial Blvd.
3
Hillandale Dr.
Hillandale Dr.
2
Chupp
Covington Hwy. (Route-115)
Covington Hwy.
Rd.
Klondike Rd.
Mall Loop Rd.
1
Mall
Pkwy.
Stonecrest Trace
Route intersecting at Mall at Stonecrest:
Rutas intersectando en la Mall at Stonecrest:
116-Redan Road
Panola Rd
Panola Road (Route-117) Snapfinger Woods Dr. (Route-96)
Lithonia Industrial Blvd.
Fairington Road/ Lithonia (Route-86)
INTERSECTING ROUTES
RUTAS INTERSECTANDO
Selective Trips
Viajes Selectados


ESTACION KENSINGTON
5
Kensington Rd.
Memorial Dr.
Mountain Industrial Blvd. (Route-121)
Covington Hwy.
GLEN HAVEN ELEMENTARY
Midway Rd.
Snapfinger Woods Dr. (Route-96)
PENDLEY HILLS SHOPPING CENTER
Redwing Cir.
Redwing Cir.
4
Redwing Cir.
Aldea Dr.
I-285 Expressway
Covington Hwy.
NORTH CENTER OFFICE PARK
Glenwood Rd.
Glenwood (Route-107)
MARY McCLOUD BETHUNE MIDDLE SCHOOL
Wesley Chapel Rd.
Fairington Rd./ Lithonia (Route-86) Rainbow/ Wesley Chapel (Route-186)
Hillandale Dr./ Stonecrest (Route-111)
Rd.
HIDDEN HILLS VILLAGE SHOPPING CENTER
3
S. Hairston
Hillandale Dr./ Stonecrest (Route-111)
MILLER GROVE MIDDLE SCHOOL
Miller Rd.
Park Central Dr.
Covington Hwy.
Panola Road (Route-117)
Rd.
Panola
Panola Road (Route-117)
Pkwy.
Dekalb Medical
SNAPFINGER INDUSTRIAL PARK
MILLER GROVE HIGH SCHOOL
Lithonia Industrial Blvd.
2
Swift St.
Max Cleland
Blvd.
1
Main St.
Hillandale Dr./ Stonecrest (Route-111)
Evans Mill Rd.
Fairington/Lithonia (Route-86) Redan Road (Route-116)
Intersecting Routes at Kensington Station:
Ruas intersectando en la Estación Kensington:
21-Memorial Drive
96-Snapfinger Woods Dr.
116-Redan Road/Stonecrest
118-Rockbridge Road
119-Avondale/N. Hairston Rd.
121-Mountain Industrial/Avondale
245-Kensington/Emory Express
NORTH
NORTE
INTERSECTING ROUTES
RUTAS INTERSECTANDO



