TRAFFIC IMPACT STUDY

Lane Parke

Mountain Brook, Alabama

Prepared for:

GOODWYN, MILLS AND CAWOOD, INC.

Prepared by:

SKIPPER CONSULTING INC.

September 2009
Revision 1: May 2010
Revision 2: January 2012
Revision 3: March 2012
Revision 4 : June 2013

SKIPPER
CONSULTING INC.

Lane Parke
Mountain Brook, Alabama

Traffic Impact Study

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DATE: 6/11/13

September 2009
Revision 1: May 2010
Revision 2: January 2012
Revision 3: March 2012
Revision 4: June 2013

TABLE OF CONTENTS

APPENDICES

LIST OF ILLUSTRATIONS

INTRODUCTION

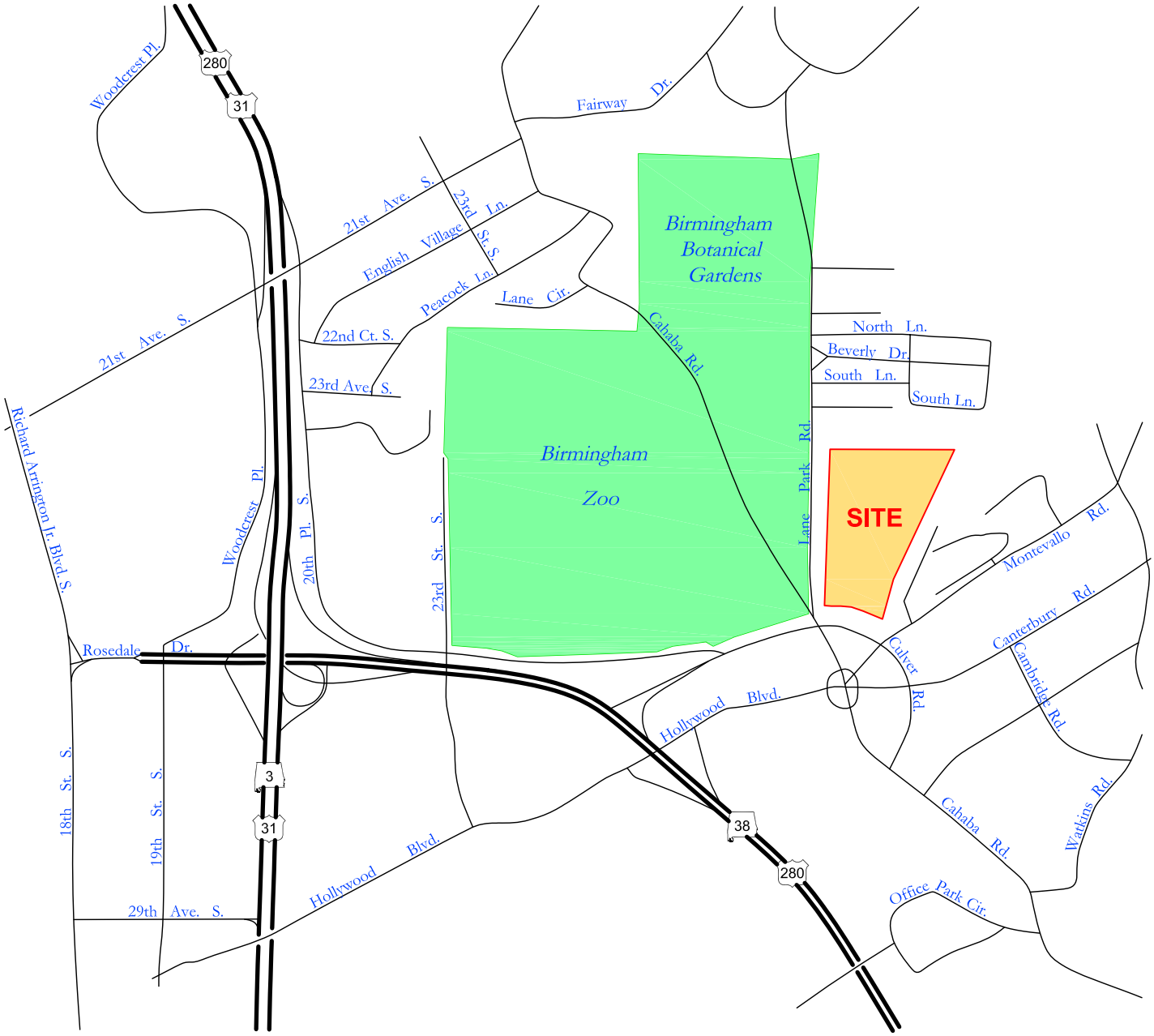
This report documents a revision to a traffic impact study performed for a proposed redevelopment of Mountain Brook Shopping Center and Park Lane Apartments in Mountain Brook, Alabama. The site is generally bounded by Montevallo Road, Culver Road, and Lane Park Road. The location of the site with respect to the area roadway network is shown in Figure 1.

The original traffic impact study was issued in April, 2009 and an addendum was issued in September, 2009. Revised studies were issued in May, 2010, January, 2012, and March, 2012. Due to changes in the site development plan, access system, and internal roadway configuration this revision of the report was prepared.

The existing site includes a variety of land uses, including a shopping center, bank, office building, and apartments. The proposed development is likewise mixed-use in nature. The primary land uses within the development will be a grocery store, pharmacy, general retail, restaurants, a hotel, and apartments. The proposed master plan is included in Appendix A.

The purposes of this study are to:

- Analyze the existing traffic conditions on the roadways and intersections surrounding the site;
- Determine the magnitude of traffic which will be generated by the proposed development;
- Estimate the directions of approach of traffic generated by the proposed development;
- Assign the traffic anticipated to be generated by proposed development to the area roadways, intersections, and site accesses;



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North

Scale: n.t.s

Figure 1
Site Location Map

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Mountain Brook, Alabama

June 2013

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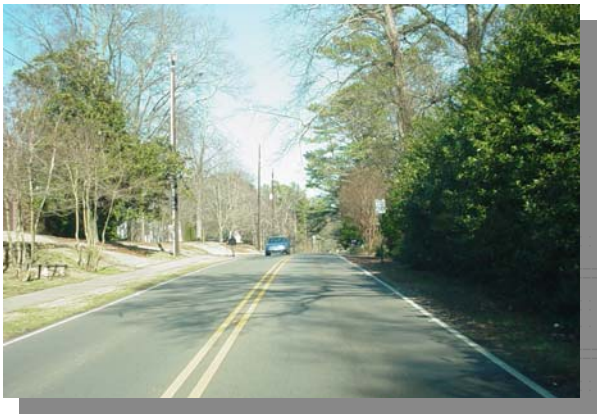
- Perform analyses to determine the traffic impacts of the proposed development;
- Develop recommended roadway improvements to mitigate the projected traffic impacts of the proposed development; and
- Analyze the proposed internal circulation plan of the proposed development.

Sources of information used in this study included: the City of Mountain Brook, Alabama, the City of Birmingham, Alabama, the Regional Planning Commission of Greater Birmingham, Goodwyn, Mills & Cawood, Inc., Evson, Inc., the Daniel Corporation, the Institute of Transportation Engineers, the Transportation Research Board, the Federal Highway Administration, and office files and field reconnaissance efforts of Skipper Consulting, Inc.

BACKGROUND INFORMATION

Roadway Descriptions

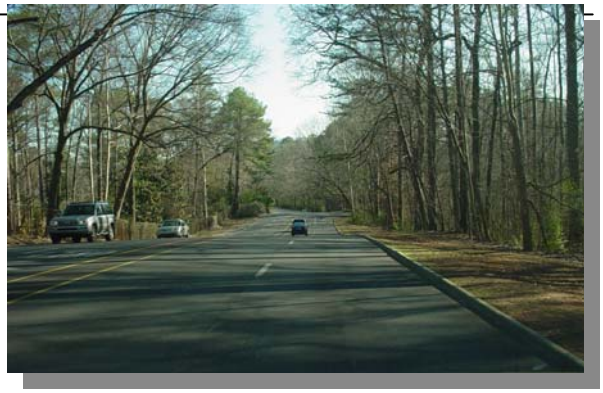
Montevallo Road. In the vicinity of the site, Montevallo Road is a two lane undivided collector roadway with a posted speed limit of 30 miles per hour.



Culver Road. In the vicinity of the site, Culver Road is a two lane local roadway with no posted speed limit.

Lane Park Road. In the vicinity of the site, Lane Park Road is a two lane collector roadway with a posted speed limit of 30 miles per hour.

Cahaba Road. In the vicinity of the site, Cahaba Road is a four lane undivided collector roadway with a posted speed limit of 30 miles per hour.



Study Locations

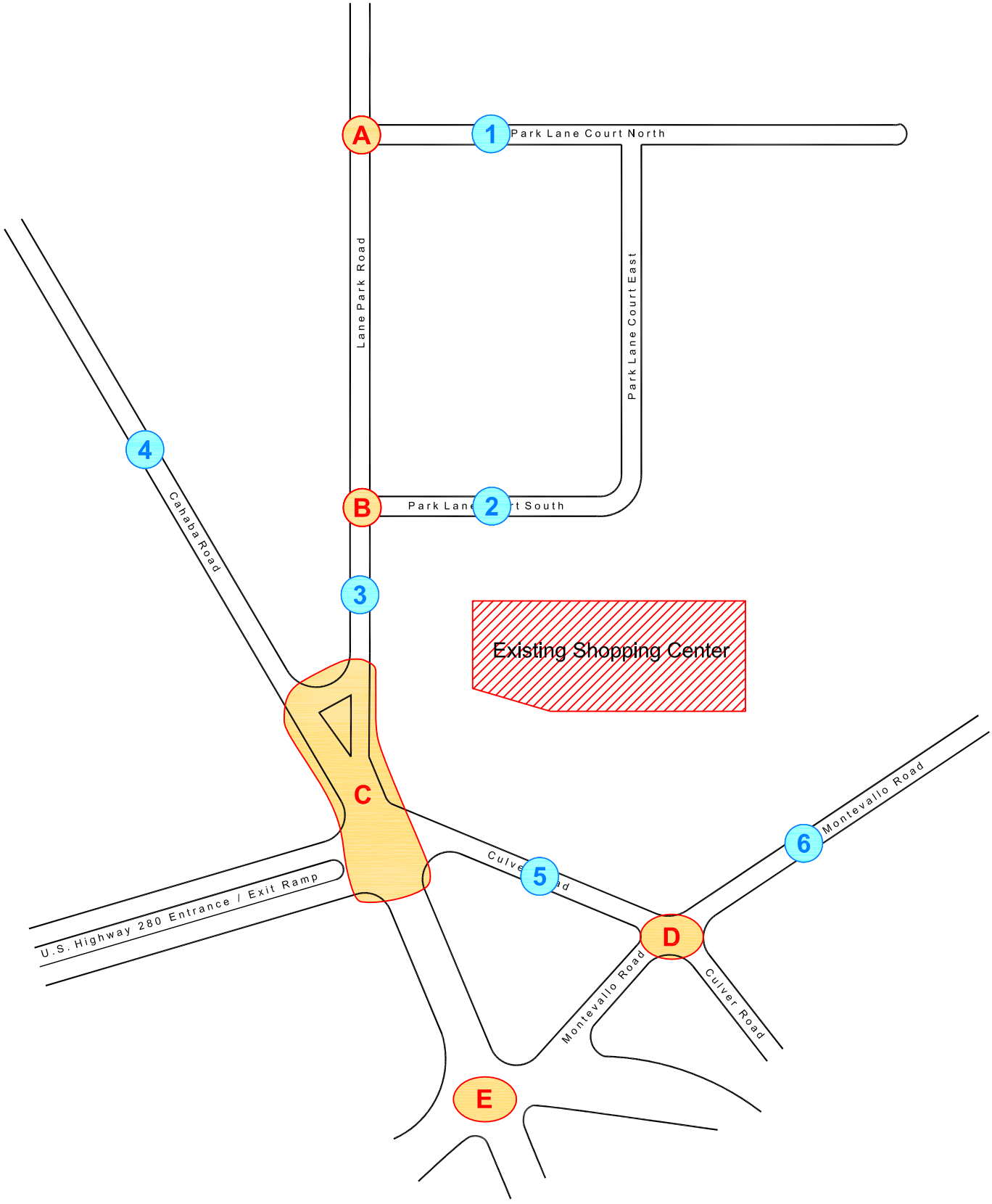
In order to quantify the traffic impacts of the proposed development, five (5) existing intersections were selected for analysis:

A Lane Park Road at Park Lane Court North
B Lane Park Road at Park Lane Court South
C Cahaba Road at Lane Park Road/Culver Road/U.S. 280 Ramp
D Montevallo Road at Culver Road
E Cahaba Road at Montevallo Road/Hollywood Boulevard/Canterbury Road

In addition, the following six (6) existing roadway segments were also selected for analysis:

1 Park Lane Court North east of Lane Park Road
2 Park Lane Court South east of Lane Park Road
3 Lane Park Road south of Park Lane Court South
4 Cahaba Road north of Lane Park Road
5 Culver Road east of Lane Park Road
6 Montevallo Road east of Culver Road

The locations of the study intersections and roadway segments are shown in Figure 2.



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LEGEND

A Study Intersections

5 Study Roadway Segments

North

Scale: n.t.s

Figure 2
Study Locations

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Development Plan

Table 1 presents the site development plan for the redevelopment as depicted in the latest master plan. Included in Table 1 is the code from the Institute of Transportation Engineers' publication *Trip Generation, Eighth Edition* which most closely matches the assumed land use. Also included in Table 1 are the estimated mixed-use rates and intercept rates for each land use. These rates are described in a subsequent section of this report.

Table 1
Site Development Plan

Land Use	*Size*	*ITE Code*	*Mixed-Use Rate*	*Intercept Rate*
Retail	49,715 sq.ft.	820	30%	48%
Pharmacy	11,157 sq.ft.	881	30%	49%
Restaurant (Fast/Casual)	4 at 1,500 sq.ft. each	932	30%	43%
Restaurant (Quality)	6,500 sq.ft.	931	30%	44%
Restaurant (Quality)	10,000 sq.ft.	931	30%	44%
Grocery	28,300 sq.ft.	850	30%	36%
Hotel	100 rooms	310	30%	0%
Bank	4,340 sq.ft.	912	30%	47%
Apartments	276 units	220	38%	0%

The development is anticipated to be constructed and occupied by the year 2015.

Site Access Plan

The existing site is served by multiple access points. The proposed master plan for the redevelopment significantly reconstructs the entire site so that the access system is materially altered. The proposed master plan provides a total of nine (9) access points to the development, plus a service court. The following is a summary of the proposed accesses points to the development:

- An access to Montevallo Road east of Culver Road (Jemison Lane)
- An access at the intersection of Culver Road and Montevallo Road.
- Two accesses to Culver Road between Montevallo Road and Cahaba Road:
    - Main Street
    - Access to the east of the Ray-Poyner Building
- Five accesses to Lane Park Road north of Culver Road:
    - Park Lane Court North
    - Hotel (this access will experience minimal peak hour traffic volumes and is not included in the analysis in this report)
    - Park Lane Court South
    - Jemison Lane
    - Access to the north of the Ray-Poyner Building

The locations of the site access points are indicated on the master plan included in Appendix A.

Historical Traffic Growth

Historical traffic counts were obtained for the years 1986 to 1999 for Lane Park Road and Montevallo Road from the Regional Planning Commission of Greater Birmingham. Traffic counts were also conducted in these same locations by Skipper Consulting, Inc. in 2007. An analysis was performed to determine the historical growth rate in traffic across this period. The analysis shows that traffic has been increasing at a rate of +0.8% per year to +1.0% per year since 1986. Therefore, for the purposes of this report, background traffic is increased by +1.0% per year over existing traffic for future year conditions. The historical traffic growth analysis is shown in Table 2.

Table 2
Historical Traffic Growth

Year	*Daily Traffic Volume*	
	Lane Park Road	*Montevallo Road*
1986	8,000	10,700
1988	7,000	12,400
1993	6,900	11,200
1999	7,900	16,400
2007	9,400	12,900
	Per Year Growth Rate	
	+0.8%	+1.0%

EXISTING CONDITIONS ANALYSIS

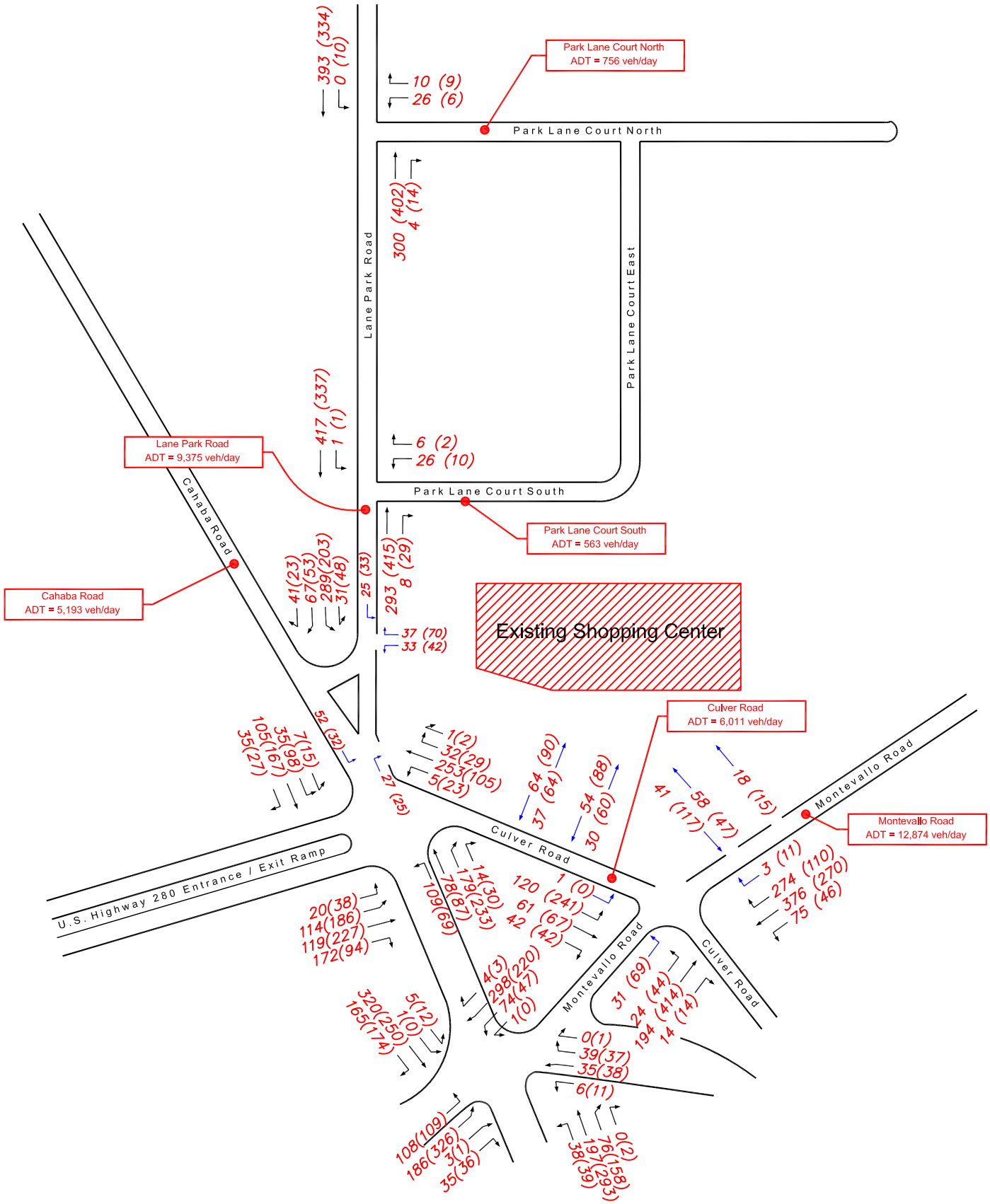
Existing Intersection Turning Movement Traffic Counts

Existing intersection turning movement traffic counts were performed at the five (5) study intersections as indicated in Figure 2 from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. by Traffic Data, LLC on behalf of Skipper Consulting, Inc. The counts are included in Appendix B and peak hour traffic counts are summarized in Figure 3.

Existing traffic counts were also performed at all the major accesses to the existing shopping center on Thursday to Friday, November 29 to 30, 2007, from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. by Traffic Data, LLC on behalf of Skipper Consulting, Inc. The counts are included in Appendix C and peak hour traffic counts are summarized in Figure 3.

Existing Machine Traffic Counts

Existing machine traffic counts were performed on the six (6) study roadway segments as indicated in Figure 2 on Thursday to Friday, November 29 to 30, 2007 for a twenty-four (24) hour period by Traffic Data, LLC on behalf of Skipper Consulting, Inc. The counts are included in Appendix D and are summarized in Figure 3.



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LEGEND

Shopping Center Accesses

Public Roadways

100 (100) AM (PM)

North

Scale: n.t.s

Figure 3
Existing Traffic Counts

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Mountain Brook, Alabama

June 2013

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Existing Intersection Capacity Analysis

Existing peak hour intersection capacity analyses for the study intersections were performed according to the methodology presented in the 2000 *Highway Capacity Manual*, published by the Transportation Research Board. Capacity is expressed as level of service, and ranges from a level of service "A" (highest quality of service) to a level of service "F" (jammed conditions). As a general rule, operation at a level of service "C" or better is desirable, while a level of service "D" is considered acceptable during peak hours of traffic flow. The results of the existing peak hour intersection capacity analyses are included in Appendix E and are summarized in Table 3.

Existing Daily Roadway Segment Capacity Analysis

Existing daily roadway segment capacity analyses were performed by comparing the existing daily traffic volumes as shown on Figure 3 with service flows by level of service calculated from information obtained from the Alabama Department of Transportation. The daily level of service chart based on traffic flows is included in Appendix F. Table 4 presents the results of the daily roadway segment capacity analyses.

Commuter Desire Lines

Existing intersection turning movement traffic counts were analyzed to produce a set of commuter desire lines for a.m. and p.m. peak hours of traffic flow. These desires lines are depicted in Figures 4 and 5, for the a.m. and p.m. peak hours, respectively.