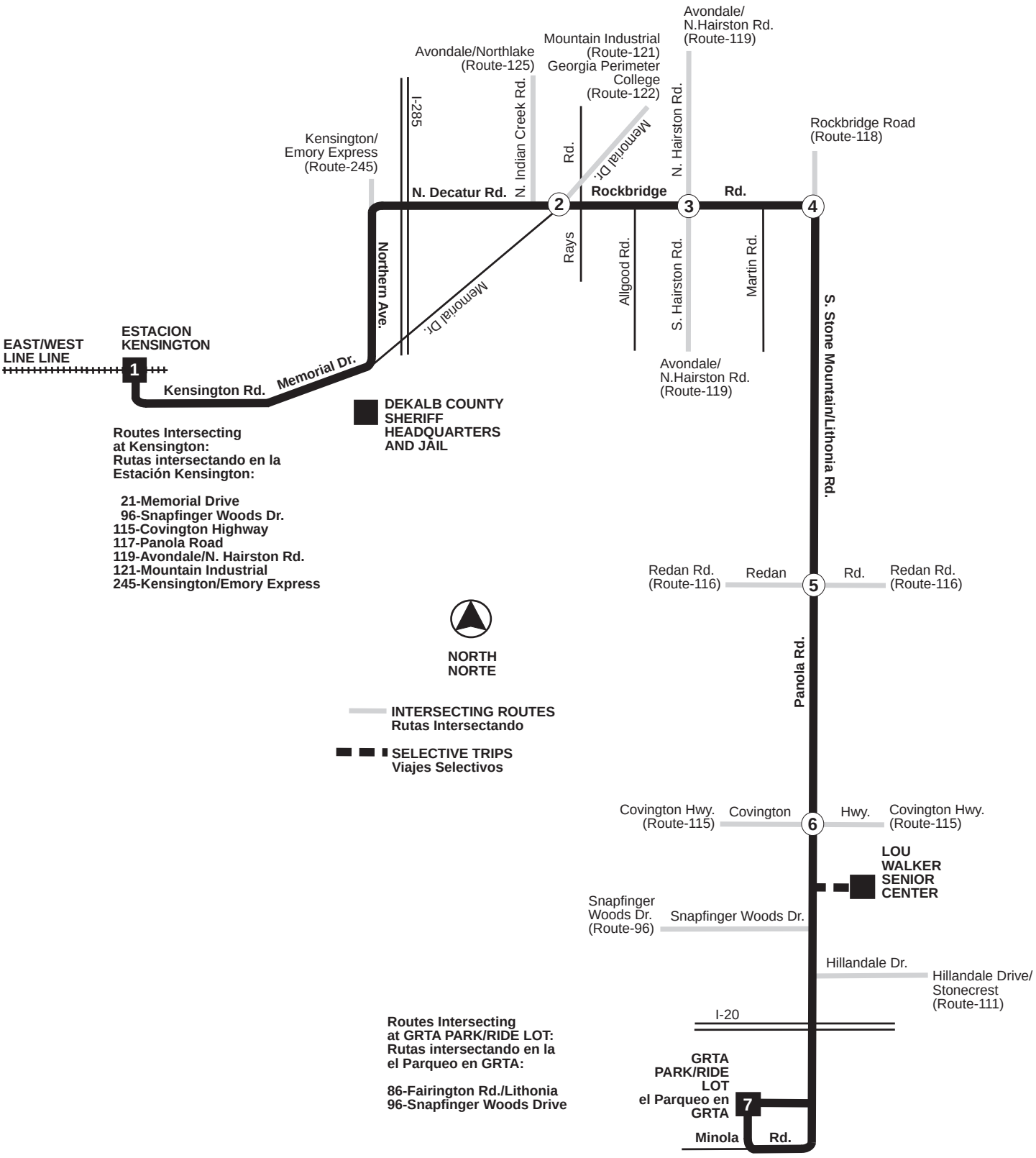
Intersecting Routes at The Mall at Stonecrest:
Rutas intersectando en la Mall at Stonecrest:

111-Hillandale Dr./ Stonecrest

Intersecting Routes at Indian Creek Station:
Rutas Intersectando en la Estación Indian Creek:

*** 86-Lithonia**
***107-Glenwood**
111-S. Hairston
119-Avondale/Indian Creek
186-Rainbow Drive/Wesley Chapel Rd.

***Buses need a transfer**
***Los autobúses necesitan una transferencia**


Avondale/
N.Hairston Rd.
(Route-119)
Mountain Industrial
(Route-121)
Georgia Perimeter
College
(Route-122)
Avondale/Northlake
(Route-125)
I-285
N. Indian Creek Rd.
Rd.
Memorial Dr.
N. Hairston Rd.
Rockbridge Road
(Route-118)
Kensington/
Emory Express
(Route-245)
N. Decatur Rd.
Rockbridge
Rd.
Rays
Allgood Rd.
S. Hairston Rd.
Martin Rd.
Northern Ave.
Memorial Dr.
S. Stone Mountain/Lithonia Rd.
EAST/WEST
LINE LINE
ESTACION
KENSINGTON
Kensington Rd.
Memorial Dr.
Avondale/
N.Hairston Rd.
(Route-119)
DEKALB COUNTY
SHERIFF
HEADQUARTERS
AND JAIL
Routes Intersecting
at Kensington:
Rutas intersectando en la
Estación Kensington:
21-Memorial Drive
96-Snapfinger Woods Dr.
115-Covington Highway
117-Panola Road
119-Avondale/N. Hairston Rd.
121-Mountain Industrial
245-Kensington/Emory Express
Redan Rd.
(Route-116)
Redan
Rd.
Redan Rd.
(Route-116)
NORTH
NORTE
Panola Rd.
INTERSECTING ROUTES
Rutas Intersectando
SELECTIVE TRIPS
Viajes Selectivos
Covington Hwy.
(Route-115)
Covington
Hwy.
Covington Hwy.
(Route-115)
LOU
WALKER
SENIOR
CENTER
Snapfinger
Woods Dr.
(Route-96)
Snapfinger Woods Dr.
Hillandale Dr.
Hillandale Drive/
Stonecrest
(Route-111)
I-20
Routes Intersecting
at GRTA PARK/RIDE LOT:
Rutas intersectando en la
el Parqueo en GRTA:
86-Fairington Rd./Lithonia
96-Snapfinger Woods Drive
GRTA
PARK/RIDE
LOT
el Parqueo en
GRTA
Minola
Rd.
1
2
3
4
5
6
7