Table 3
Existing Intersection Capacity Analysis

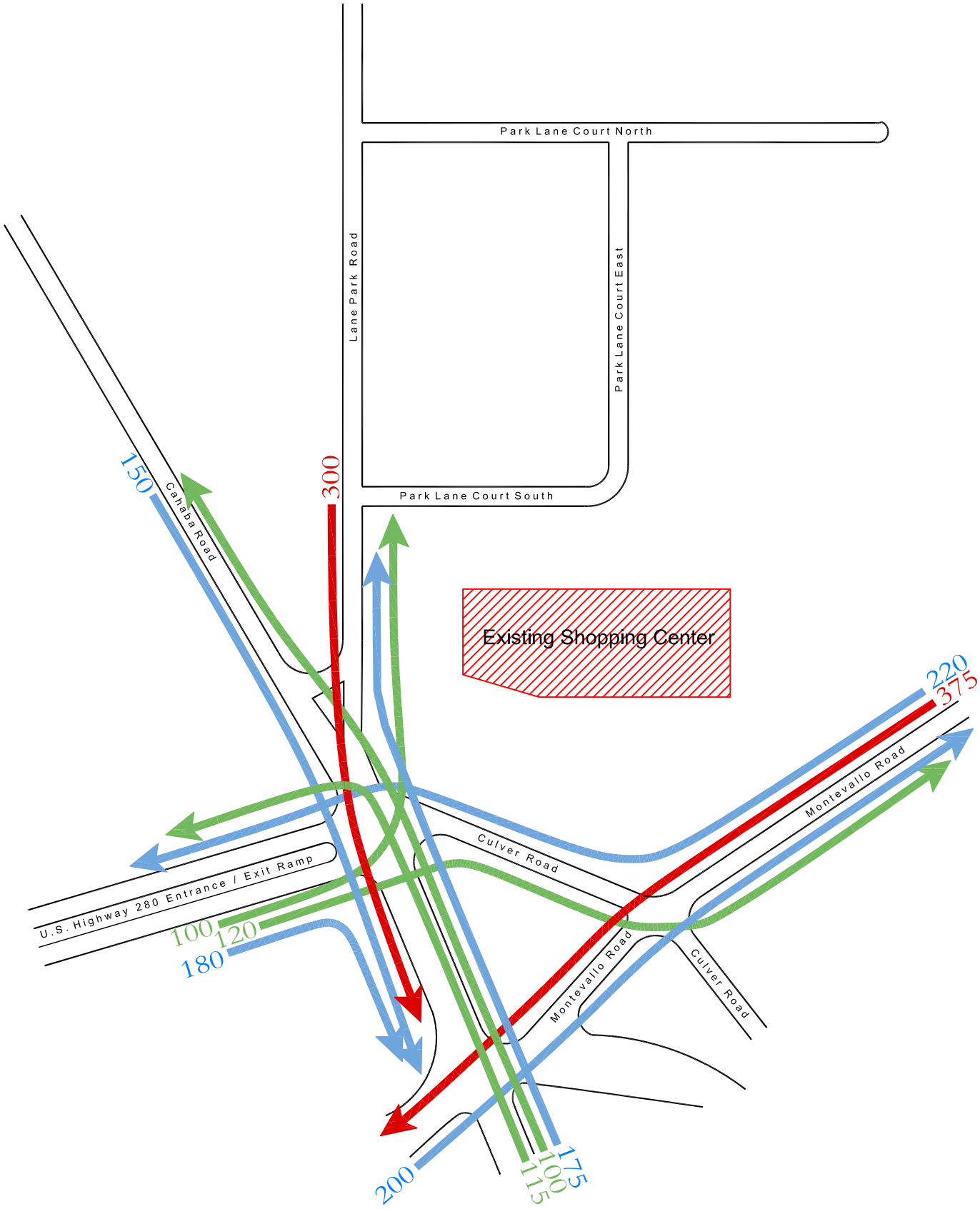
Intersection	*Approach*	*Movement*	*Level of Service*	
			AM	*PM*
Lane Park Road at Park Lane Court North	Park Lane Ct. N. Westbound	Left/Right	B	B
	Lane Park Road Southbound	Left/Through	A	A
Lane Park Road at Park Lane Court South	Park Lane Ct. S. Westbound	Left/Right	C	C
	Lane Park Road Southbound	Left/Through	A	A
Cahaba Road at Lane Park Road/ Culver Road/ U.S. Highway 280 Ramp	U.S. 280 Ramp Eastbound	Left	D	D
		Through	C	C
		Right	C	C
		Overall approach	*C*	*C*
	Culver Road Westbound	Left/Through/Right	C	C
	Cahaba Road Northbound	Left	C	C
		Through/Right	D	D
		Overall approach	*D*	*C*
	Cahaba Road Southbound	Left	C	E
		Through	C	C
		Right	C	C
		Overall approach	*C*	*D*
	Lane Park Road Southbound	Left/Through/Right	D	D
		Overall intersection	***C***	***C***
Montevallo Road at Culver Road	Culver Road Eastbound	Left	C	C
		Through/Right	C	C
		Overall approach	*C*	*C*
	Montevallo Road Northbound	Left	A	A
		Through/Right	A	A
		Overall approach	*A*	*A*
	Montevallo Road Southbound	Left	B	B
		Through/Right	C	B
		Overall approach	*C*	*B*
		Overall intersection	***C***	***B***

Table 3 (continued)
Existing Intersection Capacity Analysis

Intersection	*Approach*	*Movement*	*Level of Service*	
			AM	*PM*
Cahaba Road at Montevallo Road/ Hollywood Boulevard/ Canterbury Road	Hollywood Boulevard Eastbound	Left	D	C
		Through/Right	C	C
		Overall approach	*C*	*C*
	Montevallo Road Westbound	Left	C	C
		Through/Right	C	C
		Overall approach	*C*	*C*
	Cahaba Road Northbound	Left	B	B
		Through/Right	B	B
		Overall approach	*B*	*B*
	Cahaba Road Southbound	Left	B	B
		Through/Right	B	B
		Overall approach	*B*	*B*
	Canterbury Road Westbound	Left	C	C
		Through/Right	C	C
		Overall approach	*C*	*C*
		Overall intersection	***C***	***C***

Table 4
Existing Daily Roadway Segment Capacity Analysis

Roadway	*Segment*	*Daily Traffic Volume*	*Level of Service*
Park Lane Court North	East of Lane Park Road	756	A
Park Lake Court South	East of Lane Park Road	563	A
Lane Park Road	Park Lane Court South to Culver Road	9,375	C
Cahaba Road	Birmingham Zoo to Culver Road	5,193	A
Culver Road	Cahaba Road to Montevallo Road	6,011	B
Montevallo Road	Overhill Road to Culver Road	12,874	E



Generalized movements greater than 100 vehicles per hour.

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Legend
High
Moderate
Low

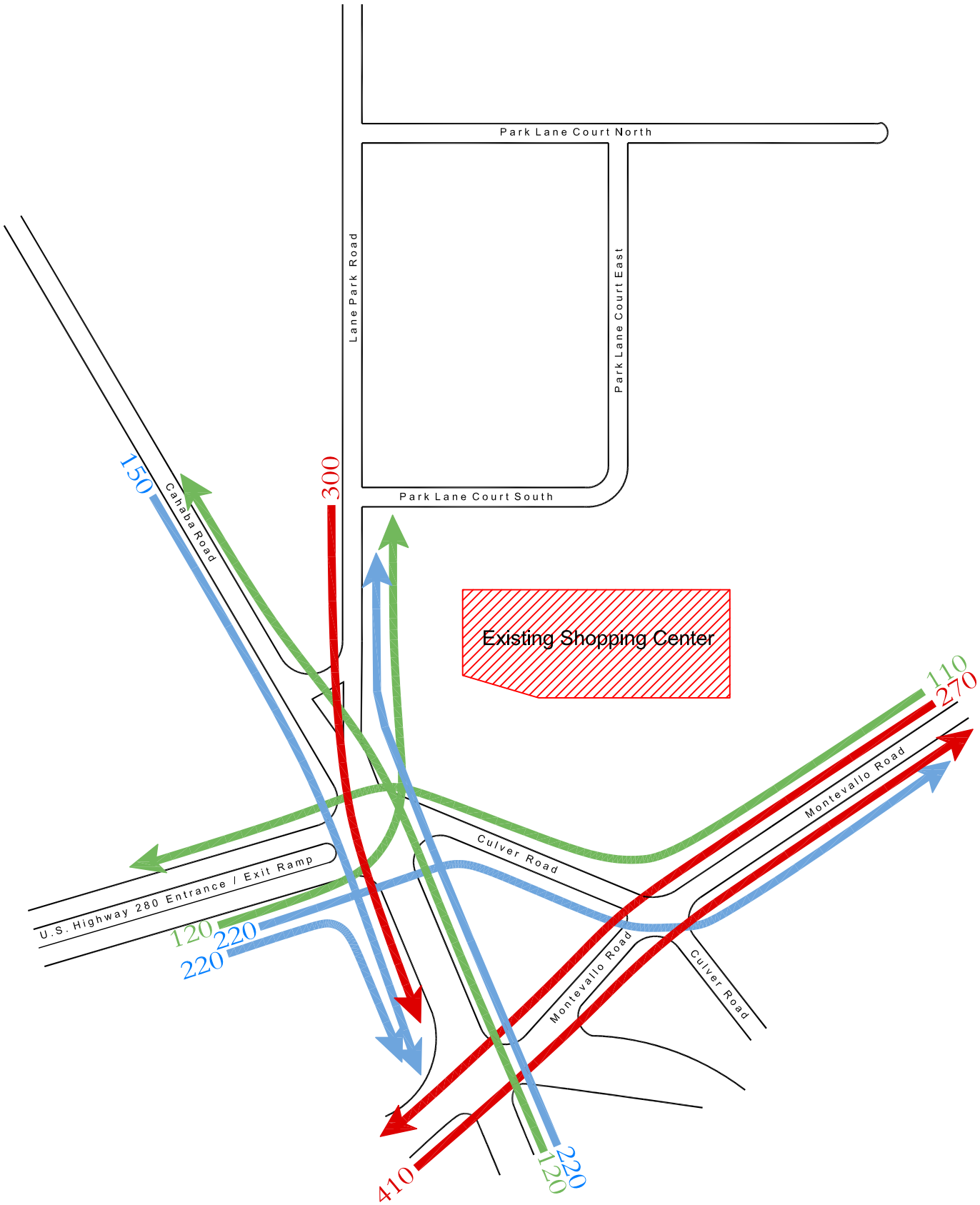
North

Scale: n.t.s

Figure 4
Commuter Desire Lines
AM Peak Hour

Lane Parke
Mountain Brook, Alabama

June 2013 1035.072



Generalized movements greater than 100 vehicles per hour.

SKIPPER CONSULTING INC.

Legend
High
Moderate
Low

North

Scale: n.t.s

Figure 5
Commuter Desire Lines
PM Peak Hour

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June 2013

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FUTURE CONDITIONS ANALYSIS

Trip Generation

An analysis was performed to determine the existing trip generation of the shopping center on the subject property. This analysis was performed using: 1) the existing traffic counts, and 2) the Institute of Transportation Engineers' publication Trip Generation, Eight Edition. The results of this analysis are shown in Table 5. As shown in Table 5, the existing shopping center generates significantly in excess of ITE Trip Generation estimates during the a.m. peak hour. The existing counts and the estimated trip generation are much closer for the p.m. peak hour.

Table 5
Trip Generation

Scenario	*AM Peak Hour*			*PM Peak Hour*		
	In	*Out*	*Total*	*In*	*Out*	*Total*
Existing Shopping Center based on Actual Counts	**282**	**229**	**511**	**356**	**407**	**763**
Existing Shopping Center based on ITE Trip Generation						
Retail (45,687 sq.ft.)	28	18	46	184	192	376
Grocery (21,867 sq.ft.)	48	31	79	117	113	230
Apartments (276 d.u.'s)	18	72	90	74	40	114
Total	***94***	***121***	***215***	***375***	***345***	***720***

The trip generation of the proposed development was estimated based on information contained in the Institute of Transportation Engineers' publication *Trip Generation, Eighth Edition*. A portion of the trips generated by the site will be mixed-use trips, or trips which are generated internally from one use to another use within the site and will not use the public roadway network. A portion of the trips generated by the development will be intercepted trips, or trips which are currently in the traffic flows on the public roadways and will stop at the development while enroute to their final destination. The mixed-use rates and intercept rates were estimated based on information contained in the Institute of Transportation Engineers' publication *Trip Generation Handbook*. The estimated trip generation of the development is shown in Table 6. Refer back to Table 1 to determine the size of each land use, the ITE Code used to determine the trip generation, the estimated mixed-use trip rate, and the estimated intercept trip rate.

Directional Distribution

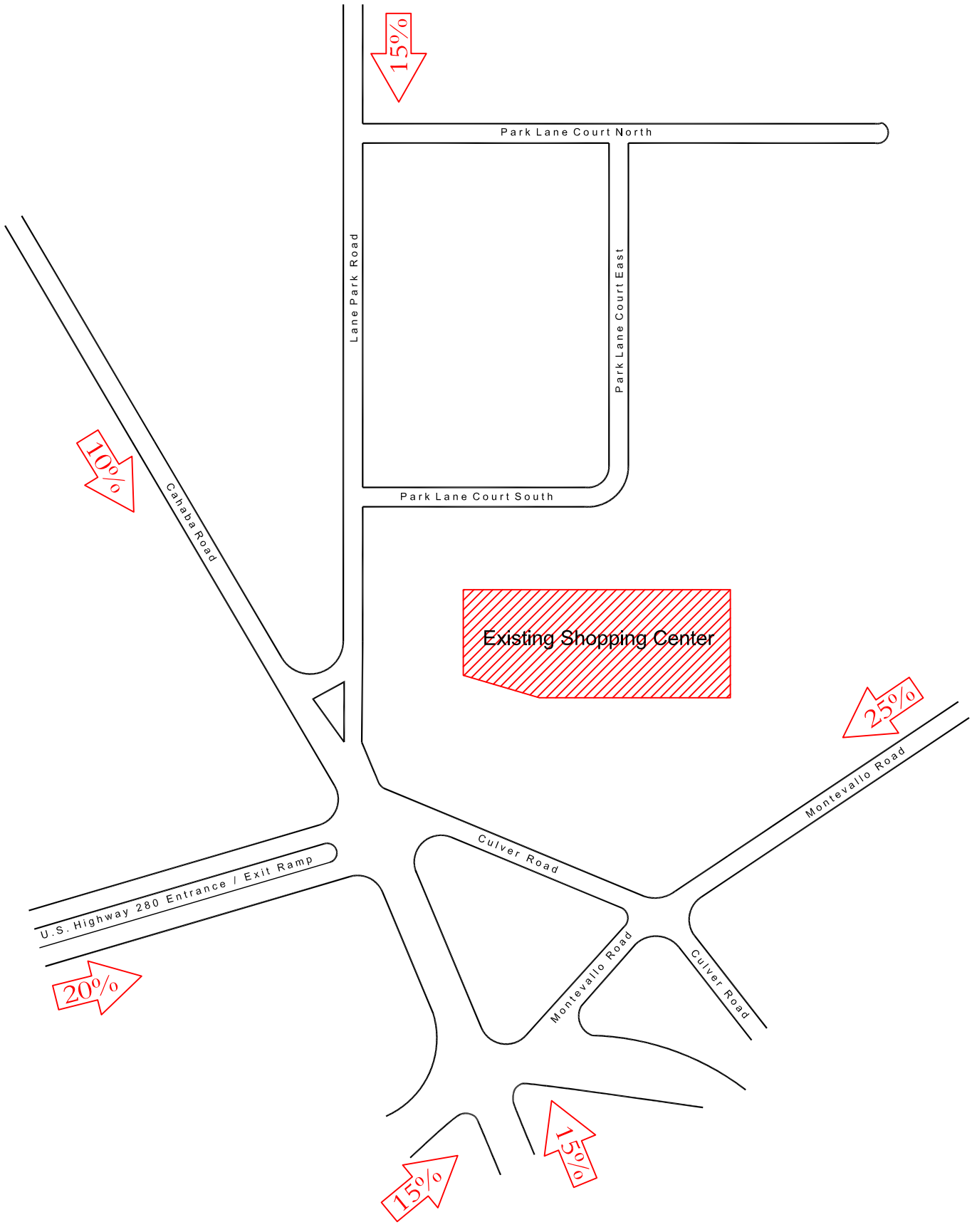
The directional distribution of traffic generated by the proposed development was estimated based on locations of population concentrations and existing traffic flow patterns on the roadway network. The estimated directional distribution of traffic is shown in Figure 6.

Table 6
Trip Generation

Land Use	*Total Trip Generation*								
	Weekday			*AM Peak Hour*			*PM Peak Hour*		
	In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Pharmacy	492	492	984	17	13	30	58	58	116
Grocery	1,447	1,447	2,894	62	40	102	152	146	298
Retail	2,156	2,156	4,312	30	19	49	195	203	398
Restaurant (Quality)	292	292	584	3	2	5	33	16	49
Restaurant (Quality)	450	450	900	5	3	8	50	25	75
Restaurant (Fast/Casual)	95	95	190	9	8	17	10	7	17
Restaurant (Fast/Casual)	95	95	190	9	8	17	10	7	17
Restaurant (Fast/Casual)	95	95	190	9	8	17	10	7	17
Restaurant (Fast/Casual)	95	95	190	9	8	17	10	7	17
Apartment (includes clubhouse)	898	898	1,796	28	111	139	110	59	169
Hotel (includes meeting space)	261	261	522	25	16	41	31	28	59
Bank	321	321	642	30	24	54	56	56	112
total	***6,698***	***6,698***	***13,396***	***236***	***261***	***497***	***724***	***618***	***1,342***
Land Use	***Mixed-Use Trip Generation***								
Pharmacy	148	148	296	5	4	9	17	17	34
Grocery	434	434	868	19	12	31	45	44	89
Retail	647	647	1,294	9	6	15	59	61	120
Restaurant (Quality)	88	88	176	1	1	2	10	5	15
Restaurant (Quality)	135	135	270	2	1	3	15	7	22
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Apartment (includes clubhouse)	341	341	682	11	42	53	42	23	65
Hotel (includes meeting space)	26	26	52	2	2	4	3	3	6
Bank	96	96	192	9	7	16	17	17	34
total	***2,029***	***2,029***	***4,058***	***68***	***84***	***152***	***220***	***185***	***405***
Land Use	***External Trip Generation***								
Pharmacy	344	344	688	12	9	21	40	40	80
Grocery	1,013	1,013	2,026	43	28	71	106	102	208
Retail	1,509	1,509	3,018	21	14	35	137	142	279
Restaurant (Quality)	205	205	410	2	1	3	23	11	34
Restaurant (Quality)	315	315	630	4	2	6	35	17	52
Restaurant (Fast/Casual)	67	67	134	6	6	12	7	5	12
Restaurant (Fast/Casual)	67	67	134	6	6	12	7	5	12
Restaurant (Fast/Casual)	67	67	134	6	6	12	7	5	12
Restaurant (Fast/Casual)	67	67	134	6	6	12	7	5	12
Apartment (includes clubhouse)	557	557	1,114	17	69	85	68	37	105
Hotel (includes meeting space)	235	235	470	22	14	36	28	25	53
Bank	225	225	450	21	17	38	39	39	78
total	***4,669***	***4,669***	***9,338***	***168***	***177***	***345***	***504***	***433***	***937***

Table 6 (continued)
Trip Generation

Land Use	*Intercept Trip Generation*								
	Weekday			*AM Peak Hour*			*PM Peak Hour*		
	In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Pharmacy	169	169	338	6	4	10	20	20	40
Grocery	365	365	730	16	10	26	38	37	75
Retail	719	719	1,438	10	6	16	65	68	133
Restaurant (Quality)	90	90	180	1	1	2	10	5	15
Restaurant (Quality)	139	139	278	2	1	3	15	8	23
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Restaurant (Fast/Casual)	29	29	58	3	2	5	3	2	5
Apartment (includes clubhouse)	0	0	0	0	0	0	0	0	0
Hotel (includes meeting space)	0	0	0	0	0	0	0	0	0
Bank	106	106	212	10	8	18	18	18	36
total	***1,702***	***1,702***	***3,404***	***55***	***40***	***95***	***179***	***164***	***343***



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North

Scale: n.t.s

Figure 6
Directional Distribution

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Mountain Brook, Alabama

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Traffic Assignment

The vehicle trips projected to be generated by the proposed development for buildout conditions were assigned to the area roadway network according to the directional distribution and access usage assumptions, and then added to background 2015 traffic volumes. Future 2015 traffic volumes were derived by:

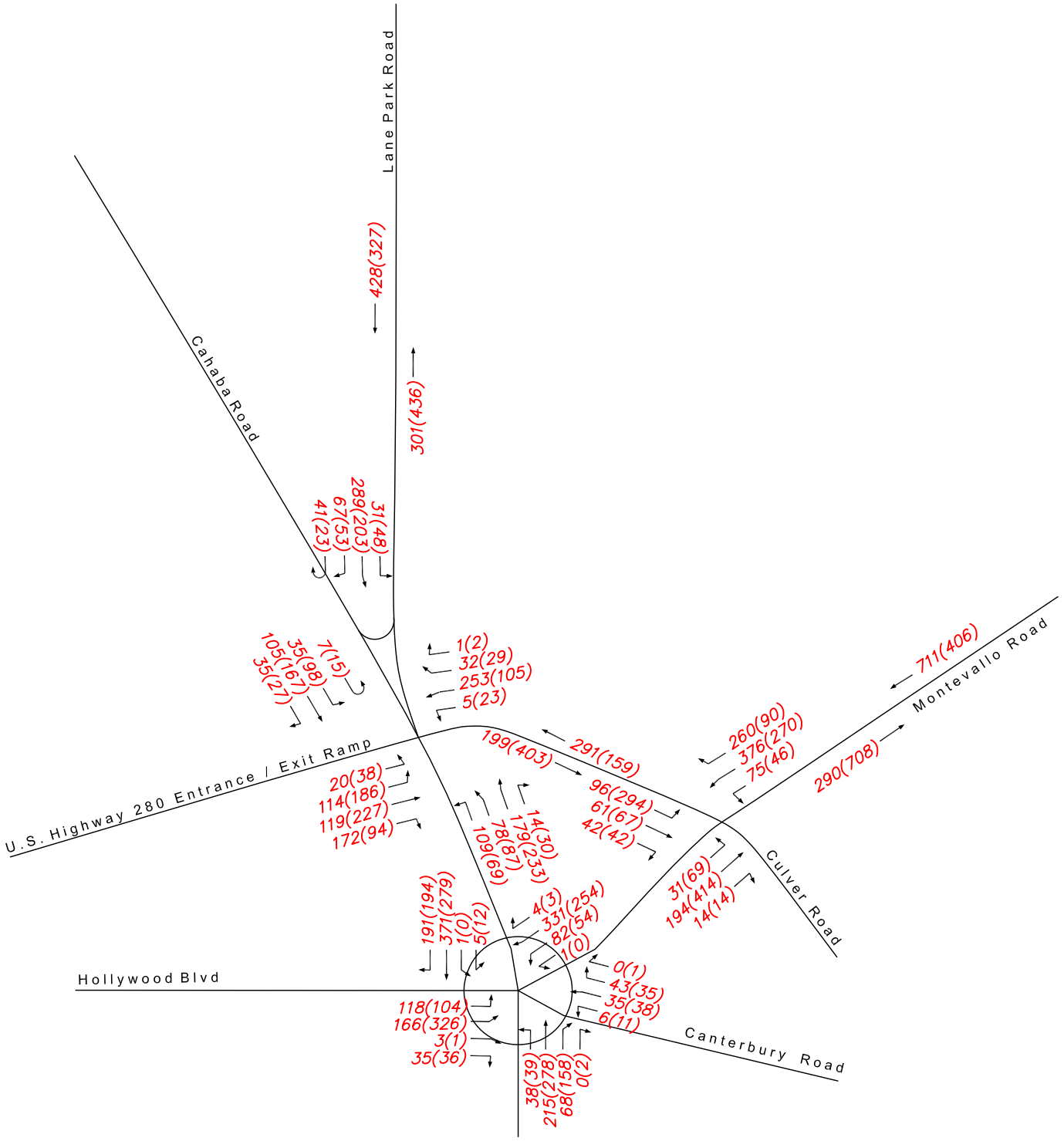
1. Balancing traffic on all roadways and intersections using the 2009 traffic counts at the intersection of Cahaba Road/Lane Park Road/Culver Road/U.S. 280 Ramps as a base. The balanced 2009 traffic volumes are shown in Figure 7.

2. Removing existing traffic generated by the current development on the site from the roadway network. The traffic subtracted from the network from the existing shopping center is shown in Figure 8.

3. Factoring the remaining traffic by +1.0% per year from 2009 to 2015 to account for historical traffic growth. The background 2015 traffic volumes with no development are shown in Figure 9.

4. Traffic generated by the proposed development was assigned to the roadway network based on the directional distribution. The traffic assignment is shown in Figure 10.

5. Traffic generated by the proposed development was added to background 2015 traffic volumes. The resultant future a.m. and p.m. peak hour traffic volumes for buildout conditions are shown in Figure 11.



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LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 7
Balanced 2009 Traffic Volumes

Lane Parke
Mountain Brook, Alabama

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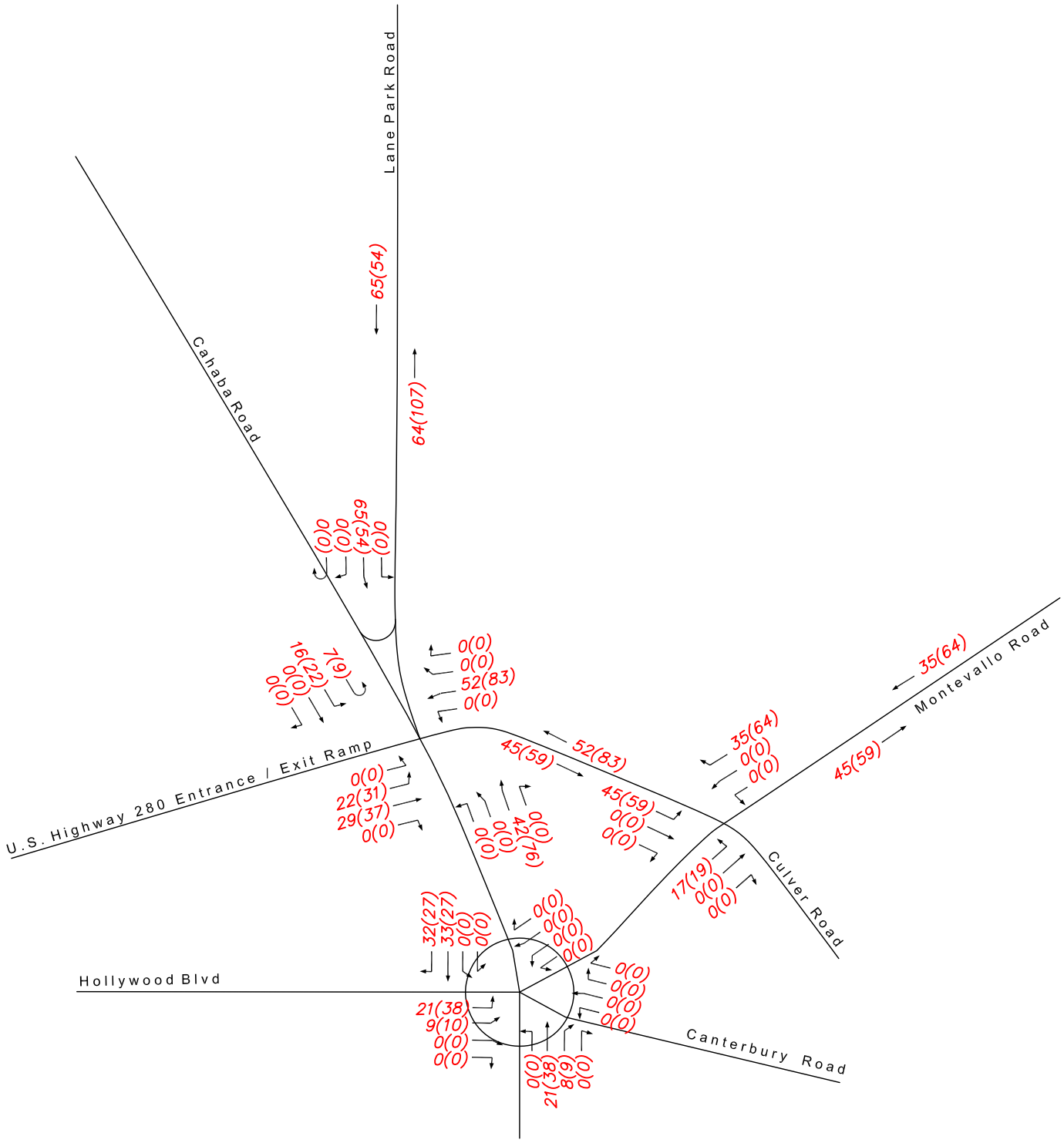

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LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 8
Existing Development Traffic

Lane Parke
Mountain Brook, Alabama

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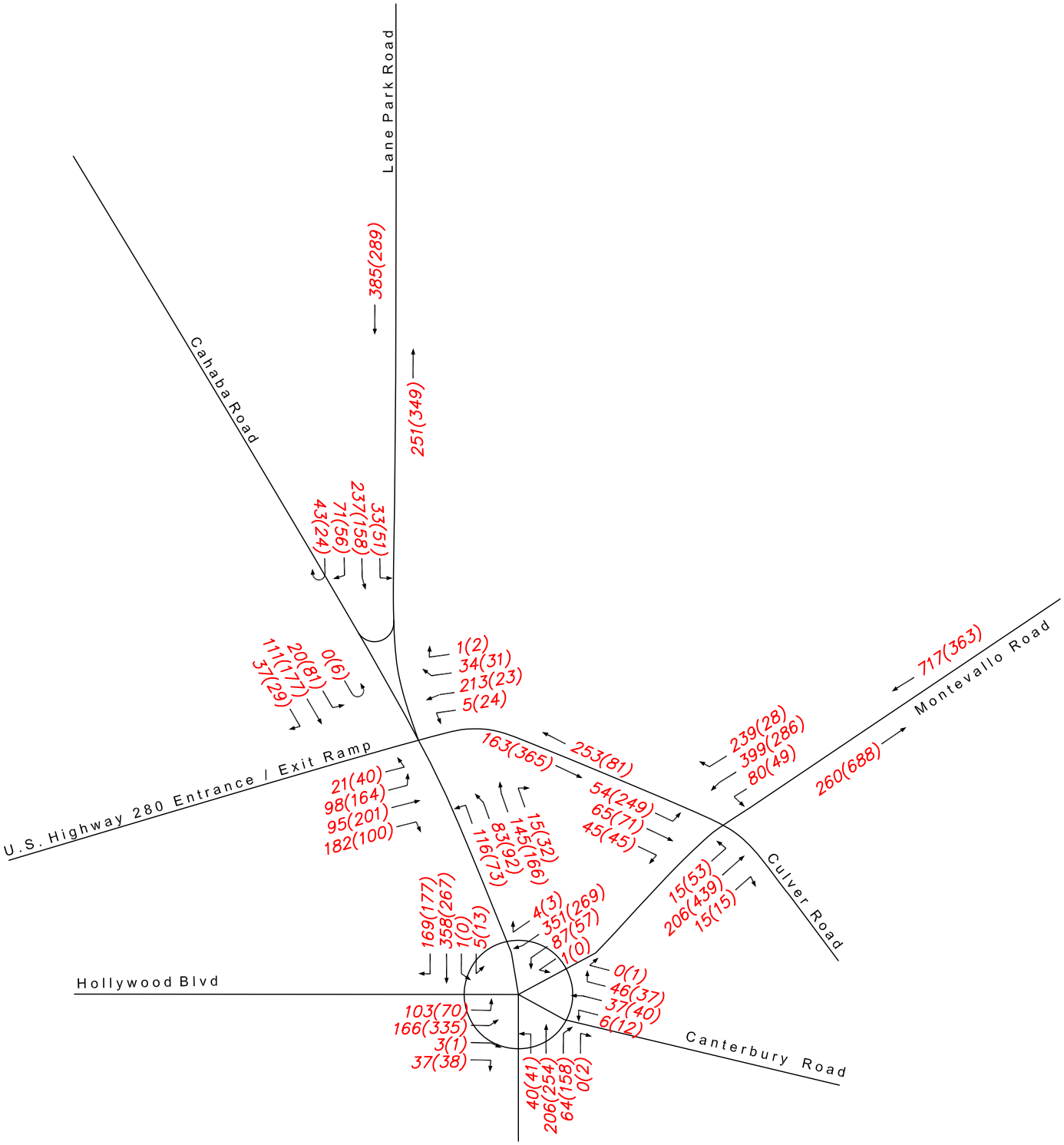

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LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 9
Background 2015 Traffic Volumes

Lane Parke
Mountain Brook, Alabama

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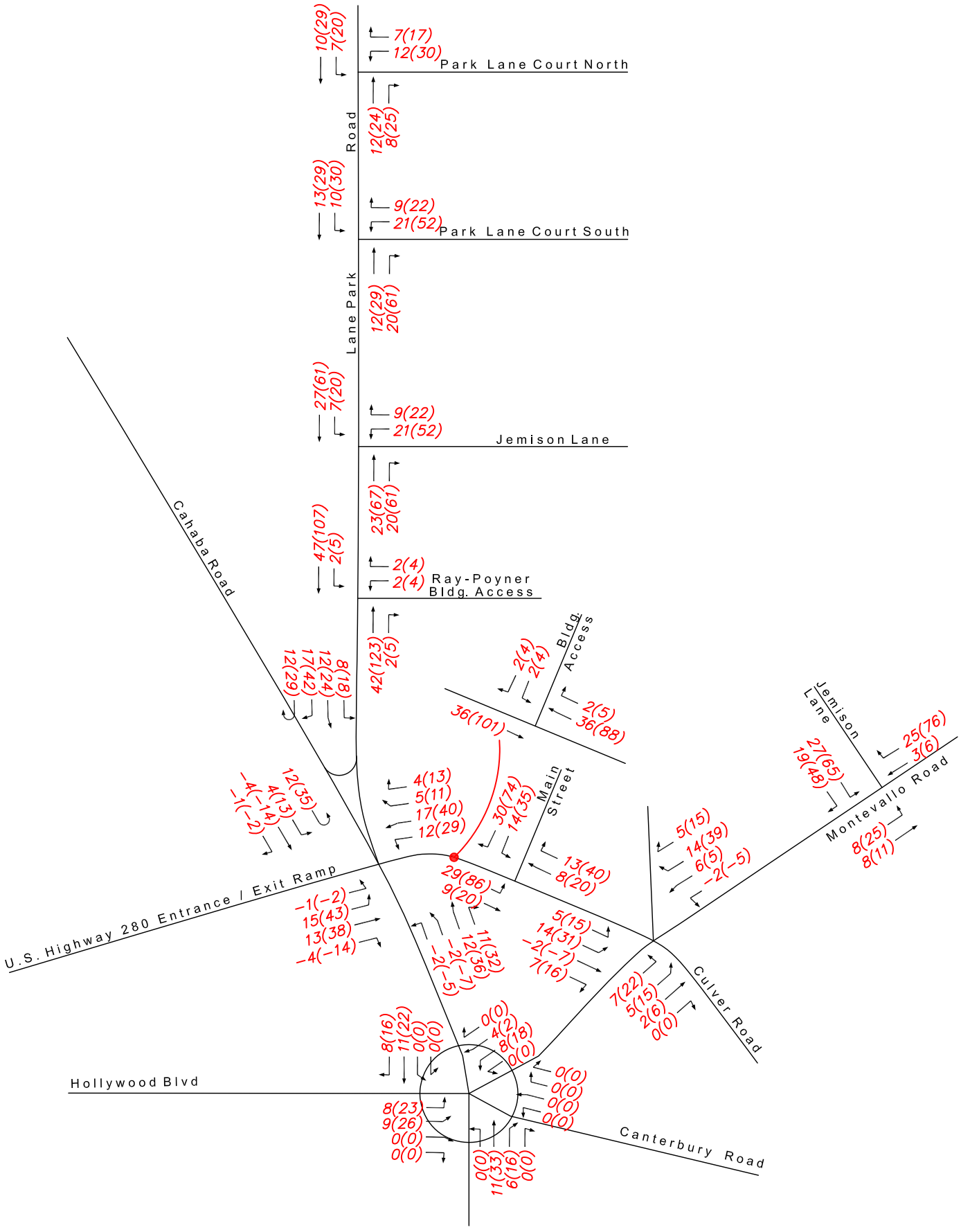

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LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 10
Traffic Assignment

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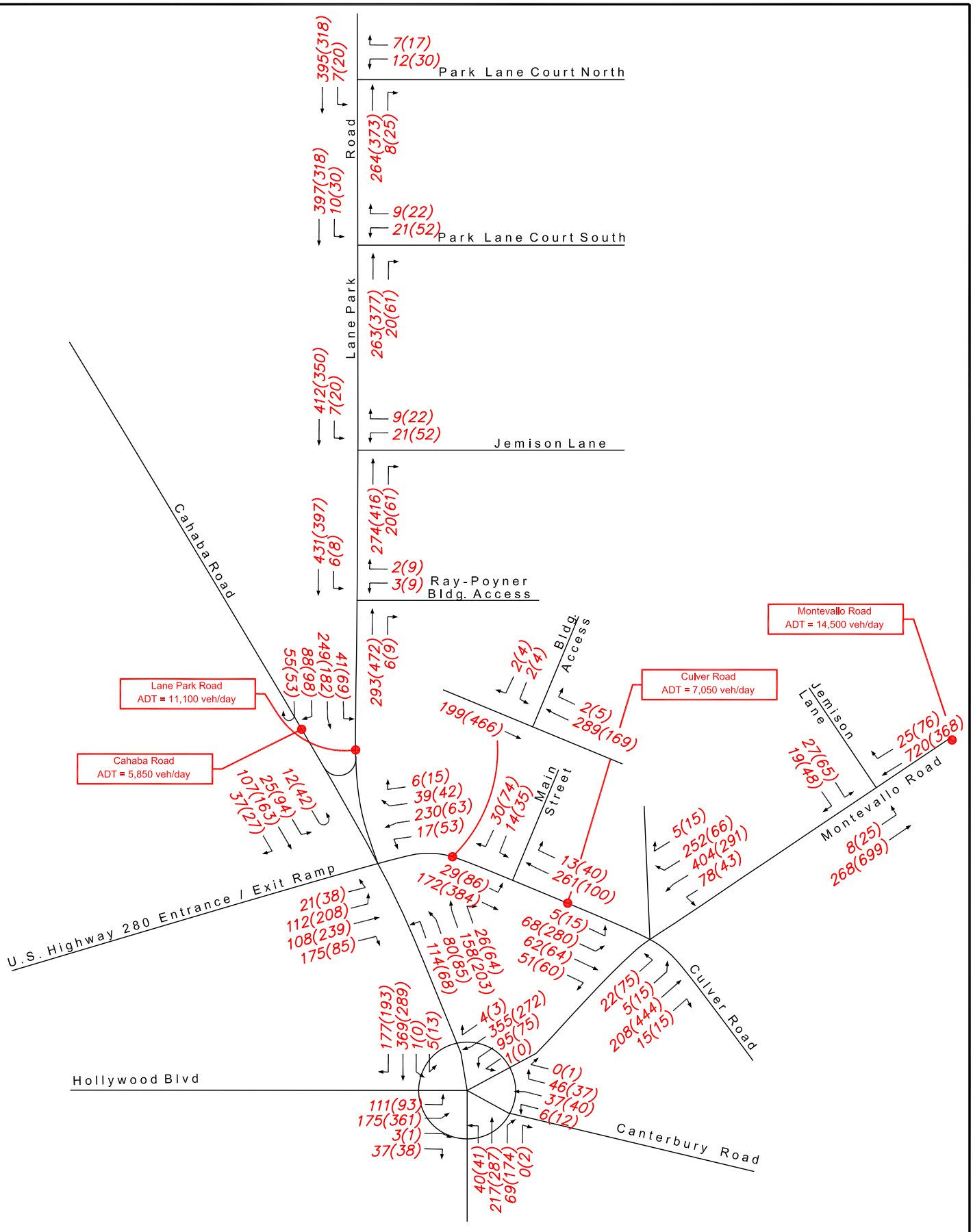
June 2013

1035.072



SKIPPER CONSULTING INC.

LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 11
Future Traffic Volumes

Lane Parke
Mountain Brook, Alabama

June 2013

1035.072

Future Intersection Capacity Analysis

Future peak hour intersection capacity analyses for the study intersections were performed according to the methodology presented in the 2000 *Highway Capacity Manual*, published by the Transportation Research Board. The results of the future peak hour intersection capacity analyses are included in Appendix G and are summarized in Table 7.

Future Daily Roadway Segment Capacity Analysis

Future daily roadway segment capacity analyses were performed by comparing the future daily traffic volumes as shown on Figure 11 with service flows by level of service calculated from information obtained from the Alabama Department of Transportation. The daily level of service chart based on traffic flows is included in Appendix F. Table 8 presents the results of the daily roadway segment capacity analyses.

Table 7
Future Intersection Capacity Analysis

Intersection	*Approach*	*Movement*	*Level of Service*	
			AM	*PM*
Lane Park Road at Park Lane Court North	Park Lane Court North Westbound	Left/Right	B	B
	Lane Park Road Southbound	Left/Through	A	A
Lane Park Road at Park Lane Court South	Park Lane Court South Westbound	Left/Right	B	B
	Lane Park Road Southbound	Left	A	A
Lane Park Road at Jemison Lane	Jemison Lane Westbound	Left	C	C
		Right	B	B
		Overall approach	*B*	*C*
	Lane Park Road Southbound	Left	A	A
Lane Park Road at Ray-Poyner Building Access	Bldg. Access Westbound	Left/Right	B	B
	Lane Park Road Southbound	Left	A	A
Cahaba Road at Lane Park Road/ Culver Road/ U.S. Highway 280 Ramp	U.S. 280 Ramp Eastbound	Left	C	D
		Through	C	C
		Right	C	C
		Overall approach	*C*	*C*
	Culver Road Westbound	Left	C	D
		Through/Right	D	D
		Overall approach	*D*	*D*
	Cahaba Road Northbound	Left	C	C
		Through/Right	D	C
		Overall approach	*D*	*C*
	Cahaba Road Southbound	Left	C	D
		Through	C	C
		Right	C	B
		Overall approach	*C*	*C*
	Lane Park Road Southbound	Left	C	C
		Through/Right	D	D
		Overall approach	*D*	*D*
		Overall intersection	***D***	***D***

Table 7 (continued)
Future Intersection Capacity Analysis

Intersection	*Approach*	*Movement*	*Level of Service*	
			AM	*PM*
Culver Road at Ray-Poyner Bldg. Access	Bldg. Access Southbound	Left/Right	B	B
Culver Road at Main Street	Culver Road Eastbound	Left	A	A
	Main Street Southbound	Left	B	C
		Right	B	A
		Overall approach	*B*	*B*
Montevallo Road at Culver Road	Culver Road Eastbound	Left	C	C
		Through/Right	C	B
		Overall approach	*C*	*B*
	Montevallo Road Northbound	Left	A	A
		Through/Right	A	A
		Overall approach	*A*	*A*
	Montevallo Road Southbound	Left	A	B
		Through/Right	A	B
		Overall approach	*A*	*B*
		Overall intersection	***B***	***B***
Montevallo Road at Jemison Lane	Jemison Lane Eastbound	Left	C	E
		Right	C	B
		Overall approach	*C*	*D*
	Montevallo Road Northbound	Left	A	A
Cahaba Road at Montevallo Road/ Hollywood Boulevard/ Canterbury Road	Hollywood Boulevard Eastbound	Left	D	C
		Through/Right	B	C
		Overall approach	*C*	*C*
	Montevallo Road Westbound	Left	B	C
		Through/Right	C	C
		Overall approach	*C*	*C*
	Cahaba Road Northbound	Left	C	B
		Through/Right	B	C
		Overall approach	*B*	*C*
	Cahaba Road Southbound	Left	B	B
		Through/Right	C	C
		Overall approach	*C*	*C*
	Canterbury Road Westbound	Left	C	C
		Through/Right	D	C
		Overall approach	*D*	*C*
		Overall intersection	***C***	***C***

Table 8
Future Daily Roadway Segment Capacity Analysis

Roadway	*Segment*	*Daily Traffic Volume*	*Level of Service*
Lane Park Road	Jemison Lane to Culver Road	11,100	D
Cahaba Road	Birmingham Zoo to Culver Road	5,850	A
Culver Road	Main Street to Montevallo Road	7,050	B
Montevallo Road	Overhill Road to Jemison Lane	15,000	E

Turn Lane Warrant Analysis

Left Turn Lane Warrant Analysis

Recommendations for the addition of left turn lanes for ingress to the proposed site accesses for future conditions were evaluated using methods outlined in the *Intersection Channelization Design Guide, Report 279*, published by the Transportation Research Board. According to the design guide, the following guidelines are suggested when considering the addition of a left turn lane:

- Left turn lanes should be considered at all median crossovers on divided, high speed highways.
- Left turn lanes should be provided at all unstopped (i.e. through) approaches of primary high-speed rural highway intersections with other arterials or collectors.
- Left turn lanes are recommended at approaches to intersections for which the combination of through left, and opposing volumes exceeds the warrants shown in Figure 4-12 provided as Figure 4 of the TRB report.

- Left turn lanes on stopped or secondary approaches should be provided based on analysis of the capacity and operations of the unsignalized intersection. Considerations include minimizing delays to right turning or through vehicles, and total approach capacity.
- Left turn lanes should be considered at intersection approaches that experience a significant number of left-turn involved accidents. A total of 4 or more such accidents in 12 months or 6 or more in 24 months, is considered appropriate.

The left turn lane warrant analysis graph as referenced from the TRB report is included in Appendix H. The analyses were performed using the p.m. peak hour volumes for full buildout conditions since this represents the peak projected left turn traffic. The results of the left turn lane warrant analyses are summarized in Table 9.

Table 9
Left Turn Lane Warrant Analysis

Intersection	*Approach*	*Opposing Volume (V_o)*	*Advancing Volume (V_A)*	*Left Turns in V_A*	*Left Turn Lane Warranted?*
Lane Park Road at Park Lane Court North	Lane Park Road Southbound	398	338	20 (6%)	No
Lane Park Road at Park Lane Court South	Lane Park Road Southbound	438	348	30 (9%)	No
Lane Park Road at Jemison Lane	Lane Park Road Southbound	477	370	20 (5%)	No
Lane Park Road at Ray-Poyner Bldg.	Lane Park Road Southbound	481	405	8 (2%)	No
Culver Road at Main Street	Culver Road Eastbound	140	470	86 (18%)	Yes
Montevallo Road at Jemison Lane	Montevallo Road Northbound	444	724	25 (3%)	Yes

Right Turn Lane Warrant Analysis

Recommendations for the addition of right turn lanes for ingress to the proposed site accesses for future conditions were evaluated using methods outlined in the *Intersection Channelization Design Guide, Report 279*, published by the Transportation Research Board. According to the design guide, the following guidelines are suggested when considering the addition of a right turn lane:

- Right turn lanes should be considered intersections when a significant percentage of the approach volume is the right turning volume.
- Right turn lanes should be considered intersections when there is a presence of pedestrians who could conflict with right-turning vehicles.
- Right turn lanes should be considered intersections when there is a severe skew or grade that increases the difficulty of right turns.

The right turn lane warrant analysis graph as referenced from the TRB report is included in Appendix H. The analyses were performed using the p.m. peak hour volumes for full buildout conditions since this represents the peak projected right turn traffic. The results of the right turn lane warrant analyses are summarized in Table 10.

Table 10
Right Turn Lane Warrant Analysis

Intersection	*Approach*	*Approach Volume*	*Right Turns*	*Right Turn Lane Warranted?*
Lane Park Road at Park Lane Court North	Lane Park Road Northbound	398	25	No
Lane Park Road at Park Lane Court South	Lane Park Road Northbound	438	61	No
Lane Park Road at Jemison Lane	Lane Park Road Northbound	477	61	No
Lane Park Road at Ray-Poyner Bldg.	Lane Park Road Northbound	481	9	No
Culver Road at Ray-Poyner Bldg.	Culver Road Westbound	174	5	No
Culver Road at Main Street	Culver Road Westbound	100	40	No
Montevallo Road at Jemison Lane	Montevallo Road Westbound	444	76	Yes

It should be noted that a right turn lane is warranted at one location where the physical constraints of the existing roadway system will not allow construction, namely Montevallo Road westbound at Jemison Lane. In this case, it is recommended that as large as radius as practical be provided for the right turn movement.

Queue Analysis

Queue lengths during the p.m. peak hour of traffic flow for critical movements at the major study intersections were evaluated using a variety of analysis techniques including the NCHRP Report 457 and the Synchro software. The 95th percentile queue lengths calculated are shown in Table 11.

Table 11
Queue Lengths

Intersection	*Approach*	*Lane Group*	*95th %tile Queue Length (PM Peak – Buildout)*
Lane Park Road at Park Lane Court North (Unsignalized)	Lane Park Road Southbound	Left/Through	80’
	Park Lane Court North Westbound	Left/Right	25’
Lane Park Road at Park Lane Court South (Unsignalized)	Lane Park Road Southbound	Left/Through	85’
	Park Lane Court South Westbound	Left/Right	30’
Lane Park Road at Jemison Lane (Unsignalized)	Lane Park Road Southbound	Left	95’
	Jemison Lane Westbound	Left	25’
		Right	25’
Cahaba Road at Lane Park Road/ Culver Road/ U.S. 280 Ramp (Signalized)	U.S. 280 Ramp Eastbound	Left	220’
		Through	195’
		Right	35’
	Culver Road Westbound	Left	70’
		Through/Right	125’
	Cahaba Road Northbound	Left	70’
		Through/Right	310’
	Cahaba Road Southbound	Left	205’
		Through	135’
		Right	25’
	Lane Park Road Southbound	Left	75’
		Through/Right	400’

Table 11 (continued)
Queue Lengths

Intersection	*Approach*	*Lane Group*	*95th %tile Queue Length (PM Peak – Buildout)*
Culver Road at Main Street (Unsignalized)	Culver Road Eastbound	Left	25’
	Main Street Southbound	Left	25’
		Right	25’
Montevallo Road at Culver Road (Signalized)	Culver Road Eastbound	Left	215’
		Through/Right	95’
	Montevallo Road Northbound	Left	35’
		Through/Right	170’
	Montevallo Road Southbound	Left	35’
		Through/Right	215’
Montevallo Road at Jemison Lane (Unsignalized)	Montevallo Road Northbound	Left	25’
	Jemison Lane Southbound	Left	50’
		Right	25’
Cahaba Road at Montevallo Road/Hollywood Blvd./Canterbury Rd. (Signalized)	Hollywood Blvd. Eastbound	Left	75’
		Through/Right	280’
	Montevallo Road Westbound	Left	75’
		Through/Right	180’
	Cahaba Road Northbound	Left	50’
		Through/Right	360’
	Cahaba Road Southbound	Left	20’
		Through/Right	355’
	Canterbury Road Westbound	Left	65’
		Through/Right	50’

Ray-Poyner Building

The proposed development plan includes retaining the existing Ray-Poyner office building. Parking for the Ray-Poyner building is proposed for the north and west sides of the building. Access to the parking for the building is proposed to remain in its current locations on Lane Park Road, which is within the confines of the intersection of Cahaba Road/Lane Park Road/Culver Road/U.S. 280 Ramps. This location is not ideal for traffic flow, but is necessary to accommodate the existing condition. Over the course of the development of the project various attempts have been made to deal with the Ray- Poyner Building and its accesses to the public roadway system. These attempts have not been successful in addressing the traffic flow concerns caused by the Ray-Poyner Building.

Table 12 summarizes the trip generation of the Ray-Poyner Building developed according to ITE Trip Generation, 8th Edition. As shown, the contribution of traffic to the roadway network during the peak hours of traffic flow is minimal.

Table 12
Ray-Poyner Building Trip Generation

Land Use	*ITE Code*	*Size*	*Weekday*			*AM Peak Hour*			*PM Peak Hour*		
			In	*Out*	*Total*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Office	715	4,822 sq.ft.	28	28	56	8	1	9	1	76	8

RECOMMENDED IMPROVEMENTS

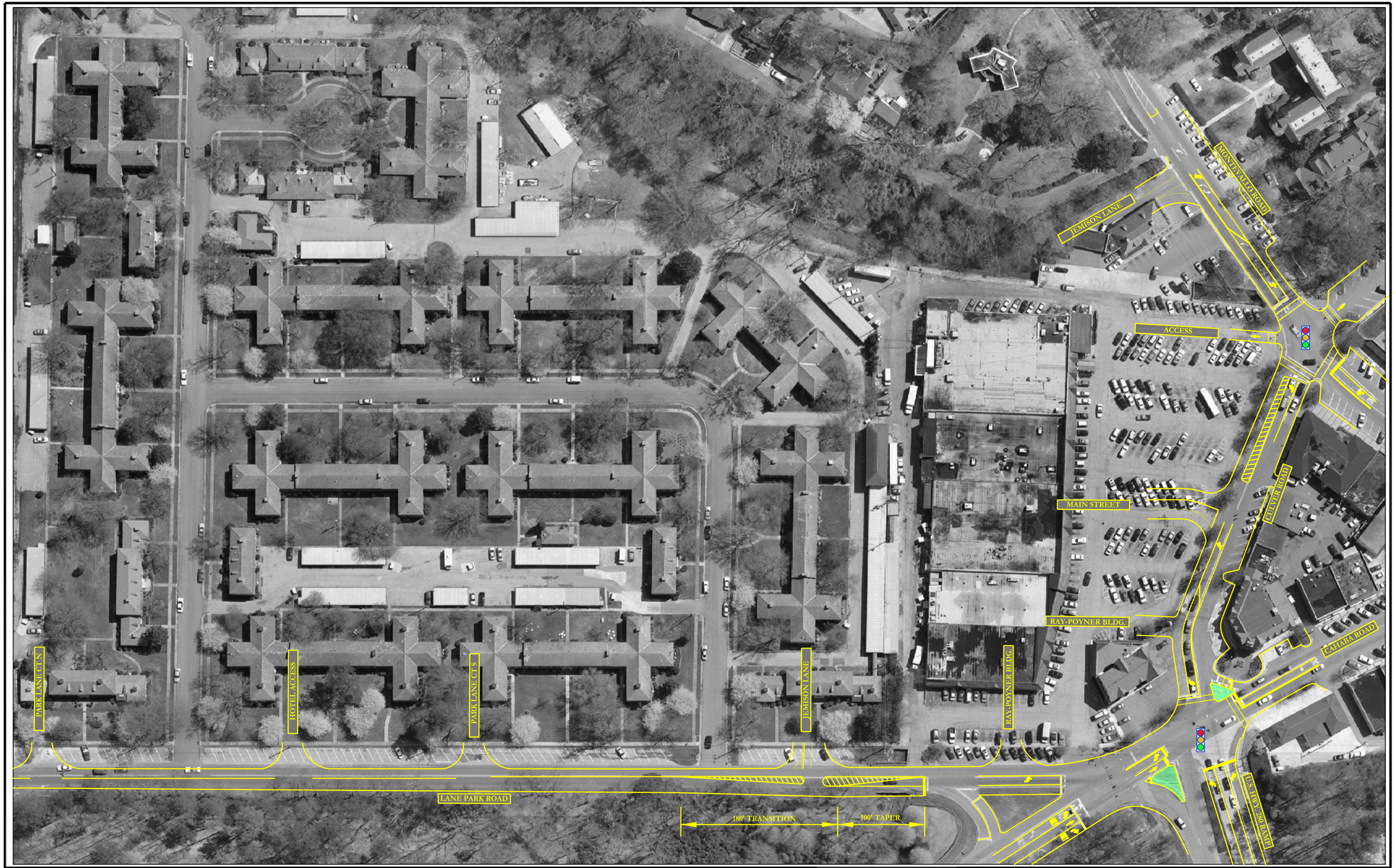
The proposed access schematic depicting cross sections and traffic control of all access points and improvements to the public roadway system is depicted in Figure 12. The following is a listing of improvements required to support the proposed development:

- Widen Lane Park Road to a three lane cross section from the intersection of Cahaba Road/Culver Road/U.S. 280 ramps for approximately 440 feet northward (including turn bay storage, turn bay taper, and transition taper).
- Widen Culver Road to a three lane cross section.
- Restripe Montevallo Road to provide a left turn lane into Jemison Lane.
- Modify the traffic signal at the intersection of Cahaba Road/Lane Park Road/Culver Road/U.S. 280 Ramps to provide a protected-permissive left turn arrow for traffic turning left from the U.S. 280 ramp northbound onto Cahaba Road and Lane Park Road.

Design Issues

The proposed site plan as included in Appendix A is schematic in nature and does not represent construction drawings. There are design issues which should be addressed when construction drawings are prepared for the project. These issues include, but are not limited to:

- Maintaining proper sight distance triangles at intersections. This includes proper placement and control of on-street parking and landscaping.
- Reviewing the placement of on-street parking to control vehicles backing into intersections.
- Determining locations where “back-out” buffers are needed and practical for the on-street parking on major public roadways.



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Legend

Traffic Signal

North

Scale: n.t.s

Figure 12
Recommended Access Schematic

Lane Parke
Mountain Brook, Alabama

June 2013

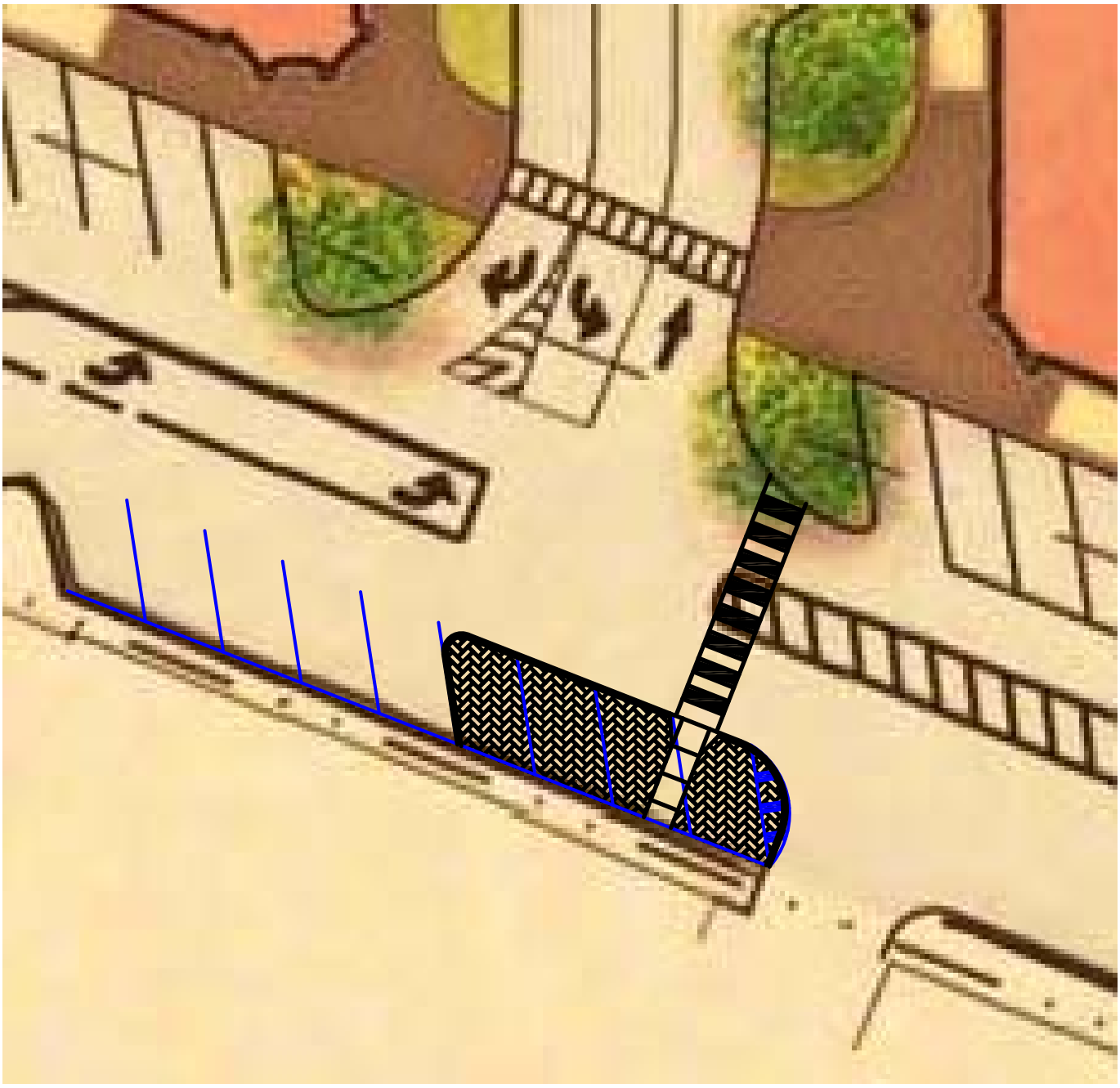
1035.072

- Proper signing and striping of pedestrian crossings.
- Proper signing and striping of intersections.
- Proper turn radii at intersections, including detailed analysis and design of the turning movements into the inbound-only access to the development at the intersection of Montevallo Road and Culver Road.
- Detailed analysis and design of pedestrian crossing features crossing the inbound-only access at the intersection of Montevallo Road and Culver Road, including determining the need for right turn on red restrictions.

Pedestrian Crossings

Culver Road at Main Street

The first pedestrian crossing discussed in this report is a proposed crossing of Culver Road on the east side of Main Street, crossing to the Sneaky Pete's. This crosswalk is not shown on the current site plan, but has been included on site plans in the past. It is recognized that pedestrians currently cross in this area today and will likely continue to do so in the future. Providing a marked pedestrian crossing in this area is problematic, but not insurmountable. The primary difficulties associated with providing a marked pedestrian crosswalk is the loss of on-street parking. In order for the crossing to be placed in the safest location and a location which has the least impact on traffic, parking spaces may need to be removed in front of the Sneaky Pete's. There have been concerns raised about this crossing being too close to adjacent pedestrian crossings at signalized intersections and concerns were also raised about parking in front of Sneaky Pete's having to back into the intersection of Culver Road and Main Street when exiting. A sketch of the proposed crossing is included in Figure 13.



SKIPPER CONSULTING INC.

LEGEND

North

Scale: n.t.s

Figure 13
Culver Road Pedestrian Crossing

Lane Parke
Mountain Brook, Alabama

June 2013

1035.072

Lane Parke Road at Botanical Gardens

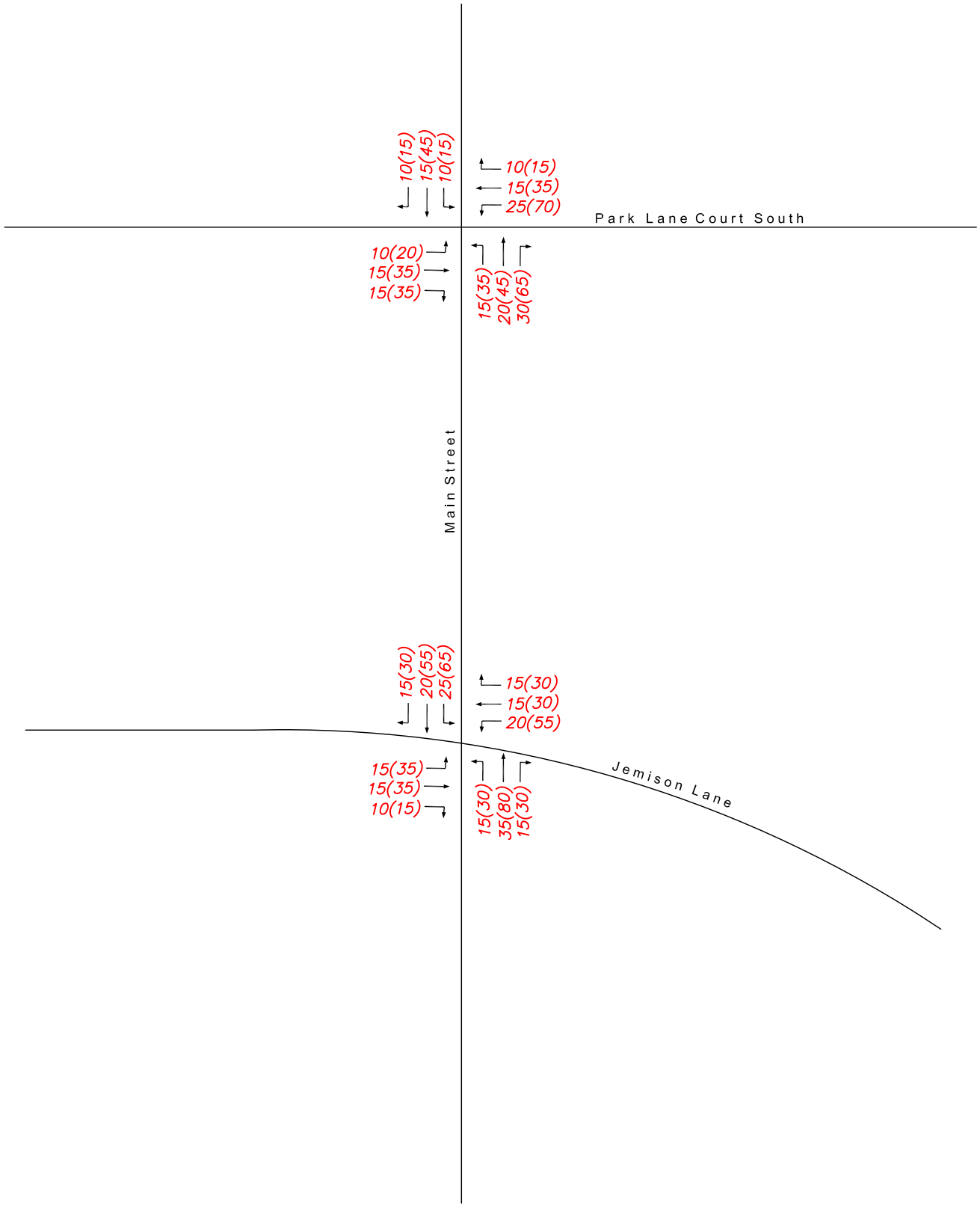
The second pedestrian crossing discussed in this report is a crossing of Lane Park Road at the north end of the subject property, crossing to the Botanical Gardens. This crosswalk is not shown in the master site plan. It is desirable for a pedestrian crossing to be provided from Lane Parke to the Botanical Gardens. The location of the crosswalk should begin on the south edge of the Botanical Gardens drive and extend to the north side of the north Lane Parke access. This crosswalk would need some type of semi-active control, such as flashing warning beacons activated by pedestrian pushbuttons. Concern has been expressed that there must be appropriate pedestrian facilities on the Botanical Gardens side of the roadway to receive the proposed crosswalk. Birmingham Botanical Gardens has been consulted and they are agreeable to constructing a sidewalk on the south side of their driveway and parking area.

Internal Circulation

An analysis was performed for the major internal intersections of the proposed development for buildout conditions in the year 2015. The intersections included in this analysis were:

- Main Street at Jemison Lane
- Main Street at the Park Lane Court South

Traffic volumes were estimated based on the projected traffic volumes entering and exiting the site at each of the site access points to the surrounding roadway network. The projected traffic volumes at the internal intersections for the a.m. and p.m. peak hours of traffic flow are shown in Figure 14.



SKIPPER CONSULTING INC.

LEGEND

100 (100) AM (PM)

North

Scale: n.t.s

Figure 14
Internal Traffic Volumes

Lane Parke
Mountain Brook, Alabama

June 2013

1035.072

It should be noted that cut-through traffic on Jemison Lane from Montevallo Road to Lane Park Road was not estimated and is assumed to be negligible in this study. A nominal volume of cut-through traffic on Jemison Lane would not change the results of analyses or the recommendations of this report.

The capacity of the internal intersections was evaluated using the 2000 *Highway Capacity Manual* procedures in order to determine quality of operation and proper traffic control. The results of the analyses are included in Appendix I and are summarized in Table 13. As shown, all movements at all internal intersections are expected to operate at a level of service "A". The recommended traffic control at the internal intersections is as follows:

- Main Street at Jemison Lane - Multi-way Stop
- Main Street at Park Lane Court South – Multi-way Stop

Table 13
Internal Intersection Capacity Analysis

Intersection	***Approach***	***Movement***	***Level of Service***	
			AM Peak	***PM Peak***
Main Street at Jemison Lane	Jemison Lane Eastbound	Left-Through-Right	A	A
	Jemison Lane Westbound	Left-Through-Right	A	A
	Main Street Northbound	Left-Through-Right	A	A
	Main Street Southbound	Left-Through-Right	A	A
Main Street at Park Lane Court South	Park Lane Ct S Eastbound	Left-Through-Right	A	A
	Park Lane Ct S Westbound	Left-Through-Right	A	A
	Main Street Northbound	Left-Through-Right	A	A
	Main Street Southbound	Left-Through-Right	A	A

Appendix A

Site Plan

Location Specifications

Lane Parke is located in Alabama's most affluent town - Mountain Brook - with easy access to the expressway and metropolitan Birmingham.

Site Size: 27 Acres
Retail Square Footage: 112,312
Inn Square Footage: 99,000
Parking: 1,134 convenient surface

NOTE: This Lease Plan is subject to change and is offered for the sole purpose of facilitating discussions with tenants who have committed to or expressed interest in the Shopping Center. No representation is made that specific tenants or tenant spaces will be located in Shopping Center as shown, or that the size and configuration of buildings, stores, office spaces, common areas, service areas, and entrances will be as shown or that the entire Shopping Center will be constructed as shown.

BUILDING	SIZE(SF)	BUILDING	SIZE(SF)	BUILDING	SIZE(SF)
A-1	28,300	D-1	4,340	E-1	4,430
A-2	1,065	D-2	2,890	E-2	4,300
A-3	2,400	D-3	1,450	E-3	1,450
A-4	6,500	D-4	1,500	E-4	1,430
A-TOTAL	38,265	D-5	1,450	E-5	1,440
B-TOTAL	11,157	D-6	1,500	E-6	1,450
C-1	6,500	D-7	8,480	E-7	1,500
C-2	1,800	D-TOTAL	21,610	E-8	6,230
C-3	2,400			E-TOTAL	22,230
C-4	2,400			F-TOTAL	3,700
C-5	3,000				
C-6	1,150				
C-7	1,800				
C-TOTAL	19,050				

OVERALL SITE: LEASE PLAN 04.29.13

Appendix B

Intersection Turning Movement Traffic Counts

A

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook03
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

Groups Printed- 1 - Unshifted

	LANE PARK RD Southbound		PARK LANE CT N Westbound		LANE PARK RD Northbound		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	0	67	2	0	91	1	161
04:15 PM	1	92	3	1	79	4	180
04:30 PM	4	87	1	1	89	2	184
04:45 PM	3	84	2	2	107	4	202
Total	8	330	8	4	366	11	727
05:00 PM	2	71	1	2	92	3	171
05:15 PM	7	71	0	5	104	4	191
05:30 PM	7	89	3	0	99	3	201
05:45 PM	5	76	2	2	93	5	183
Total	21	307	6	9	388	15	746
07:00 AM	0	45	3	1	72	0	121
07:15 AM	0	68	2	3	71	0	144
07:30 AM	0	96	5	2	79	1	183
07:45 AM	0	106	9	4	78	3	200
Total	0	315	19	10	300	4	648
08:00 AM	0	101	8	2	62	0	173
08:15 AM	0	90	4	2	59	0	155
08:30 AM	0	77	6	1	75	3	162
08:45 AM	0	47	5	2	62	1	117
Total	0	315	23	7	258	4	607
Grand Total	29	1267	56	30	1312	34	2728
Apprch %	2.2	97.8	65.1	34.9	97.5	2.5	
Total %	1.1	46.4	2.1	1.1	48.1	1.2	

	LANE PARK RD Southbound			PARK LANE CT N Westbound			LANE PARK RD Northbound				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
Intersection	04:45 PM										
Volume	19	315	334	6	9	15	402	14	416	0	765
Percent	5.7	94.3		40.0	60.0		96.6	3.4			
04:45 Volume	3	84	87	2	2	4	107	4	111	0	202
Peak Factor											0.947
High Int.	05:30 PM			05:15 PM			04:45 PM			3:45:00 PM	
Volume	7	89	96	0	5	5	107	4	111		
Peak Factor			0.870			0.750			0.937		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
By Approach	04:15 PM			04:45 PM			04:45 PM			04:00 PM	
Volume	10	334	344	6	9	15	402	14	416	0	
Percent	2.9	97.1		40.0	60.0		96.6	3.4			
High Int.	04:15 PM			05:15 PM			04:45 PM			-	
Volume	1	92	93	0	5	5	107	4	111	-	
Peak Factor			0.925			0.750			0.937	-	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mtbrook03
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

	LANE PARK RD Southbound			PARK LANE CT N Westbound			LANE PARK RD Northbound				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:30 AM										
Volume	0	393	393	26	10	36	278	4	282	0	711
Percent	0.0	100.0		72.2	27.8		98.6	1.4			
07:45 Volume	0	106	106	9	4	13	78	3	81	0	200
Peak Factor											0.889
High Int.	07:45 AM			07:45 AM			07:45 AM				
Volume	0	106	106	9	4	13	78	3	81		
Peak Factor			0.927			0.692			0.870		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
By Approach	07:30 AM			07:30 AM			07:00 AM			07:00 AM	
Volume	0	393	393	26	10	36	300	4	304	0	
Percent	0.0	100.0		72.2	27.8		98.7	1.3			
High Int.	07:45 AM			07:45 AM			07:45 AM			-	
Volume	0	106	106	9	4	13	78	3	81	-	
Peak Factor			0.927			0.692			0.938	-	

B

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook05
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

Groups Printed- 1 - Unshifted

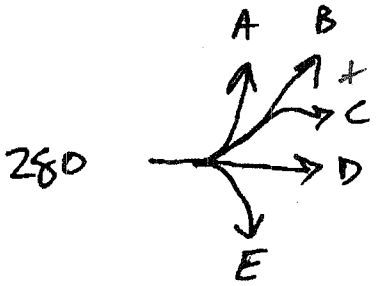
	LANE PARK RD Southbound		PARK LANE CT S Westbound		LANE PARK RD Northbound		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	1	77	1	0	89	5	173
04:15 PM	0	87	2	1	84	4	178
04:30 PM	0	92	4	0	103	4	203
04:45 PM	0	81	2	0	101	4	188
Total	1	337	9	1	377	17	742
05:00 PM	1	75	2	1	99	11	189
05:15 PM	1	83	1	1	112	7	205
05:30 PM	1	90	4	0	103	7	205
05:45 PM	2	71	2	1	96	8	180
Total	5	319	9	3	410	33	779
07:00 AM	0	44	8	1	75	2	130
07:15 AM	0	70	4	0	62	1	137
07:30 AM	1	111	12	2	83	1	210
07:45 AM	0	118	2	3	73	4	200
Total	1	343	26	6	293	8	677
08:00 AM	0	100	2	0	65	0	167
08:15 AM	0	88	3	1	67	1	160
08:30 AM	0	81	8	0	71	2	162
08:45 AM	0	59	6	0	62	0	127
Total	0	328	19	1	265	3	616
Grand Total	7	1327	63	11	1345	61	2814
Apprch %	0.5	99.5	85.1	14.9	95.7	4.3	
Total %	0.2	47.2	2.2	0.4	47.8	2.2	

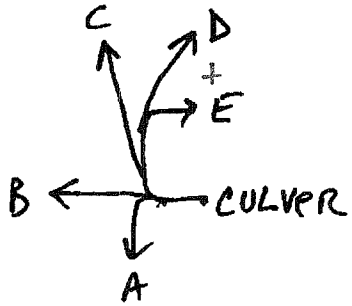
	LANE PARK RD Southbound			PARK LANE CT S Westbound			LANE PARK RD Northbound				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
Intersection	04:45 PM										
Volume	3	329	332	9	2	11	415	29	444	0	787
Percent	0.9	99.1		81.8	18.2		93.5	6.5			
05:30 Volume	1	90	91	4	0	4	103	7	110	0	205
Peak Factor											0.960
High Int.	05:30 PM			05:30 PM			05:15 PM			3:45:00 PM	
Volume	1	90	91	4	0	4	112	7	119		
Peak Factor			0.912			0.688			0.933		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
By Approach	04:00 PM			04:15 PM			04:45 PM			04:00 PM	
Volume	1	337	338	10	2	12	415	29	444	0	
Percent	0.3	99.7		83.3	16.7		93.5	6.5			
High Int.	04:30 PM			04:30 PM			05:15 PM			-	
Volume	0	92	92	4	0	4	112	7	119	-	
Peak Factor			0.918			0.750			0.933	-	

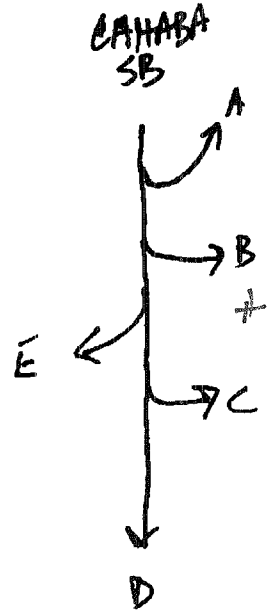
TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

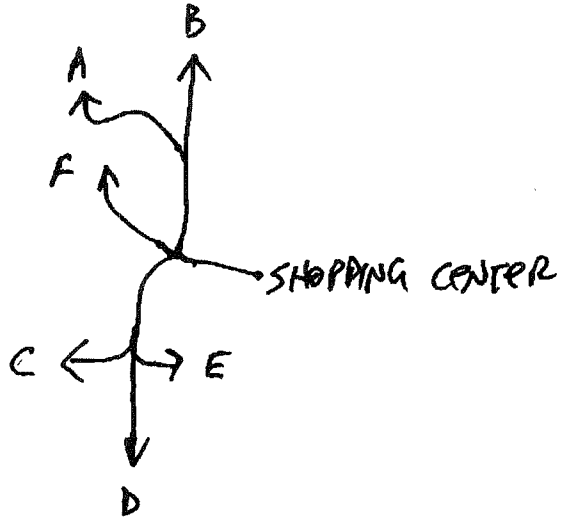
File Name : mtbrook05
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

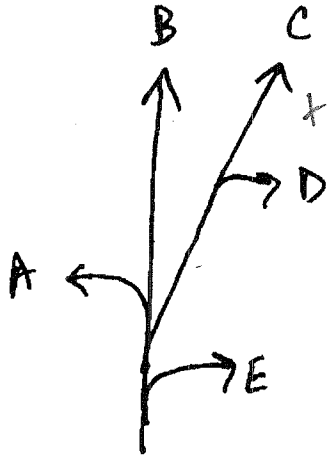
	LANE PARK RD Southbound			PARK LANE CT S Westbound			LANE PARK RD Northbound				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:30 AM										
Volume	1	417	418	19	6	25	288	6	294	0	737
Percent	0.2	99.8		76.0	24.0		98.0	2.0			
07:30 Volume	1	111	112	12	2	14	83	1	84	0	210
Peak Factor											0.877
High Int.	07:45 AM			07:30 AM			07:30 AM				
Volume	0	118	118	12	2	14	83	1	84		
Peak Factor			0.886			0.446			0.875		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
By Approach	07:30 AM			07:00 AM			07:00 AM			07:00 AM	
Volume	1	417	418	26	6	32	293	8	301	0	
Percent	0.2	99.8		81.3	18.8		97.3	2.7			
High Int.	07:45 AM			07:30 AM			07:30 AM			-	
Volume	0	118	118	12	2	14	83	1	84	-	
Peak Factor			0.886			0.571			0.896	-	



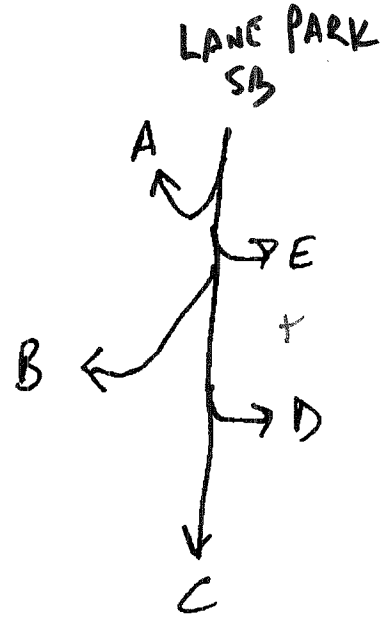








CAHABA
NB



TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mbrook08
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- Unshifted

	HWY 280 RAMPS Eastbound					
Start Time	A	B	C	D	E	Int. Total
11:00 AM	10	29	4	25	18	86
11:15 AM	13	27	5	36	15	96
11:30 AM	10	31	9	40	29	119
11:45 AM	7	24	2	45	28	106
Total	40	111	20	146	90	407
12:00 PM	11	23	4	28	22	88
12:15 PM	13	29	6	43	17	108
12:30 PM	7	28	4	33	25	97
12:45 PM	6	20	5	41	29	101
Total	37	100	19	145	93	394
04:00 PM	8	36	3	42	10	99
04:15 PM	1	23	4	41	19	88
04:30 PM	3	27	7	45	10	92
04:45 PM	8	46	3	59	23	139
Total	20	132	17	187	62	418
05:00 PM	9	35	4	59	28	135
05:15 PM	10	44	4	57	23	138
05:30 PM	11	47	3	52	20	133
05:45 PM	15	34	2	58	29	138
Total	45	160	13	226	100	544
07:00 AM	9	30	1	23	28	91
07:15 AM	5	26	0	16	45	92
07:30 AM	7	22	4	24	35	92
07:45 AM	6	19	1	30	43	99
Total	27	97	6	93	151	374
08:00 AM	4	35	0	34	57	130
08:15 AM	3	30	3	31	37	104
08:30 AM	4	23	2	18	36	83
08:45 AM	9	29	9	24	27	98
Total	20	117	14	107	157	415
Grand Total	189	717	89	904	653	2552
Apprch %	7.4	28.1	3.5	35.4	25.6	
Total %	7.4	28.1	3.5	35.4	25.6	

				HWY 280 RAMPS Eastbound						
Start Time	App. Total	App. Total	App. Total	A	B	C	D	E	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
Intersection	11:30 AM									
Volume	0	0	0	41	107	21	156	96	421	421
Percent				9.7	25.4	5.0	37.1	22.8		
11:30 Volume	0	0	0	10	31	9	40	29	119	119
Peak Factor										0.884
High Int.	10:45:00 AM	10:45:00 AM	10:45:00 AM	11:30 AM						
Volume	0	0	0	10	31	9	40	29	119	
Peak Factor									0.884	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook08
Site Code : 00000000
Start Date : 09/08/2009
Page No : 2

				HWY 280 RAMPS Eastbound						
Start Time	App. Total	App. Total	App. Total	A	B	C	D	E	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
By Approach	11:00 AM	11:00 AM	11:00 AM	11:30 AM						
Volume	0	0	0	41	107	21	156	96	421	
Percent				9.7	25.4	5.0	37.1	22.8		
High Int.	-	-	-	11:30 AM						
Volume	-	-	-	10	31	9	40	29	119	
Peak Factor	-	-	-						0.884	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:45 PM									
Volume	0	0	0	38	172	14	227	94	545	545
Percent				7.0	31.6	2.6	41.7	17.2		
04:45 Volume	0	0	0	8	46	3	59	23	139	139
Peak Factor										0.980
High Int.				04:45 PM						
Volume	0	0	0	8	46	3	59	23	139	
Peak Factor									0.980	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
By Approach	04:00 PM	04:00 PM	04:00 PM	04:45 PM						
Volume	0	0	0	38	172	14	227	94	545	
Percent				7.0	31.6	2.6	41.7	17.2		
High Int.	-	-	-	04:45 PM						
Volume	-	-	-	8	46	3	59	23	139	
Peak Factor	-	-	-						0.980	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:30 AM									
Volume	0	0	0	20	106	8	119	172	425	425
Percent				4.7	24.9	1.9	28.0	40.5		
08:00 Volume	0	0	0	4	35	0	34	57	130	130
Peak Factor										0.817
High Int.				08:00 AM						
Volume	0	0	0	4	35	0	34	57	130	
Peak Factor									0.817	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
By Approach	07:00 AM	07:00 AM	07:00 AM	07:30 AM						
Volume	0	0	0	20	106	8	119	172	425	
Percent				4.7	24.9	1.9	28.0	40.5		
High Int.	-	-	-	08:00 AM						
Volume	-	-	-	4	35	0	34	57	130	
Peak Factor	-	-	-						0.817	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mbrook14
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- Unshifted

	CAHABA RD Northbound					
Start Time	A	B	C	D	E	Int. Total
11:00 AM	16	19	28	6	17	86
11:15 AM	13	19	28	5	16	81
11:30 AM	16	17	29	4	3	69
11:45 AM	14	30	42	6	3	95
Total	59	85	127	21	39	331
12:00 PM	21	15	26	5	10	77
12:15 PM	19	18	42	6	9	94
12:30 PM	17	14	29	4	17	81
12:45 PM	24	24	39	7	12	106
Total	81	71	136	22	48	358
04:00 PM	16	24	39	6	11	96
04:15 PM	19	15	36	5	8	83
04:30 PM	15	17	46	12	4	94
04:45 PM	22	23	43	7	8	103
Total	72	79	164	30	31	376
05:00 PM	18	24	45	9	15	111
05:15 PM	14	23	66	5	3	111
05:30 PM	19	24	42	4	5	94
05:45 PM	15	24	34	3	9	85
Total	66	95	187	21	32	401
07:00 AM	14	7	27	2	2	52
07:15 AM	12	17	34	2	1	66
07:30 AM	34	26	31	2	4	97
07:45 AM	30	24	53	0	1	108
Total	90	74	145	6	8	323
08:00 AM	20	14	51	3	4	92
08:15 AM	25	14	37	2	5	83
08:30 AM	21	13	30	0	1	65
08:45 AM	20	19	33	8	4	84
Total	86	60	151	13	14	324
Grand Total	454	464	910	113	172	2113
Apprch %	21.5	22.0	43.1	5.3	8.1	
Total %	21.5	22.0	43.1	5.3	8.1	

			CAHABA RD Northbound							
Start Time	App. Total	App. Total	A	B	C	D	E	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
Intersection	12:00 PM									
Volume	0	0	81	71	136	22	48	358	0	358
Percent			22.6	19.8	38.0	6.1	13.4			
12:45 Volume	0	0	24	24	39	7	12	106	0	106
Peak Factor										0.844
High Int.	10:45:00 AM	10:45:00 AM	12:45 PM						10:45:00 AM	
Volume	0	0	24	24	39	7	12	106		
Peak Factor								0.844		

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook14
Site Code : 00000000
Start Date : 09/08/2009
Page No : 2

			CAHABA RD Northbound							
Start Time	App. Total	App. Total	A	B	C	D	E	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
By Approach	11:00 AM	11:00 AM	12:00 PM						11:00 AM	
Volume	0	0	81	71	136	22	48	358	0	
Percent			22.6	19.8	38.0	6.1	13.4			
High Int.	-	-	12:45 PM						-	
Volume	-	-	24	24	39	7	12	106	-	
Peak Factor	-	-						0.844	-	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:30 PM									
Volume	0	0	69	87	200	33	30	419	0	419
Percent			16.5	20.8	47.7	7.9	7.2			
05:15 Volume	0	0	14	23	66	5	3	111	0	111
Peak Factor										0.944
High Int.			05:00 PM							
Volume	0	0	18	24	45	9	15	111		
Peak Factor								0.944		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
By Approach	04:00 PM	04:00 PM	04:30 PM						04:00 PM	
Volume	0	0	69	87	200	33	30	419	0	
Percent			16.5	20.8	47.7	7.9	7.2			
High Int.	-	-	05:00 PM						-	
Volume	-	-	18	24	45	9	15	111	-	
Peak Factor	-	-						0.944	-	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:30 AM									
Volume	0	0	109	78	172	7	14	380	0	380
Percent			28.7	20.5	45.3	1.8	3.7			
07:45 Volume	0	0	30	24	53	0	1	108	0	108
Peak Factor										0.880
High Int.			07:45 AM							
Volume	0	0	30	24	53	0	1	108		
Peak Factor								0.880		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
By Approach	07:00 AM	07:00 AM	07:30 AM						07:00 AM	
Volume	0	0	109	78	172	7	14	380	0	
Percent			28.7	20.5	45.3	1.8	3.7			
High Int.	-	-	07:45 AM						-	
Volume	-	-	30	24	53	0	1	108	-	
Peak Factor	-	-						0.880	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mbrook09
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- 1 - Unshifted

	CULVER RD Westbound					
Start Time	A	B	C	D	E	Int. Total
11:00 AM	6	21	10	0	0	37
11:15 AM	9	22	3	0	0	34
11:30 AM	7	28	10	0	0	45
11:45 AM	4	32	5	0	0	41
Total	26	103	28	0	0	157
12:00 PM	4	28	7	2	0	41
12:15 PM	5	27	7	1	0	40
12:30 PM	8	20	5	0	0	33
12:45 PM	7	39	6	0	0	52
Total	24	114	25	3	0	166
04:00 PM	2	27	8	0	0	37
04:15 PM	7	25	7	0	0	39
04:30 PM	5	30	6	0	2	43
04:45 PM	9	23	8	0	0	40
Total	23	105	29	0	2	159
05:00 PM	4	21	4	0	0	29
05:15 PM	2	32	9	0	1	44
05:30 PM	6	28	7	0	0	41
05:45 PM	1	16	7	0	0	24
Total	13	97	27	0	1	138
07:00 AM	1	32	6	0	0	39
07:15 AM	2	42	8	0	0	52
07:30 AM	1	52	8	0	0	61
07:45 AM	1	74	14	0	0	89
Total	5	200	36	0	0	241
08:00 AM	1	79	6	1	0	87
08:15 AM	2	48	4	0	0	54
08:30 AM	2	38	3	0	0	43
08:45 AM	3	45	2	0	0	50
Total	8	210	15	1	0	234
Grand Total	99	829	160	4	3	1095
Apprch %	9.0	75.7	14.6	0.4	0.3	
Total %	9.0	75.7	14.6	0.4	0.3	

		CULVER RD Westbound								
Start Time	App. Total	A	B	C	D	E	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
Intersection	11:30 AM									
Volume	0	20	115	29	3	0	167	0	0	167
Percent		12.0	68.9	17.4	1.8	0.0				
11:30 Volume	0	7	28	10	0	0	45	0	0	45
Peak Factor										0.928
High Int.	10:45:00 AM	11:30 AM						10:45:00 AM	10:45:00 AM	
Volume	0	7	28	10	0	0	45			
Peak Factor							0.928			

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook09
Site Code : 00000000
Start Date : 09/08/2009

		CULVER RD Westbound								
Start Time	App. Total	A	B	C	D	E	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
By Approach	11:00 AM	11:30 AM						11:00 AM	11:00 AM	
Volume	0	20	115	29	3	0	167	0	0	
Percent		12.0	68.9	17.4	1.8	0.0				
High Int.	-	11:30 AM						-	-	
Volume	-	7	28	10	0	0	45	-	-	
Peak Factor	-						0.928	-	-	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:00 PM									
Volume	0	23	105	29	0	2	159	0	0	159
Percent		14.5	66.0	18.2	0.0	1.3				
04:30 Volume	0	5	30	6	0	2	43	0	0	43
Peak Factor										0.924
High Int.		04:30 PM								
Volume	0	5	30	6	0	2	43			
Peak Factor							0.924			
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
By Approach	04:00 PM	04:00 PM						04:00 PM	04:00 PM	
Volume	0	23	105	29	0	2	159	0	0	
Percent		14.5	66.0	18.2	0.0	1.3				
High Int.	-	04:30 PM						-	-	
Volume	-	5	30	6	0	2	43	-	-	
Peak Factor	-						0.924	-	-	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:30 AM									
Volume	0	5	253	32	1	0	291	0	0	291
Percent		1.7	86.9	11.0	0.3	0.0				
07:45 Volume	0	1	74	14	0	0	89	0	0	89
Peak Factor										0.817
High Int.		07:45 AM								
Volume	0	1	74	14	0	0	89			
Peak Factor							0.817			
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
By Approach	07:00 AM	07:30 AM						07:00 AM	07:00 AM	
Volume	0	5	253	32	1	0	291	0	0	
Percent		1.7	86.9	11.0	0.3	0.0				
High Int.	-	07:45 AM						-	-	
Volume	-	1	74	14	0	0	89	-	-	
Peak Factor	-						0.817	-	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

one way (wrong way)

File Name : mbrook10
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- 1 - Unshifted

	SHOPPING CENTER DRWY Westbound						
Start Time	A	B	C	D	E	F	Int. Total
11:30 AM	0	1	0	0	0	0	1
Total	0	1	0	0	0	0	1
12:00 PM	1	0	0	0	0	2	3
12:15 PM	0	0	0	0	0	1	1
Total	1	0	0	0	0	3	4
04:15 PM	0	1	0	0	0	0	1
04:30 PM	0	1	0	0	0	0	1
04:45 PM	0	1	0	0	0	0	1
Total	0	3	0	0	0	0	3
05:30 PM	1	0	0	0	0	0	1
05:45 PM	1	0	0	0	0	0	1
Total	2	0	0	0	0	0	2
07:00 AM	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	2
Total	0	2	0	1	0	0	3
08:00 AM	0	0	0	0	0	1	1
Total	0	0	0	0	0	1	1
Grand Total	3	6	0	1	0	4	14
Apprch %	21.4	42.9	0.0	7.1	0.0	28.6	
Total %	21.4	42.9	0.0	7.1	0.0	28.6	

		SHOPPING CENTER DRWY Westbound									
Start Time	App. Total	A	B	C	D	E	F	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1											
Intersection	11:30 AM										
Volume	0	1	1	0	0	0	3	5	0	0	5
Percent		20.0	20.0	0.0	0.0	0.0	60.0				
12:00 Volume	0	1	0	0	0	0	2	3	0	0	3
Peak Factor											0.417
High Int.	10:45:00 AM	12:00 PM							10:45:00 AM	10:45:00 AM	
Volume	0	1	0	0	0	0	2	3			
Peak Factor								0.417			

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook10
Site Code : 00000000
Start Date : 09/08/2009
Page No : 2

		SHOPPING CENTER DRWY Westbound									
Start Time	App. Total	A	B	C	D	E	F	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1											
By Approach	11:00 AM	11:30 AM							11:00 AM	11:00 AM	
Volume	0	1	1	0	0	0	3	5	0	0	
Percent		20.0	20.0	0.0	0.0	0.0	60.0				
High Int.	-	12:00 PM							-	-	
Volume	-	1	0	0	0	0	2	3	-	-	
Peak Factor	-							0.417	-	-	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
Intersection	04:00 PM										
Volume	0	0	3	0	0	0	0	3	0	0	3
Percent		0.0	100.0	0.0	0.0	0.0	0.0				
04:45 Volume	0	0	1	0	0	0	0	1	0	0	1
Peak Factor											0.750
High Int.		04:15 PM									
Volume	0	0	1	0	0	0	0	1			
Peak Factor								0.750			
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
By Approach	04:00 PM	04:00 PM							04:00 PM	04:00 PM	
Volume	0	0	3	0	0	0	0	3	0	0	
Percent		0.0	100.0	0.0	0.0	0.0	0.0				
High Int.	-	04:15 PM							-	-	
Volume	-	0	1	0	0	0	0	1	-	-	
Peak Factor	-							0.750	-	-	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:00 AM										
Volume	0	0	2	0	1	0	0	3	0	0	3
Percent		0.0	66.7	0.0	33.3	0.0	0.0				
07:45 Volume	0	0	1	0	1	0	0	2	0	0	2
Peak Factor											0.375
High Int.		07:45 AM									
Volume	0	0	1	0	1	0	0	2			
Peak Factor								0.375			
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
By Approach	07:00 AM	07:00 AM							07:00 AM	07:00 AM	
Volume	0	0	2	0	1	0	0	3	0	0	
Percent		0.0	66.7	0.0	33.3	0.0	0.0				
High Int.	-	07:45 AM							-	-	
Volume	-	0	1	0	1	0	0	2	-	-	
Peak Factor	-							0.375	-	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mbrook12
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- 1 - Unshifted

	CAHABA RD Southbound					
Start Time	A	B	C	D	E	Int. Total
11:00 AM	0	5	4	20	9	38
11:15 AM	3	5	0	27	9	44
11:30 AM	1	9	2	28	5	45
11:45 AM	1	9	5	21	8	44
Total	5	28	11	96	31	171
12:00 PM	3	6	8	26	6	49
12:15 PM	2	7	9	26	14	58
12:30 PM	1	9	6	31	8	55
12:45 PM	4	5	6	32	15	62
Total	10	27	29	115	43	224
04:00 PM	1	6	10	30	5	52
04:15 PM	0	4	5	28	6	43
04:30 PM	1	6	9	22	11	49
04:45 PM	5	4	9	31	4	53
Total	7	20	33	111	26	197
05:00 PM	8	9	13	53	13	96
05:15 PM	5	10	12	39	5	71
05:30 PM	2	11	10	34	7	64
05:45 PM	0	5	8	41	2	56
Total	15	35	43	167	27	287
07:00 AM	1	0	3	15	2	21
07:15 AM	0	6	3	32	2	43
07:30 AM	2	3	4	30	4	43
07:45 AM	1	2	4	31	10	48
Total	4	11	14	108	18	155
08:00 AM	1	3	7	18	10	39
08:15 AM	2	2	3	30	8	45
08:30 AM	3	7	5	26	7	48
08:45 AM	0	4	4	30	6	44
Total	6	16	19	104	31	176
Grand Total	47	137	149	701	176	1210
Apprch %	3.9	11.3	12.3	57.9	14.5	
Total %	3.9	11.3	12.3	57.9	14.5	

	CAHABA RD Southbound									
Start Time	A	B	C	D	E	App. Total	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
Intersection	12:00 PM									
Volume	10	27	29	115	43	224	0	0	0	224
Percent	4.5	12.1	12.9	51.3	19.2					
12:45 Volume	4	5	6	32	15	62	0	0	0	62
Peak Factor										0.903
High Int.	12:45 PM						10:45:00 AM	10:45:00 AM	10:45:00 AM	
Volume	4	5	6	32	15	62				
Peak Factor						0.903				

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook12
Site Code : 00000000
Start Date : 09/08/2009
Page No : 2

	CAHABA RD Southbound									
Start Time	A	B	C	D	E	App. Total	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
By Approach	12:00 PM						11:00 AM	11:00 AM	11:00 AM	
Volume	10	27	29	115	43	224	0	0	0	
Percent	4.5	12.1	12.9	51.3	19.2					
High Int.	12:45 PM						-	-	-	
Volume	4	5	6	32	15	62	-	-	-	
Peak Factor						0.903	-	-	-	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	05:00 PM									
Volume	15	35	43	167	27	287	0	0	0	287
Percent	5.2	12.2	15.0	58.2	9.4					
05:00 Volume	8	9	13	53	13	96	0	0	0	96
Peak Factor										0.747
High Int.	05:00 PM									
Volume	8	9	13	53	13	96				
Peak Factor						0.747				
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
By Approach	05:00 PM						04:00 PM	04:00 PM	04:00 PM	
Volume	15	35	43	167	27	287	0	0	0	
Percent	5.2	12.2	15.0	58.2	9.4					
High Int.	05:00 PM						-	-	-	
Volume	8	9	13	53	13	96	-	-	-	
Peak Factor						0.747	-	-	-	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:45 AM									
Volume	7	14	19	105	35	180	0	0	0	180
Percent	3.9	7.8	10.6	58.3	19.4					
08:30 Volume	3	7	5	26	7	48	0	0	0	48
Peak Factor										0.938
High Int.	07:45 AM									
Volume	1	2	4	31	10	48				
Peak Factor						0.938				
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
By Approach	07:45 AM						07:00 AM	07:00 AM	07:00 AM	
Volume	7	14	19	105	35	180	0	0	0	
Percent	3.9	7.8	10.6	58.3	19.4					
High Int.	07:45 AM						-	-	-	
Volume	1	2	4	31	10	48	-	-	-	
Peak Factor						0.938	-	-	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mbrook13
Site Code : 00000000
Start Date : 09/08/2009
Page No : 1

Groups Printed- 1 - Unshifted

	LANE PARK RD Southbound					
Start Time	A	B	C	D	E	Int. Total
11:00 AM	5	8	47	0	7	67
11:15 AM	7	9	50	2	5	73
11:30 AM	11	12	54	3	12	92
11:45 AM	8	17	50	4	7	86
Total	31	46	201	9	31	318
12:00 PM	8	18	61	2	7	96
12:15 PM	10	11	51	5	7	84
12:30 PM	15	14	67	3	7	106
12:45 PM	16	15	48	5	5	89
Total	49	58	227	15	26	375
04:00 PM	1	13	55	4	8	81
04:15 PM	3	22	60	5	7	97
04:30 PM	3	8	39	4	11	65
04:45 PM	8	9	54	2	7	80
Total	15	52	208	15	33	323
05:00 PM	9	14	50	4	8	85
05:15 PM	11	17	34	3	9	74
05:30 PM	5	18	48	3	10	84
05:45 PM	11	8	49	4	7	79
Total	36	57	181	14	34	322
07:00 AM	4	7	29	3	3	46
07:15 AM	7	15	48	5	1	76
07:30 AM	8	16	95	5	3	127
07:45 AM	9	22	80	3	4	118
Total	28	60	252	16	11	367
08:00 AM	14	19	57	2	8	100
08:15 AM	10	10	57	1	5	83
08:30 AM	15	15	52	3	6	91
08:45 AM	8	17	44	5	5	79
Total	47	61	210	11	24	353
Grand Total	206	334	1279	80	159	2058
Apprch %	10.0	16.2	62.1	3.9	7.7	
Total %	10.0	16.2	62.1	3.9	7.7	

	LANE PARK RD Southbound									
Start Time	A	B	C	D	E	App. Total	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
Intersection	12:00 PM									
Volume	49	58	227	15	26	375	0	0	0	375
Percent	13.1	15.5	60.5	4.0	6.9					
12:30 Volume	15	14	67	3	7	106	0	0	0	106
Peak Factor										0.884
High Int.	12:30 PM						10:45:00 AM	10:45:00 AM	10:45:00 AM	
Volume	15	14	67	3	7	106				
Peak Factor						0.884				

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mbrook13
Site Code : 00000000
Start Date : 09/08/2009

	LANE PARK RD Southbound									
Start Time	A	B	C	D	E	App. Total	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1										
By Approach	12:00 PM						11:00 AM	11:00 AM	11:00 AM	
Volume	49	58	227	15	26	375	0	0	0	
Percent	13.1	15.5	60.5	4.0	6.9					
High Int.	12:30 PM						-	-	-	
Volume	15	14	67	3	7	106	-	-	-	
Peak Factor						0.884	-	-	-	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:15 PM									
Volume	23	53	203	15	33	327	0	0	0	327
Percent	7.0	16.2	62.1	4.6	10.1					
04:15 Volume	3	22	60	5	7	97	0	0	0	97
Peak Factor										0.843
High Int.	04:15 PM									
Volume	3	22	60	5	7	97				
Peak Factor						0.843				
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
By Approach	04:15 PM						04:00 PM	04:00 PM	04:00 PM	
Volume	23	53	203	15	33	327	0	0	0	
Percent	7.0	16.2	62.1	4.6	10.1					
High Int.	04:15 PM						-	-	-	
Volume	3	22	60	5	7	97	-	-	-	
Peak Factor						0.843	-	-	-	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:30 AM									
Volume	41	67	289	11	20	428	0	0	0	428
Percent	9.6	15.7	67.5	2.6	4.7					
07:30 Volume	8	16	95	5	3	127	0	0	0	127
Peak Factor										0.843
High Int.	07:30 AM									
Volume	8	16	95	5	3	127				
Peak Factor						0.843				
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
By Approach	07:30 AM						07:00 AM	07:00 AM	07:00 AM	
Volume	41	67	289	11	20	428	0	0	0	
Percent	9.6	15.7	67.5	2.6	4.7					
High Int.	07:30 AM						-	-	-	
Volume	8	16	95	5	3	127	-	-	-	
Peak Factor						0.843	-	-	-	

D

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook08
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

Groups Printed- 1 - Unshifted

	CULVER RD Southbound				MONTEVALLO RD Westbound				MONTEVALLO RD Eastbound				
Start Time	Left	Thru	Right	s/c	Left	Thru	Right	s/c	Left	Thru	Right	s/c	Int. Total
04:00 PM	33	13	18	0	13	56	24	2	7	92	14	15	287
04:15 PM	40	24	9	0	14	62	32	4	16	92	8	12	313
04:30 PM	56	13	6	0	12	56	28	3	17	114	12	15	332
04:45 PM	50	20	9	0	10	73	26	3	9	83	1	18	302
Total	179	70	42	0	49	247	110	12	49	381	35	60	1234
05:00 PM	61	17	14	0	10	79	24	1	8	106	1	12	333
05:15 PM	74	17	13	0	13	54	23	2	10	111	0	24	341
05:30 PM	42	12	10	0	12	68	18	0	15	103	0	17	297
05:45 PM	48	18	14	0	8	63	31	1	5	84	2	8	282
Total	225	64	51	0	43	264	96	4	38	404	3	61	1253
07:00 AM	22	7	8	0	4	51	40	2	1	29	0	8	172
07:15 AM	17	13	5	0	9	67	40	1	6	34	1	2	195
07:30 AM	26	5	7	0	24	88	77	0	11	52	5	6	301
07:45 AM	26	17	5	0	20	94	77	0	7	44	2	6	298
Total	91	42	25	0	57	300	234	3	25	159	8	22	966
08:00 AM	21	17	5	0	17	120	66	2	3	52	3	10	316
08:15 AM	27	13	15	0	14	74	54	1	6	41	3	5	253
08:30 AM	23	14	14	0	14	74	40	0	7	40	3	7	236
08:45 AM	49	17	8	1	14	58	47	3	8	61	5	9	280
Total	120	61	42	1	59	326	207	6	24	194	14	31	1085
Grand Total	615	237	160	1	208	1137	647	25	136	1138	60	174	4538
Apprch %	60.7	23.4	15.8	0.1	10.3	56.4	32.1	1.2	9.0	75.5	4.0	11.5	
Total %	13.6	5.2	3.5	0.0	4.6	25.1	14.3	0.6	3.0	25.1	1.3	3.8	

	CULVER RD Southbound					MONTEVALLO RD Westbound						MONTEVALLO RD Eastbound					
Start Time	Left	Thru	Right	s/c	App. Total	Left	Thru	Right	s/c	App. Total	App. Total	Left	Thru	Right	s/c	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	241	67	42	0	350	45	262	101	9	417	0	44	414	14	69	541	1308
Percent	68.9	19.1	12.0	0.0		10.8	62.8	24.2	2.2			8.1	76.5	2.6	12.8		
05:15 Volume	74	17	13	0	104	13	54	23	2	92	0	10	111	0	24	145	341
Peak Factor																	0.959
High Int.	05:15 PM					05:00 PM					3:45:00 PM	04:30 PM					
Volume	74	17	13	0	104	10	79	24	1	114	0	17	114	12	15	158	
Peak Factor					0.841					0.914						0.856	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
By Approach	04:30 PM					04:15 PM					04:00 PM	04:30 PM					
Volume	241	67	42	0	350	46	270	110	11	437	0	44	414	14	69	541	
Percent	68.9	19.1	12.0	0.0		10.5	61.8	25.2	2.5			8.1	76.5	2.6	12.8		
High Int.	05:15 PM					05:00 PM					-	04:30 PM					
Volume	74	17	13	0	104	10	79	24	1	114	-	17	114	12	15	158	
Peak Factor					0.841					0.958	-					0.856	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mtbrook08
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

	CULVER RD Southbound					MONTEVALLO RD Westbound						MONTEVALLO RD Eastbound					
Start Time	Left	Thru	Right	s/c	App. Total	Left	Thru	Right	s/c	App. Total	App. Total	Left	Thru	Right	s/c	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:30 AM																
Volume	100	52	32	0	184	75	376	274	3	728	0	27	189	13	27	256	1168
Percent	54.3	28.3	17.4	0.0		10.3	51.6	37.6	0.4			10.5	73.8	5.1	10.5		
08:00 Volume	21	17	5	0	43	17	120	66	2	205	0	3	52	3	10	68	316
Peak Factor																	0.924
High Int.	08:15 AM					08:00 AM						07:30 AM					
Volume	27	13	15	0	55	17	120	66	2	205	0	11	52	5	6	74	
Peak Factor					0.836					0.888						0.865	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
By Approach	08:00 AM					07:30 AM					07:00 AM	08:00 AM					
Volume	120	61	42	1	224	75	376	274	3	728	0	24	194	14	31	263	
Percent	53.6	27.2	18.8	0.4		10.3	51.6	37.6	0.4			9.1	73.8	5.3	11.8		
High Int.	08:45 AM					08:00 AM					-	08:45 AM					
Volume	49	17	8	1	75	17	120	66	2	205	-	8	61	5	9	83	
Peak Factor					0.747					0.888	-					0.792	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

cant=Canterbury Rd

File Name : mtbrook01a
Site Code : 00000000
Start Date : 08/27/2009
Page No : 1

Groups Printed- Unshifted

	CAHABA RD Southbound				MONTEVALLO RD Westbound				CAHABA RD Northbound				MONTEVALLO RD Eastbound				
Start Time	Left	Thru	Right	cant	Left	Thru	Right	cant	Left	Thru	Right	cant	Left	Thru	Right	cant	Int. Total
04:00 PM	4	47	49	0	13	61	0	0	14	43	32	0	19	59	9	2	352
04:15 PM	2	49	35	0	10	39	1	1	16	58	27	0	23	72	6	0	339
04:30 PM	4	49	43	0	8	51	1	0	11	59	37	1	27	74	18	0	383
04:45 PM	4	65	33	0	11	60	1	1	6	70	41	0	23	76	8	0	399
Total	14	210	160	0	42	211	3	2	47	230	137	1	92	281	41	2	1473
05:00 PM	3	70	35	0	18	55	1	0	12	82	45	2	37	88	8	0	456
05:15 PM	4	77	44	0	8	50	1	0	12	74	34	0	22	84	5	1	416
05:30 PM	0	53	38	0	10	55	0	0	9	67	38	0	27	78	15	0	390
05:45 PM	5	50	57	0	10	52	1	0	16	51	33	0	26	72	5	0	378
Total	12	250	174	0	46	212	3	0	49	274	150	2	112	322	33	1	1640
Grand Total	26	460	334	0	88	423	6	2	96	504	287	3	204	603	74	3	3113
Apprch %	3.2	56.1	40.7	0.0	17.0	81.5	1.2	0.4	10.8	56.6	32.2	0.3	23.1	68.2	8.4	0.3	
Total %	0.8	14.8	10.7	0.0	2.8	13.6	0.2	0.1	3.1	16.2	9.2	0.1	6.6	19.4	2.4	0.1	

	CAHABA RD Southbound					MONTEVALLO RD Westbound					CAHABA RD Northbound					MONTEVALLO RD Eastbound					
Start Time	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	11	265	150	0	426	47	220	3	1	271	39	293	158	2	492	109	326	36	1	472	1661
Percent	2.6	62.2	35.2	0.0		17.3	81.2	1.1	0.4		7.9	59.6	32.1	0.4		23.1	69.1	7.6	0.2		
05:00 Volume	3	70	35	0	108	18	55	1	0	74	12	82	45	2	141	37	88	8	0	133	456
Peak Factor																					0.911
High Int.	05:15 PM					05:00 PM					05:00 PM					05:00 PM					
Volume	4	77	44	0	125	18	55	1	0	74	12	82	45	2	141	37	88	8	0	133	
Peak Factor					0.852					0.916					0.872					0.887	

Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1

By Approach	05:00 PM					04:45 PM					04:45 PM					04:45 PM					
Volume	12	250	174	0	436	47	220	3	1	271	39	293	158	2	492	109	326	36	1	472	
Percent	2.8	57.3	39.9	0.0		17.3	81.2	1.1	0.4		7.9	59.6	32.1	0.4		23.1	69.1	7.6	0.2		
High Int.	05:15 PM					05:00 PM					05:00 PM					05:00 PM					
Volume	4	77	44	0	125	18	55	1	0	74	12	82	45	2	141	37	88	8	0	133	
Peak Factor					0.872					0.916					0.872					0.887	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

mont=Montevallo Rd hard right

File Name : mtbrook01b
Site Code : 00000000
Start Date : 08/27/2009
Page No : 1

Groups Printed- Unshifted

	CANTERBURY RD Westbound				
Start Time	Left	Thru	Right	mont	Int. Total
04:00 PM	2	13	9	0	24
04:15 PM	4	11	11	0	26
04:30 PM	2	8	9	1	20
04:45 PM	3	6	8	0	17
Total	11	38	37	1	87
05:00 PM	0	7	7	1	15
05:15 PM	1	5	3	0	9
05:30 PM	1	4	5	0	10
05:45 PM	3	4	1	0	8
Total	5	20	16	1	42
Grand Total	16	58	53	2	129
Apprch %	12.4	45.0	41.1	1.6	
Total %	12.4	45.0	41.1	1.6	

		CANTERBURY RD Westbound							
Start Time	App. Total	Left	Thru	Right	mont	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
Intersection	04:00 PM								
Volume	0	11	38	37	1	87	0	0	87
Percent		12.6	43.7	42.5	1.1				
04:15 Volume	0	4	11	11	0	26	0	0	26
Peak Factor									0.837
High Int.	3:45:00 PM	04:15 PM					3:45:00 PM	3:45:00 PM	
Volume	0	4	11	11	0	26			
Peak Factor						0.837			
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
By Approach	04:00 PM	04:00 PM					04:00 PM	04:00 PM	
Volume	0	11	38	37	1	87	0	0	
Percent		12.6	43.7	42.5	1.1				
High Int.	-	04:15 PM					-	-	
Volume	-	4	11	11	0	26	-	-	
Peak Factor	-					0.837	-	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

cant=Canterbury Rd

File Name : mtbrook02a
Site Code : 00000000
Start Date : 08/28/2009
Page No : 1

Groups Printed- Unshifted

	CAHABA RD Southbound				MONTEVALLO RD Westbound				CAHABA RD Northbound				MONTEVALLO RD Eastbound				
Start Time	Left	Thru	Right	cant	Left	Thru	Right	cant	Left	Thru	Right	cant	Left	Thru	Right	cant	Int. Total
07:00 AM	2	50	24	0	10	39	1	0	6	27	4	0	19	26	5	0	213
07:15 AM	0	78	32	0	19	62	0	0	4	47	16	0	14	31	6	0	309
07:30 AM	1	79	37	1	17	62	0	0	18	63	22	0	21	30	10	0	361
07:45 AM	0	90	57	0	20	92	2	0	4	52	21	0	18	34	7	1	398
Total	3	297	150	1	66	255	3	0	32	189	63	0	72	121	28	1	1281
08:00 AM	3	67	39	0	18	82	2	1	12	35	17	0	33	44	13	1	367
08:15 AM	1	84	32	0	18	58	0	0	3	50	9	0	29	43	11	1	339
08:30 AM	1	56	32	0	14	62	0	0	3	35	16	0	23	44	7	1	294
08:45 AM	0	54	44	0	18	55	0	0	9	41	12	0	23	55	4	0	315
Total	5	261	147	0	68	257	2	1	27	161	54	0	108	186	35	3	1315
Grand Total	8	558	297	1	134	512	5	1	59	350	117	0	180	307	63	4	2596
Apprch %	0.9	64.6	34.4	0.1	20.6	78.5	0.8	0.2	11.2	66.5	22.2	0.0	32.5	55.4	11.4	0.7	
Total %	0.3	21.5	11.4	0.0	5.2	19.7	0.2	0.0	2.3	13.5	4.5	0.0	6.9	11.8	2.4	0.2	

	CAHABA RD Southbound					MONTEVALLO RD Westbound					CAHABA RD Northbound					MONTEVALLO RD Eastbound					
Start Time	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Left	Thru	Right	cant	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	5	320	165	1	491	73	294	4	1	372	37	200	69	0	306	101	151	41	3	296	1465
Percent	1.0	65.2	33.6	0.2		19.6	79.0	1.1	0.3		12.1	65.4	22.5	0.0		34.1	51.0	13.9	1.0		
07:45 Volume	0	90	57	0	147	20	92	2	0	114	4	52	21	0	77	18	34	7	1	60	398
Peak Factor																					0.920
High Int.	07:45 AM					07:45 AM					07:30 AM					08:00 AM					
Volume	0	90	57	0	147	20	92	2	0	114	18	63	22	0	103	33	44	13	1	91	
Peak Factor					0.835					0.816					0.743					0.813	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
By Approach	07:30 AM					07:15 AM					07:15 AM					08:00 AM					
Volume	5	320	165	1	491	74	298	4	1	377	38	197	76	0	311	108	186	35	3	332	
Percent	1.0	65.2	33.6	0.2		19.6	79.0	1.1	0.3		12.2	63.3	24.4	0.0		32.5	56.0	10.5	0.9		
High Int.	07:45 AM					07:45 AM					07:30 AM					08:00 AM					
Volume	0	90	57	0	147	20	92	2	0	114	18	63	22	0	103	33	44	13	1	91	
Peak Factor					0.835					0.827					0.755					0.912	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

mont=Montevallo Rd

File Name : mtbrook02a
Site Code : 00000000
Start Date : 08/28/2009
Page No : 1

Groups Printed- Bank 1

	CANTERBURY RD Westbound				
Start Time	Left	Thru	Right	mont	Int. Total
07:00 AM	0	4	0	0	4
07:15 AM	2	5	4	0	11
07:30 AM	3	15	14	0	32
07:45 AM	1	5	19	0	25
Total	6	29	37	0	72
08:00 AM	0	10	2	0	12
08:15 AM	1	5	5	0	11
08:30 AM	0	3	5	0	8
08:45 AM	0	4	5	0	9
Total	1	22	17	0	40
Grand Total	7	51	54	0	112
Apprch %	6.3	45.5	48.2	0.0	
Total %	6.3	45.5	48.2	0.0	

		CANTERBURY RD Westbound							
Start Time	App. Total	Left	Thru	Right	mont	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
Intersection	07:15 AM								
Volume	0	6	35	39	0	80	0	0	80
Percent		7.5	43.8	48.8	0.0				
07:30 Volume	0	3	15	14	0	32	0	0	32
Peak Factor									0.625
High Int.	6:45:00 AM	07:30 AM					6:45:00 AM	6:45:00 AM	
Volume	0	3	15	14	0	32			
Peak Factor						0.625			
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
By Approach	07:00 AM	07:15 AM					07:00 AM	07:00 AM	
Volume	0	6	35	39	0	80	0	0	
Percent		7.5	43.8	48.8	0.0				
High Int.	-	07:30 AM					-	-	
Volume	-	3	15	14	0	32	-	-	
Peak Factor	-					0.625	-	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

Cant=Canterbury Rd

File Name : mbrook11
Site Code : 00000000
Start Date : 09/09/2009
Page No : 1

Groups Printed- Unshifted

	CAHABA RD Southbound				MONTEVALLO RD Westbound				CAHABA RD Northbound				HOLLYWOOD BLVD Eastbound				
Start Time	Left	Thru	Right	Cant	Left	Thru	Right	Cant	Left	Thru	Right	Cant	Left	Thru	Right	Cant	Int. Total
11:00 AM	2	39	37	1	14	48	1	0	13	43	15	1	22	59	9	0	304
11:15 AM	5	52	26	1	22	74	0	0	14	51	24	1	36	62	4	0	372
11:30 AM	2	45	37	1	11	53	1	0	9	54	33	0	19	56	11	0	332
11:45 AM	4	50	35	1	17	62	0	0	17	51	45	0	18	78	9	2	389
Total	13	186	135	4	64	237	2	0	53	199	117	2	95	255	33	2	1397
12:00 PM	1	55	38	1	18	57	1	0	16	55	29	1	10	57	14	0	353
12:15 PM	5	56	41	0	16	69	1	0	12	68	26	0	19	62	12	2	389
12:30 PM	4	58	35	0	8	74	0	0	13	46	19	0	21	70	17	2	367
12:45 PM	2	71	48	1	17	75	1	0	12	56	26	0	14	61	16	1	401
Total	12	240	162	2	59	275	3	0	53	225	100	1	64	250	59	5	1510
Grand Total	25	426	297	6	123	512	5	0	106	424	217	3	159	505	92	7	2907
Apprch %	3.3	56.5	39.4	0.8	19.2	80.0	0.8	0.0	14.1	56.5	28.9	0.4	20.8	66.2	12.1	0.9	
Total %	0.9	14.7	10.2	0.2	4.2	17.6	0.2	0.0	3.6	14.6	7.5	0.1	5.5	17.4	3.2	0.2	

	CAHABA RD Southbound					MONTEVALLO RD Westbound					CAHABA RD Northbound					HOLLYWOOD BLVD Eastbound					
Start Time	Left	Thru	Right	Cant	App. Total	Left	Thru	Right	Cant	App. Total	Left	Thru	Right	Cant	App. Total	Left	Thru	Right	Cant	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Intersection	12:00 PM																				
Volume	12	240	162	2	416	59	275	3	0	337	53	225	100	1	379	64	250	59	5	378	1510
Percent	2.9	57.7	38.9	0.5		17.5	81.6	0.9	0.0		14.0	59.4	26.4	0.3		16.9	66.1	15.6	1.3		
12:45 Volume	2	71	48	1	122	17	75	1	0	93	12	56	26	0	94	14	61	16	1	92	401
Peak Factor																					0.941
High Int.	12:45 PM					12:45 PM					12:15 PM					12:30 PM					
Volume	2	71	48	1	122	17	75	1	0	93	12	68	26	0	106	21	70	17	2	110	
Peak Factor					0.852					0.906					0.894					0.859	

Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																					
By Approach	12:00 PM					12:00 PM					11:30 AM					11:45 AM					
Volume	12	240	162	2	416	59	275	3	0	337	54	228	133	1	416	68	267	52	6	393	
Percent	2.9	57.7	38.9	0.5		17.5	81.6	0.9	0.0		13.0	54.8	32.0	0.2		17.3	67.9	13.2	1.5		
High Int.	12:45 PM					12:45 PM					11:45 AM					12:30 PM					
Volume	2	71	48	1	122	17	75	1	0	93	17	51	45	0	113	21	70	17	2	110	
Peak Factor					0.852					0.906					0.920					0.893	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

Mont=Montevallo Rd

File Name : mbrook11x
Site Code : 00000000
Start Date : 09/09/2009
Page No : 1

Groups Printed- Bank 1

	CANTABURY RD Westbound				
Start Time	Left	Thru	Right	Mont	Int. Total
11:00 AM	0	15	7	0	22
11:15 AM	5	8	8	1	22
11:30 AM	4	16	5	0	25
11:45 AM	3	9	6	0	18
Total	12	48	26	1	87
12:00 PM	3	4	2	0	9
12:15 PM	9	13	8	0	30
12:30 PM	2	14	12	0	28
12:45 PM	3	12	9	0	24
Total	17	43	31	0	91
Grand Total	29	91	57	1	178
Apprch %	16.3	51.1	32.0	0.6	
Total %	16.3	51.1	32.0	0.6	

		CANTABURY RD Westbound							
Start Time	App. Total	Left	Thru	Right	Mont	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1									
Intersection	12:00 PM								
Volume	0	17	43	31	0	91	0	0	91
Percent		18.7	47.3	34.1	0.0				
12:15 Volume	0	9	13	8	0	30	0	0	30
Peak Factor									0.758
High Int.	10:45:00 AM	12:15 PM					10:45:00 AM	10:45:00 AM	
Volume	0	9	13	8	0	30			
Peak Factor						0.758			
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1									
By Approach	11:00 AM	12:00 PM					11:00 AM	11:00 AM	
Volume	0	17	43	31	0	91	0	0	
Percent		18.7	47.3	34.1	0.0				
High Int.	-	12:15 PM					-	-	
Volume	-	9	13	8	0	30	-	-	
Peak Factor	-					0.758	-	-	

Appendix C

Site Access Counts

1-2

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook06
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

2 1

Groups Printed- 1 - Unshifted

	S/C DRWY from MONTEVALLO RD		REGIONS DRWY from MONTEVALLO RD	
Start Time	Outbound	Inbound	Inbound	Int. Total
04:00 PM	26	12	3	41
04:15 PM	30	11	6	47
04:30 PM	29	10	3	42
04:45 PM	21	12	3	36
Total	106	45	15	166
05:00 PM	35	14	0	49
05:15 PM	32	11	2	45
05:30 PM	21	8	3	32
05:45 PM	16	10	2	28
Total	104	43	7	154
07:00 AM	7	8	0	15
07:15 AM	5	7	3	15
07:30 AM	12	12	4	28
07:45 AM	10	16	6	32
Total	34	43	13	90
08:00 AM	10	15	5	30
08:15 AM	9	15	0	24
08:30 AM	8	9	0	17
08:45 AM	6	13	5	24
Total	33	52	10	95
Grand Total	277	183	45	505
Apprch %	60.2	39.8	100.0	
Total %	54.9	36.2	8.9	

	S/C DRWY from MONTEVALLO RD Southbound			REGIONS DRWY from MONTEVALLO RD Westbound				
Start Time	Outbound	Inbound	App. Total	Inbound	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1								
Intersection	04:15 PM							
Volume	115	47	162	12	12	0	0	174
Percent	71.0	29.0		100.0				
05:00 Volume	35	14	49	0	0	0	0	49
Peak Factor								0.888
High Int.	05:00 PM			04:15 PM		3:45:00 PM	3:45:00 PM	
Volume	35	14	49	6	6			
Peak Factor			0.827		0.500			
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1								
By Approach	04:30 PM			04:00 PM		04:00 PM	04:00 PM	
Volume	117	47	164	15	15	0	0	
Percent	71.3	28.7		100.0				
High Int.	05:00 PM			04:15 PM		-	-	
Volume	35	14	49	6	6	-	-	
Peak Factor			0.837		0.625	-	-	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mtbrook06
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

	S/C DRWY from MONTEVALLO RD Southbound			REGIONS DRWY from MONTEVALLO RD Westbound				
Start Time	Outbound	Inbound	App. Total	Inbound	App. Total	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1								
Intersection	07:30 AM							
Volume	41	58	99	15	15	0	0	114
Percent	41.4	58.6		100.0				
07:45 Volume	10	16	26	6	6	0	0	32
Peak Factor								0.891
High Int.	07:45 AM			07:45 AM				
Volume	10	16	26	6	6			
Peak Factor			0.952		0.625			
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1								
By Approach	07:30 AM			07:15 AM		07:00 AM	07:00 AM	
Volume	41	58	99	18	18	0	0	
Percent	41.4	58.6		100.0				
High Int.	07:45 AM			07:45 AM		-	-	
Volume	10	16	26	6	6	-	-	
Peak Factor			0.952		0.750	-	-	

3-4

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook09
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

3 4

Groups Printed- 1 - Unshifted

	E S/C from CULVER		W S/C from CULVER		
Start Time	Inbound	Outbound	Inbound	Outbound	Int. Total
04:00 PM	17	20	13	24	74
04:15 PM	19	27	20	8	74
04:30 PM	17	21	14	24	76
04:45 PM	7	20	19	19	65
Total	60	88	66	75	289
05:00 PM	14	20	16	24	74
05:15 PM	12	25	15	23	75
05:30 PM	10	20	17	18	65
05:45 PM	14	22	11	19	66
Total	50	87	59	84	280
07:00 AM	2	9	5	6	22
07:15 AM	7	8	5	10	30
07:30 AM	12	6	11	8	37
07:45 AM	8	14	11	10	43
Total	29	37	32	34	132
08:00 AM	4	13	7	8	32
08:15 AM	9	14	10	18	51
08:30 AM	9	13	9	26	57
08:45 AM	7	8	12	12	39
Total	29	48	38	64	179
Grand Total	168	260	195	257	880
Apprch %	39.3	60.7	43.1	56.9	
Total %	19.1	29.5	22.2	29.2	

		E S/C from CULVER Westbound			W S/C from CULVER Northbound				
Start Time	App. Total	Inbound	Outbound	App. Total	Inbound	Outbound	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
Intersection	04:30 PM								
Volume	0	50	86	136	64	90	154	0	290
Percent		36.8	63.2		41.6	58.4			
04:30 Volume	0	17	21	38	14	24	38	0	76
Peak Factor									0.954
High Int.	3:45:00 PM	04:30 PM			05:00 PM			3:45:00 PM	
Volume	0	17	21	38	16	24	40		
Peak Factor				0.895			0.963		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
By Approach	04:00 PM	04:00 PM			04:30 PM			04:00 PM	
Volume	0	60	88	148	64	90	154	0	
Percent		40.5	59.5		41.6	58.4			
High Int.	-	04:15 PM			05:00 PM			-	
Volume	-	19	27	46	16	24	40	-	
Peak Factor	-			0.804			0.963	-	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mtbrook09
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

		E S/C from CULVER Westbound			W S/C from CULVER Northbound				
Start Time	App. Total	Inbound	Outbound	App. Total	Inbound	Outbound	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
Intersection	07:45 AM								
Volume	0	30	54	84	37	62	99	0	183
Percent		35.7	64.3		37.4	62.6			
08:30 Volume	0	9	13	22	9	26	35	0	57
Peak Factor									0.803
High Int.		08:15 AM			08:30 AM				
Volume	0	9	14	23	9	26	35		
Peak Factor				0.913			0.707		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
By Approach	07:00 AM	07:45 AM			08:00 AM			07:00 AM	
Volume	0	30	54	84	38	64	102	0	
Percent		35.7	64.3		37.3	62.7			
High Int.	-	08:15 AM			08:30 AM			-	
Volume	-	9	14	23	9	26	35	-	
Peak Factor	-			0.913			0.729	-	

TRAFFIC DATA, LLC

1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

Mountain Brook, AL

File Name : mtbrook04
Site Code : 00000000
Start Date : 11/29/2007
Page No : 1

Groups Printed- 1 - Unshifted

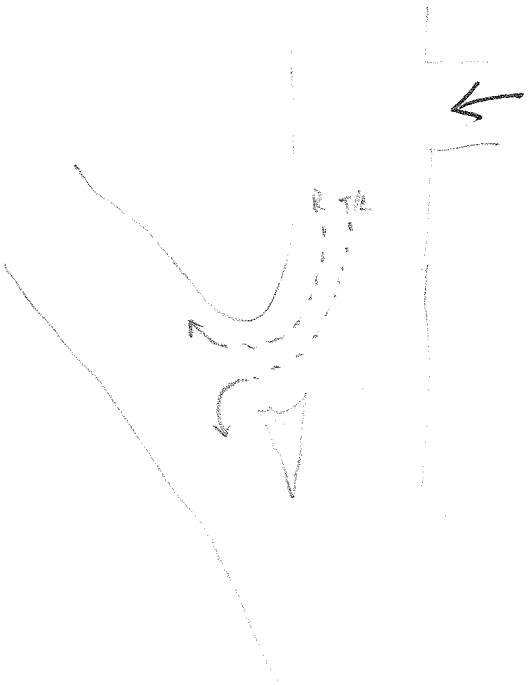
	N S/C DRWY Westbound		LANE PARK RD		
Start Time	Left	Right	Thru /L	Right	Int. Total
04:00 PM	9	14	0	2	25
04:15 PM	11	17	0	0	28
04:30 PM	11	20	0	1	32
04:45 PM	11	15	0	4	30
Total	42	66	0	7	115
05:00 PM	9	18	0	3	30
05:15 PM	5	12	0	0	17
05:30 PM	5	15	2	1	23
05:45 PM	2	15	1	2	20
Total	21	60	3	6	90
07:00 AM	3	6	2	1	12
07:15 AM	3	5	1	0	9
07:30 AM	7	16	1	0	24
07:45 AM	9	8	1	0	18
Total	22	35	5	1	63
08:00 AM	11	7	0	0	18
08:15 AM	6	6	1	1	14
08:30 AM	5	5	0	0	10
08:45 AM	4	6	0	2	12
Total	26	24	1	3	54
Grand Total	111	185	9	17	322
Apprch %	37.5	62.5	34.6	65.4	
Total %	34.5	57.5	2.8	5.3	

		N S/C DRWY Westbound			LANE PARK RD Northbound				
Start Time	App. Total	Left	Right	App. Total	Thru /L	Right	App. Total	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
Intersection	04:15 PM								
Volume	0	42	70	112	0	8	8	0	120
Percent		37.5	62.5		0.0	100.0			
04:30 Volume	0	11	20	31	0	1	1	0	32
Peak Factor									0.938
High Int.	3:45:00 PM	04:30 PM			04:45 PM			3:45:00 PM	
Volume	0	11	20	31	0	4	4		
Peak Factor				0.903			0.500		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1									
By Approach	04:00 PM	04:15 PM			04:45 PM			04:00 PM	
Volume	0	42	70	112	2	8	10	0	
Percent		37.5	62.5		20.0	80.0			
High Int.	-	04:30 PM			04:45 PM			-	
Volume	-	11	20	31	0	4	4	-	
Peak Factor	-			0.903			0.625	-	

TRAFFIC DATA, LLC
1409 Turnham Lane
Birmingham, AL 35216
205-824-0125

File Name : mtbrook04
Site Code : 00000000
Start Date : 11/29/2007
Page No : 2

		N S/C DRWY Westbound			LANE PARK RD Northbound				
Start Time	App. Total	Left	Right	App. Total	Thru /L	Right	App. Total	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
Intersection 07:30 AM									
Volume	0	33	37	70	3	1	4	0	74
Percent		47.1	52.9		75.0	25.0			
07:30 Volume	0	7	16	23	1	0	1	0	24
Peak Factor									0.771
High Int.		07:30 AM			08:15 AM				
Volume	0	7	16	23	1	1	2		
Peak Factor				0.761			0.500		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1									
By Approach 07:00 AM		07:30 AM			07:00 AM			07:00 AM	
Volume	0	33	37	70	5	1	6	0	
Percent		47.1	52.9		83.3	16.7			
High Int. -		07:30 AM			07:00 AM			-	
Volume	-	7	16	23	2	1	3	-	
Peak Factor	-			0.761			0.500	-	



Appendix D

Machine Traffic Counts

TRAFFIC DATA, LLC 205-824-0125

Location: PARK LANE CT N east of LANE PARK RD - MT BROOK
Count Interval: 15 minutes
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
9:00 - 9:14	1	5	6
9:15 - 9:29	3	8	11
9:30 - 9:44	0	9	9
9:45 - 9:59	5	9	14
Hour Total	9	31	40
10:00 - 10:14	1	2	3
10:15 - 10:29	2	8	10
10:30 - 10:44	3	8	11
10:45 - 10:59	2	11	13
Hour Total	8	29	37
11:00 - 11:14	1	2	3
11:15 - 11:29	2	9	11
11:30 - 11:44	2	9	11
11:45 - 11:59	2	3	5
Hour Total	7	23	30
12:00 - 12:14	3	4	7
12:15 - 12:29	6	19	25
12:30 - 12:44	5	17	22
12:45 - 12:59	4	5	9
Hour Total	18	45	63
13:00 - 13:14	2	14	16
13:15 - 13:29	3	7	10
13:30 - 13:44	5	13	18
13:45 - 13:59	6	8	14
Hour Total	16	42	58
14:00 - 14:14	6	10	16
14:15 - 14:29	0	13	13
14:30 - 14:44	1	13	14
14:45 - 14:59	1	8	9
Hour Total	8	44	52
15:00 - 15:14	2	8	10
15:15 - 15:29	1	11	12
15:30 - 15:44	2	2	4
15:45 - 15:59	4	7	11
Hour Total	9	28	37
16:00 - 16:14	1	2	3
16:15 - 16:29	2	10	12
16:30 - 16:44	8	1	9

Location: PARK LANE CT N east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
16:45 - 16:59	3	11	14
Hour Total	14	24	38
17:00 - 17:14	5	11	16
17:15 - 17:29	11	9	20
17:30 - 17:44	6	8	14
17:45 - 17:59	6	5	11
Hour Total	28	33	61
18:00 - 18:14	4	7	11
18:15 - 18:29	3	6	9
18:30 - 18:44	1	11	12
18:45 - 18:59	2	9	11
Hour Total	10	33	43
19:00 - 19:14	2	12	14
19:15 - 19:29	3	13	16
19:30 - 19:44	2	14	16
19:45 - 19:59	1	6	7
Hour Total	8	45	53
20:00 - 20:14	3	6	9
20:15 - 20:29	2	5	7
20:30 - 20:44	1	4	5
20:45 - 20:59	3	8	11
Hour Total	9	23	32
21:00 - 21:14	3	5	8
21:15 - 21:29	1	7	8
21:30 - 21:44	2	6	8
21:45 - 21:59	3	4	7
Hour Total	9	22	31
22:00 - 22:14	0	2	2
22:15 - 22:29	1	2	3
22:30 - 22:44	0	3	3
23:45 - 22:59	2	3	5
Hour Total	3	10	13
23:00 - 23:14	1	9	10
23:15 - 23:29	0	3	3
23:30 - 23:44	0	3	3
23:45 - 23:59	0	1	1
Hour Total	1	16	17
Mid - 12:14	0	0	0
12:15 - 12:29	0	0	0
12:30 - 12:44	0	3	3
12:45 - 12:59	0	0	0
Hour Total	0	3	3
1:00 - 1:14	0	1	1
1:15 - 1:29	0	2	2
1:30 - 1:44	0	2	2
1:45 - 1:59	0	0	0
Hour Total	0	5	5

Location: PARK LANE CT N east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
2:00 - 2:14	1	1	2
2:15 - 2:29	0	4	4
2:30 - 2:44	0	1	1
2:45 - 2:59	0	0	0
Hour Total	1	6	7
3:00 - 3:14	0	4	4
3:15 - 3:29	0	0	0
3:30 - 3:44	0	0	0
3:45 - 3:59	1	1	2
Hour Total	1	5	6
4:00 - 4:14	0	0	0
4:15 - 4:29	0	0	0
4:30 - 4:44	0	0	0
4:45 - 4:59	0	0	0
Hour Total	0	0	0
5:00 - 5:14	0	0	0
5:15 - 5:29	0	2	2
5:30 - 5:44	0	0	0
5:45 - 5:59	0	1	1
Hour Total	0	3	3
6:00 - 6:14	0	0	0
6:15 - 6:29	0	8	8
6:30 - 6:44	3	6	9
6:45 - 6:59	1	7	8
Hour Total	4	21	25
7:00 - 7:14	0	3	3
7:15 - 7:29	0	9	9
7:30 - 7:44	2	13	15
7:45 - 7:59	2	20	22
Hour Total	4	45	49
8:00 - 8:14	0	14	14
8:15 - 8:29	1	10	11
8:30 - 8:44	2	11	13
8:45 - 8:59	2	13	15
Hour Total	5	48	53
ADT :	172	584	756
AM Peak Time :	9:45-10:45	7:30- 8:30	7:30- 8:30
AM Peak Volume:	11	57	62
PM Peak Time :	17:00-18:00	12:15-13:15	12:15-13:15
PM Peak Volume:	28	55	72

TRAFFIC DATA, LLC 205-824-0125

Location: PARK LANE CT S east of LANE PARK RD - MT BROOK
Count Interval: 15 minutes
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
9:00 - 9:14	0	2	2
9:15 - 9:29	2	11	13
9:30 - 9:44	3	6	9
9:45 - 9:59	0	7	7
Hour Total	5	26	31
10:00 - 10:14	1	7	8
10:15 - 10:29	1	2	3
10:30 - 10:44	2	2	4
10:45 - 10:59	1	1	2
Hour Total	5	12	17
11:00 - 11:14	1	2	3
11:15 - 11:29	2	4	6
11:30 - 11:44	4	8	12
11:45 - 11:59	1	7	8
Hour Total	8	21	29
12:00 - 12:14	1	3	4
12:15 - 12:29	2	6	8
12:30 - 12:44	4	4	8
12:45 - 12:59	2	4	6
Hour Total	9	17	26
13:00 - 13:14	5	9	14
13:15 - 13:29	3	5	8
13:30 - 13:44	1	6	7
13:45 - 13:59	5	3	8
Hour Total	14	23	37
14:00 - 14:14	1	7	8
14:15 - 14:29	1	2	3
14:30 - 14:44	3	4	7
14:45 - 14:59	4	2	6
Hour Total	9	15	24
15:00 - 15:14	4	1	5
15:15 - 15:29	2	4	6
15:30 - 15:44	5	1	6
15:45 - 15:59	2	6	8
Hour Total	13	12	25
16:00 - 16:14	5	5	10
16:15 - 16:29	3	5	8
16:30 - 16:44	1	9	10

Location: PARK LANE CT S east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
16:45 - 16:59	1	7	8
Hour Total	10	26	36
17:00 - 17:14	4	12	16
17:15 - 17:29	4	11	15
17:30 - 17:44	5	8	13
17:45 - 17:59	6	14	20
Hour Total	19	45	64
18:00 - 18:14	0	15	15
18:15 - 18:29	3	14	17
18:30 - 18:44	5	10	15
18:45 - 18:59	2	11	13
Hour Total	10	50	60
19:00 - 19:14	1	6	7
19:15 - 19:29	2	12	14
19:30 - 19:44	0	5	5
19:45 - 19:59	0	7	7
Hour Total	3	30	33
20:00 - 20:14	2	5	7
20:15 - 20:29	0	4	4
20:30 - 20:44	4	2	6
20:45 - 20:59	3	3	6
Hour Total	9	14	23
21:00 - 21:14	0	2	2
21:15 - 21:29	2	6	8
21:30 - 21:44	1	2	3
21:45 - 21:59	1	4	5
Hour Total	4	14	18
22:00 - 22:14	1	4	5
22:15 - 22:29	0	2	2
22:30 - 22:44	0	2	2
23:45 - 22:59	1	7	8
Hour Total	2	15	17
23:00 - 23:14	0	6	6
23:15 - 23:29	0	1	1
23:30 - 23:44	0	2	2
23:45 - 23:59	0	0	0
Hour Total	0	9	9
Mid - 12:14	0	0	0
12:15 - 12:29	0	0	0
12:30 - 12:44	0	2	2
12:45 - 12:59	0	0	0
Hour Total	0	2	2
1:00 - 1:14	1	0	1
1:15 - 1:29	0	1	1
1:30 - 1:44	0	0	0
1:45 - 1:59	0	1	1
Hour Total	1	2	3

Location: PARK LANE CT S east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	EastBound Volume	WestBound Volume	Total Volume
2:00 - 2:14	0	1	1
2:15 - 2:29	0	0	0
2:30 - 2:44	0	0	0
2:45 - 2:59	0	0	0
Hour Total	0	1	1
3:00 - 3:14	0	2	2
3:15 - 3:29	0	0	0
3:30 - 3:44	0	2	2
3:45 - 3:59	0	0	0
Hour Total	0	4	4
4:00 - 4:14	1	0	1
4:15 - 4:29	1	1	2
4:30 - 4:44	0	0	0
4:45 - 4:59	0	1	1
Hour Total	2	2	4
5:00 - 5:14	0	0	0
5:15 - 5:29	0	1	1
5:30 - 5:44	0	0	0
5:45 - 5:59	0	0	0
Hour Total	0	1	1
6:00 - 6:14	0	2	2
6:15 - 6:29	0	3	3
6:30 - 6:44	0	7	7
6:45 - 6:59	0	3	3
Hour Total	0	15	15
7:00 - 7:14	1	13	14
7:15 - 7:29	0	10	10
7:30 - 7:44	2	21	23
7:45 - 7:59	2	7	9
Hour Total	5	51	56
8:00 - 8:14	0	6	6
8:15 - 8:29	0	3	3
8:30 - 8:44	1	13	14
8:45 - 8:59	0	5	5
Hour Total	1	27	28
ADT :	129	434	563
AM Peak Time :	10:45-11:45	7:00- 8:00	7:00- 8:00
AM Peak Volume:	8	51	56
PM Peak Time :	17:00-18:00	17:45-18:45	17:45-18:45
PM Peak Volume:	19	53	67

TRAFFIC DATA, LLC 205-824-0125

Location: LANE PARK RD south of PARK LANE CT S - MT BROOK
Count Interval: 15 minutes
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	SouthBound Volume	NorthBound Volume	Total Volume
9:00 - 9:14	68	58	126
9:15 - 9:29	66	72	138
9:30 - 9:44	63	70	133
9:45 - 9:59	70	68	138
Hour Total	267	268	535
10:00 - 10:14	54	69	123
10:15 - 10:29	64	65	129
10:30 - 10:44	76	70	146
10:45 - 10:59	65	93	158
Hour Total	259	297	556
11:00 - 11:14	75	80	155
11:15 - 11:29	63	99	162
11:30 - 11:44	69	77	146
11:45 - 11:59	75	93	168
Hour Total	282	349	631
12:00 - 12:14	75	90	165
12:15 - 12:29	100	87	187
12:30 - 12:44	86	66	152
12:45 - 12:59	115	85	200
Hour Total	376	328	704
13:00 - 13:14	98	92	190
13:15 - 13:29	83	95	178
13:30 - 13:44	94	63	157
13:45 - 13:59	81	80	161
Hour Total	356	330	686
14:00 - 14:14	81	75	156
14:15 - 14:29	79	76	155
14:30 - 14:44	88	82	170
14:45 - 14:59	78	88	166
Hour Total	326	321	647
15:00 - 15:14	83	111	194
15:15 - 15:29	88	89	177
15:30 - 15:44	110	70	180
15:45 - 15:59	72	95	167
Hour Total	353	365	718
16:00 - 16:14	80	88	168
16:15 - 16:29	89	90	179
16:30 - 16:44	94	90	184

Location: LANE PARK RD south of PARK LANE CT S - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	SouthBound Volume	NorthBound Volume	Total Volume
16:45 - 16:59	77	111	188
Hour Total	340	379	719
17:00 - 17:14	71	109	180
17:15 - 17:29	83	112	195
17:30 - 17:44	79	106	185
17:45 - 17:59	75	99	174
Hour Total	308	426	734
18:00 - 18:14	79	95	174
18:15 - 18:29	55	108	163
18:30 - 18:44	59	76	135
18:45 - 18:59	66	65	131
Hour Total	259	344	603
19:00 - 19:14	48	59	107
19:15 - 19:29	63	53	116
19:30 - 19:44	41	49	90
19:45 - 19:59	31	45	76
Hour Total	183	206	389
20:00 - 20:14	34	44	78
20:15 - 20:29	37	34	71
20:30 - 20:44	27	34	61
20:45 - 20:59	33	34	67
Hour Total	131	146	277
21:00 - 21:14	25	43	68
21:15 - 21:29	26	29	55
21:30 - 21:44	17	38	55
21:45 - 21:59	21	23	44
Hour Total	89	133	222
22:00 - 22:14	14	21	35
22:15 - 22:29	23	21	44
22:30 - 22:44	8	20	28
23:45 - 22:59	4	25	29
Hour Total	49	87	136
23:00 - 23:14	13	10	23
23:15 - 23:29	4	11	15
23:30 - 23:44	4	11	15
23:45 - 23:59	2	6	8
Hour Total	23	38	61
Mid - 12:14	3	3	6
12:15 - 12:29	3	2	5
12:30 - 12:44	4	3	7
12:45 - 12:59	3	0	3
Hour Total	13	8	21
1:00 - 1:14	2	3	5
1:15 - 1:29	2	3	5
1:30 - 1:44	2	3	5
1:45 - 1:59	0	4	4
Hour Total	6	13	19

Location: LANE PARK RD south of PARK LANE CT S - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	SouthBound Volume	NorthBound Volume	Total Volume
2:00 - 2:14	3	3	6
2:15 - 2:29	1	5	6
2:30 - 2:44	2	1	3
2:45 - 2:59	0	0	0
Hour Total	6	9	15
3:00 - 3:14	2	4	6
3:15 - 3:29	0	1	1
3:30 - 3:44	0	3	3
3:45 - 3:59	0	2	2
Hour Total	2	10	12
4:00 - 4:14	1	1	2
4:15 - 4:29	2	3	5
4:30 - 4:44	2	4	6
4:45 - 4:59	4	7	11
Hour Total	9	15	24
5:00 - 5:14	4	8	12
5:15 - 5:29	6	12	18
5:30 - 5:44	12	13	25
5:45 - 5:59	10	18	28
Hour Total	32	51	83
6:00 - 6:14	14	34	48
6:15 - 6:29	22	37	59
6:30 - 6:44	28	55	83
6:45 - 6:59	47	54	101
Hour Total	111	180	291
7:00 - 7:14	54	77	131
7:15 - 7:29	76	66	142
7:30 - 7:44	112	87	199
7:45 - 7:59	129	68	197
Hour Total	371	298	669
8:00 - 8:14	107	59	166
8:15 - 8:29	90	78	168
8:30 - 8:44	88	69	157
8:45 - 8:59	68	64	132
Hour Total	353	270	623
ADT :	4504	4871	9375
AM Peak Time :	7:30- 8:30	11:15-12:15	7:30- 8:30
AM Peak Volume:	438	359	730
PM Peak Time :	12:15-13:15	16:45-17:45	16:45-17:45
PM Peak Volume:	399	438	748

MicroCounts

dai
C:\TDDAI127\MTNBRK08.DAI

TRAFFIC DATA, LLC 205-824-0125

Location: CAHABA RD north of LANE PARK RD - MT BROOK
Count Interval: 15 minutes
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	NorthBound Volume	SouthBound Volume	Total Volume
9:00 - 9:14	22	37	59
9:15 - 9:29	44	36	80
9:30 - 9:44	44	28	72
9:45 - 9:59	43	37	80
Hour Total	153	138	291
10:00 - 10:14	29	40	69
10:15 - 10:29	38	40	78
10:30 - 10:44	38	46	84
10:45 - 10:59	34	38	72
Hour Total	139	164	303
11:00 - 11:14	55	57	112
11:15 - 11:29	42	51	93
11:30 - 11:44	37	50	87
11:45 - 11:59	43	41	84
Hour Total	177	199	376
12:00 - 12:14	49	58	107
12:15 - 12:29	58	64	122
12:30 - 12:44	60	63	123
12:45 - 12:59	47	60	107
Hour Total	214	245	459
13:00 - 13:14	43	51	94
13:15 - 13:29	46	48	94
13:30 - 13:44	49	42	91
13:45 - 13:59	40	49	89
Hour Total	178	190	368
14:00 - 14:14	48	45	93
14:15 - 14:29	46	43	89
14:30 - 14:44	33	51	84
14:45 - 14:59	47	51	98
Hour Total	174	190	364
15:00 - 15:14	55	58	113
15:15 - 15:29	56	35	91
15:30 - 15:44	46	56	102
15:45 - 15:59	43	39	82
Hour Total	200	188	388
16:00 - 16:14	37	49	86
16:15 - 16:29	41	47	88
16:30 - 16:44	39	59	98

Location: CAHABA RD north of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	NorthBound Volume	SouthBound Volume	Total Volume
16:45 - 16:59	43	72	115
Hour Total	160	227	387
17:00 - 17:14	60	62	122
17:15 - 17:29	51	75	126
17:30 - 17:44	42	85	127
17:45 - 17:59	57	93	150
Hour Total	210	315	525
18:00 - 18:14	35	60	95
18:15 - 18:29	31	25	56
18:30 - 18:44	32	33	65
18:45 - 18:59	43	29	72
Hour Total	141	147	288
19:00 - 19:14	45	24	69
19:15 - 19:29	31	15	46
19:30 - 19:44	27	26	53
19:45 - 19:59	31	18	49
Hour Total	134	83	217
20:00 - 20:14	32	27	59
20:15 - 20:29	20	20	40
20:30 - 20:44	33	21	54
20:45 - 20:59	20	17	37
Hour Total	105	85	190
21:00 - 21:14	14	16	30
21:15 - 21:29	12	19	31
21:30 - 21:44	11	14	25
21:45 - 21:59	14	14	28
Hour Total	51	63	114
22:00 - 22:14	7	14	21
22:15 - 22:29	8	11	19
22:30 - 22:44	2	9	11
23:45 - 22:59	7	12	19
Hour Total	24	46	70
23:00 - 23:14	5	7	12
23:15 - 23:29	5	7	12
23:30 - 23:44	5	4	9
23:45 - 23:59	2	4	6
Hour Total	17	22	39
Mid - 12:14	3	0	3
12:15 - 12:29	1	0	1
12:30 - 12:44	2	2	4
12:45 - 12:59	1	9	10
Hour Total	7	11	18
1:00 - 1:14	1	1	2
1:15 - 1:29	1	0	1
1:30 - 1:44	2	1	3
1:45 - 1:59	3	4	7
Hour Total	7	6	13

Location: CAHABA RD north of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	NorthBound Volume	SouthBound Volume	Total Volume
2:00 - 2:14	0	2	2
2:15 - 2:29	0	0	0
2:30 - 2:44	1	2	3
2:45 - 2:59	0	1	1
Hour Total	1	5	6
3:00 - 3:14	1	3	4
3:15 - 3:29	0	1	1
3:30 - 3:44	0	0	0
3:45 - 3:59	0	0	0
Hour Total	1	4	5
4:00 - 4:14	0	1	1
4:15 - 4:29	1	0	1
4:30 - 4:44	1	0	1
4:45 - 4:59	3	3	6
Hour Total	5	4	9
5:00 - 5:14	1	0	1
5:15 - 5:29	0	2	2
5:30 - 5:44	5	4	9
5:45 - 5:59	5	4	9
Hour Total	11	10	21
6:00 - 6:14	8	13	21
6:15 - 6:29	8	11	19
6:30 - 6:44	9	13	22
6:45 - 6:59	24	17	41
Hour Total	49	54	103
7:00 - 7:14	21	34	55
7:15 - 7:29	36	29	65
7:30 - 7:44	36	39	75
7:45 - 7:59	57	49	106
Hour Total	150	151	301
8:00 - 8:14	51	40	91
8:15 - 8:29	50	39	89
8:30 - 8:44	36	43	79
8:45 - 8:59	36	43	79
Hour Total	173	165	338
ADT :	2481	2712	5193
AM Peak Time :	7:30- 8:30	11:15-12:15	11:00-12:00
AM Peak Volume:	194	200	376
PM Peak Time :	12:00-13:00	17:00-18:00	17:00-18:00
PM Peak Volume:	214	315	525

TRAFFIC DATA, LLC 205-824-0125

Location: CULVER RD east of LANE PARK RD - MT BROOK
Count Interval: 15 minutes
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
10:00 - 10:14	38	48	86
10:15 - 10:29	41	45	86
10:30 - 10:44	46	67	113
10:45 - 10:59	40	52	92
Hour Total	165	212	377
11:00 - 11:14	48	77	125
11:15 - 11:29	49	71	120
11:30 - 11:44	61	72	133
11:45 - 11:59	46	63	109
Hour Total	204	283	487
12:00 - 12:14	50	74	124
12:15 - 12:29	48	53	101
12:30 - 12:44	55	70	125
12:45 - 12:59	72	71	143
Hour Total	225	268	493
13:00 - 13:14	64	75	139
13:15 - 13:29	58	62	120
13:30 - 13:44	60	49	109
13:45 - 13:59	54	73	127
Hour Total	236	259	495
14:00 - 14:14	58	76	134
14:15 - 14:29	38	67	105
14:30 - 14:44	51	72	123
14:45 - 14:59	65	84	149
Hour Total	212	299	511
15:00 - 15:14	46	78	124
15:15 - 15:29	72	43	115
15:30 - 15:44	50	60	110
15:45 - 15:59	45	57	102
Hour Total	213	238	451
16:00 - 16:14	51	70	121
16:15 - 16:29	50	74	124
16:30 - 16:44	52	70	122
16:45 - 16:59	42	88	130
Hour Total	195	302	497
17:00 - 17:14	49	85	134
17:15 - 17:29	49	82	131
17:30 - 17:44	42	61	103

Location: CULVER RD east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
17:45 - 17:59	47	61	108
Hour Total	187	289	476
18:00 - 18:14	43	76	119
18:15 - 18:29	37	44	81
18:30 - 18:44	34	51	85
18:45 - 18:59	34	35	69
Hour Total	148	206	354
19:00 - 19:14	25	40	65
19:15 - 19:29	21	41	62
19:30 - 19:44	22	18	40
19:45 - 19:59	21	21	42
Hour Total	89	120	209
20:00 - 20:14	24	21	45
20:15 - 20:29	7	20	27
20:30 - 20:44	17	28	45
20:45 - 20:59	15	19	34
Hour Total	63	88	151
21:00 - 21:14	11	12	23
21:15 - 21:29	10	11	21
21:30 - 21:44	6	13	19
21:45 - 21:59	6	10	16
Hour Total	33	46	79
22:00 - 22:14	5	10	15
22:15 - 22:29	6	6	12
22:30 - 22:44	4	6	10
23:45 - 22:59	5	8	13
Hour Total	20	30	50
23:00 - 23:14	3	5	8
23:15 - 23:29	4	5	9
23:30 - 23:44	1	3	4
23:45 - 23:59	4	3	7
Hour Total	12	16	28
Mid - 12:14	3	0	3
12:15 - 12:29	0	0	0
12:30 - 12:44	1	1	2
12:45 - 12:59	2	5	7
Hour Total	6	6	12
1:00 - 1:14	2	0	2
1:15 - 1:29	0	1	1
1:30 - 1:44	0	0	0
1:45 - 1:59	0	0	0
Hour Total	2	1	3
2:00 - 2:14	0	0	0
2:15 - 2:29	0	3	3
2:30 - 2:44	0	0	0
2:45 - 2:59	0	1	1
Hour Total	0	4	4

Location: CULVER RD east of LANE PARK RD - MT BROOK
Count Date: Thursday - November 29, 2007 /Friday - November 30, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
3:00 - 3:14	0	1	1
3:15 - 3:29	0	0	0
3:30 - 3:44	0	2	2
3:45 - 3:59	2	0	2
Hour Total	2	3	5
4:00 - 4:14	2	1	3
4:15 - 4:29	1	3	4
4:30 - 4:44	2	1	3
4:45 - 4:59	7	1	8
Hour Total	12	6	18
5:00 - 5:14	3	2	5
5:15 - 5:29	7	2	9
5:30 - 5:44	6	1	7
5:45 - 5:59	7	9	16
Hour Total	23	14	37
6:00 - 6:14	12	19	31
6:15 - 6:29	15	23	38
6:30 - 6:44	19	32	51
6:45 - 6:59	31	42	73
Hour Total	77	116	193
7:00 - 7:14	50	25	75
7:15 - 7:29	50	40	90
7:30 - 7:44	80	57	137
7:45 - 7:59	82	39	121
Hour Total	262	161	423
8:00 - 8:14	78	51	129
8:15 - 8:29	57	51	108
8:30 - 8:44	53	43	96
8:45 - 8:59	46	62	108
Hour Total	234	207	441
9:00 - 9:14	54	73	127
9:15 - 9:29	51	39	90
9:30 - 9:44	0	0	0
9:45 - 9:59	0	0	0
Hour Total	105	112	217
ADT :	2725	3286	6011
AM Peak Time :	7:30- 8:30	11:00-12:00	7:30- 8:30
AM Peak Volume:	297	283	495
PM Peak Time :	12:45-13:45	16:30-17:30	12:30-13:30
PM Peak Volume:	254	325	527

TRAFFIC DATA, LLC 205-824-0125

Location: MONTEVALLO RD east of CULVER RD - MOUNTAIN BROOK
Count Interval: 15 minutes
Count Date: Wednesday - December 5, 2007 /Thursday - December 6, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
14:00 - 14:14	112	114	226
14:15 - 14:29	110	108	218
14:30 - 14:44	118	108	226
14:45 - 14:59	107	156	263
Hour Total	447	486	933
15:00 - 15:14	158	145	303
15:15 - 15:29	153	129	282
15:30 - 15:44	133	116	249
15:45 - 15:59	103	132	235
Hour Total	547	522	1069
16:00 - 16:14	119	131	250
16:15 - 16:29	119	141	260
16:30 - 16:44	104	164	268
16:45 - 16:59	84	164	248
Hour Total	426	600	1026
17:00 - 17:14	100	192	292
17:15 - 17:29	110	179	289
17:30 - 17:44	115	179	294
17:45 - 17:59	95	133	228
Hour Total	420	683	1103
18:00 - 18:14	98	129	227
18:15 - 18:29	87	91	178
18:30 - 18:44	72	94	166
18:45 - 18:59	61	104	165
Hour Total	318	418	736
19:00 - 19:14	52	88	140
19:15 - 19:29	46	59	105
19:30 - 19:44	38	61	99
19:45 - 19:59	38	58	96
Hour Total	174	266	440
20:00 - 20:14	40	59	99
20:15 - 20:29	38	71	109
20:30 - 20:44	29	53	82
20:45 - 20:59	28	32	60
Hour Total	135	215	350
21:00 - 21:14	27	53	80
21:15 - 21:29	34	28	62
21:30 - 21:44	23	46	69

Location: MONTEVALLO RD east of CULVER RD - MOUNTAIN BROOK
Count Date: Wednesday - December 5, 2007 /Thursday - December 6, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
21:45 - 21:59	10	21	31
Hour Total	94	148	242
22:00 - 22:14	20	19	39
22:15 - 22:29	13	19	32
22:30 - 22:44	4	12	16
23:45 - 22:59	5	9	14
Hour Total	42	59	101
23:00 - 23:14	6	5	11
23:15 - 23:29	5	6	11
23:30 - 23:44	3	4	7
23:45 - 23:59	5	4	9
Hour Total	19	19	38
Mid - 12:14	5	6	11
12:15 - 12:29	0	3	3
12:30 - 12:44	1	0	1
12:45 - 12:59	2	5	7
Hour Total	8	14	22
1:00 - 1:14	2	0	2
1:15 - 1:29	1	2	3
1:30 - 1:44	0	0	0
1:45 - 1:59	1	1	2
Hour Total	4	3	7
2:00 - 2:14	1	2	3
2:15 - 2:29	2	1	3
2:30 - 2:44	1	0	1
2:45 - 2:59	1	1	2
Hour Total	5	4	9
3:00 - 3:14	0	2	2
3:15 - 3:29	1	2	3
3:30 - 3:44	0	1	1
3:45 - 3:59	0	2	2
Hour Total	1	7	8
4:00 - 4:14	2	1	3
4:15 - 4:29	1	1	2
4:30 - 4:44	1	1	2
4:45 - 4:59	10	0	10
Hour Total	14	3	17
5:00 - 5:14	5	2	7
5:15 - 5:29	12	3	15
5:30 - 5:44	10	9	19
5:45 - 5:59	29	16	45
Hour Total	56	30	86
6:00 - 6:14	16	7	23
6:15 - 6:29	29	15	44
6:30 - 6:44	50	34	84
6:45 - 6:59	80	83	163
Hour Total	175	139	314

Location: MONTEVALLO RD east of CULVER RD - MOUNTAIN BROOK
Count Date: Wednesday - December 5, 2007 /Thursday - December 6, 2007

Time	WestBound Volume	EastBound Volume	Total Volume
7:00 - 7:14	121	50	171
7:15 - 7:29	140	66	206
7:30 - 7:44	195	80	275
7:45 - 7:59	219	64	283
Hour Total	675	260	935
8:00 - 8:14	167	88	255
8:15 - 8:29	156	82	238
8:30 - 8:44	140	80	220
8:45 - 8:59	124	96	220
Hour Total	587	346	933
9:00 - 9:14	128	97	225
9:15 - 9:29	140	85	225
9:30 - 9:44	123	86	209
9:45 - 9:59	119	82	201
Hour Total	510	350	860
10:00 - 10:14	145	74	219
10:15 - 10:29	114	85	199
10:30 - 10:44	105	104	209
10:45 - 10:59	132	87	219
Hour Total	496	350	846
11:00 - 11:14	127	92	219
11:15 - 11:29	101	97	198
11:30 - 11:44	118	105	223
11:45 - 11:59	114	121	235
Hour Total	460	415	875
12:00 - 12:14	131	102	233
12:15 - 12:29	103	110	213
12:30 - 12:44	127	109	236
12:45 - 12:59	130	130	260
Hour Total	491	451	942
13:00 - 13:14	160	94	254
13:15 - 13:29	116	125	241
13:30 - 13:44	122	121	243
13:45 - 13:59	126	118	244
Hour Total	524	458	982
ADT :	6628	6246	12874
AM Peak Time :	7:30- 8:30	11:15-12:15	7:30- 8:30
AM Peak Volume:	737	425	1051
PM Peak Time :	14:45-15:45	16:45-17:45	16:45-17:45
PM Peak Volume:	551	714	1123

Appendix E

Existing Capacity Analysis Worksheets

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*2/17/2009*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at Court North*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Existing 2007*

Project Description *Mountain Brook Urban Village*

East/West Street: *Park Lane Court North* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*300*	*4*	*0*	*393*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*333*	*4*	*0*	*436*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*26*		*10*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*28*	*0*	*11*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*0*		*39*				
C (m) (veh/h)		*1217*		*424*				
v/c		*0.00*		*0.09*				
95% queue length		*0.00*		*0.30*				
Control Delay (s/veh)		*8.0*		*14.3*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.3*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*2/17/2009*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at Court North*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Existing 2007*

Project Description *Mountain Brook Urban Village*

East/West Street: *Park Lane Court North* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*402*	*14*	*10*	*334*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*446*	*15*	*11*	*371*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*6*		*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*6*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*11*		*16*				
C (m) (veh/h)		*1095*		*459*				
v/c		*0.01*		*0.03*				
95% queue length		*0.03*		*0.11*				
Control Delay (s/veh)		*8.3*		*13.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.1*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*2/17/2009*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at Court South*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Existing 2007*

Project Description *Mountain Brook Urban Village*

East/West Street: *Park Lane Court South* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*293*	*8*	*1*	*417*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*325*	*8*	*1*	*463*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*26*		*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*28*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*1*		*34*				
C (m) (veh/h)		*1221*		*390*				
v/c		*0.00*		*0.09*				
95% queue length		*0.00*		*0.28*				
Control Delay (s/veh)		*8.0*		*15.1*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*15.1*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*2/17/2009*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at Court South*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Existing 2007*

Project Description *Mountain Brook Urban Village*

East/West Street: *Park Lane Court South* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*415*	*29*	*1*	*337*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*461*	*32*	*1*	*374*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*11*	*0*	*2*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*1*		*13*				
C (m) (veh/h)		*1065*		*352*				
v/c		*0.00*		*0.04*				
95% queue length		*0.00*		*0.11*				
Control Delay (s/veh)		*8.4*		*15.6*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*15.6*					
Approach LOS	--	--	*C*					

HCS+™ Version 5.3 Generated: 2/17/2009 9:59 AM

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
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		1.00			1.00	1.00		
Frt		1.00	1.00	0.85		0.98			1.00	0.89		
Flt Protected		0.95	1.00	1.00		1.00			0.95	1.00		
Satd. Flow (prot)		1752	1845	1568		1815			1752	1648		
Flt Permitted		0.38	1.00	1.00		1.00			0.66	1.00		
Satd. Flow (perm)		702	1845	1568		1809			1209	1648		
Volume (vph)	20	114	119	172	5	253	32	1	109	78	179	14
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	127	132	191	6	281	36	1	121	87	199	16
RTOR Reduction (vph)	0	0	0	133	0	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	149	132	58	0	324	0	0	121	300	0	0
Turn Type	Perm	Perm		Perm	Perm				Perm			
Protected Phases			4			4				2		
Permitted Phases	4	4		4	4				2			
Actuated Green, G (s)		27.8	27.8	27.8		27.8			22.3	22.3		
Effective Green, g (s)		28.3	28.3	28.3		28.3			22.8	22.8		
Actuated g/C Ratio		0.30	0.30	0.30		0.30			0.25	0.25		
Clearance Time (s)		4.5	4.5	4.5		4.5			4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0		3.0			3.0	3.0		
Lane Grp Cap (vph)		214	562	478		551			297	404		
v/s Ratio Prot			0.07							c0.18		
v/s Ratio Perm		c0.21		0.04		0.18			0.10			
v/c Ratio		0.70	0.23	0.12		0.59			0.41	0.74		
Uniform Delay, d1		28.5	24.2	23.3		27.4			29.4	32.3		
Progression Factor		1.00	1.00	1.00		1.00			1.00	1.00		
Incremental Delay, d2		9.4	0.2	0.1		1.6			0.9	7.2		
Delay (s)		38.0	24.4	23.4		29.0			30.3	39.5		
Level of Service		D	C	C		C			C	D		
Approach Delay (s)			28.3			29.0				36.9		
Approach LOS			C			C				D		

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	92.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0		
Lane Util. Factor		1.00	1.00	1.00		1.00		
Frt		1.00	1.00	0.85		0.97		
Flt Protected		0.95	1.00	1.00		0.96		
Satd. Flow (prot)		1752	1845	1568		1718		
Flt Permitted		0.32	1.00	1.00		0.96		
Satd. Flow (perm)		590	1845	1568		1718		
Volume (vph)	7	33	105	35	31	289	67	41
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	37	117	39	34	321	74	46
RTOR Reduction (vph)	0	0	0	29	0	3	0	0
Lane Group Flow (vph)	0	45	117	10	0	472	0	0
Turn Type	Perm	Perm		Perm	Perm			
Protected Phases			2			3		
Permitted Phases	2	2		2	3			
Actuated Green, G (s)		22.3	22.3	22.3		29.3		
Effective Green, g (s)		22.8	22.8	22.8		29.8		
Actuated g/C Ratio		0.25	0.25	0.25		0.32		
Clearance Time (s)		4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		145	453	385		551		
v/s Ratio Prot			0.06					
v/s Ratio Perm		0.08		0.01		0.27		
v/c Ratio		0.31	0.26	0.02		0.86		
Uniform Delay, d1		28.6	28.2	26.6		29.5		
Progression Factor		1.00	1.00	1.00		1.00		
Incremental Delay, d2		1.2	0.3	0.0		12.4		
Delay (s)		29.9	28.5	26.6		41.9		
Level of Service		C	C	C		D		
Approach Delay (s)			28.5			41.9		
Approach LOS			C			D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
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		1.00			1.00	1.00		
Frt		1.00	1.00	0.85		0.97			1.00	0.89		
Flt Protected		0.95	1.00	1.00		0.99			0.95	1.00		
Satd. Flow (prot)		1752	1845	1568		1784			1752	1637		
Flt Permitted		0.58	1.00	1.00		0.93			0.56	1.00		
Satd. Flow (perm)		1062	1845	1568		1677			1036	1637		
Volume (vph)	38	186	227	94	23	105	29	2	69	87	233	30
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	207	252	104	26	117	32	2	77	97	259	33
RTOR Reduction (vph)	0	0	0	72	0	0	0	0	0	3	0	0
Lane Group Flow (vph)	0	249	252	32	0	177	0	0	77	386	0	0
Turn Type	Perm	Perm		Perm	Perm				Perm			
Protected Phases			4			4				2		
Permitted Phases	4	4		4	4				2			
Actuated Green, G (s)		27.7	27.7	27.7		27.7			27.8	27.8		
Effective Green, g (s)		28.2	28.2	28.2		28.2			28.3	28.3		
Actuated g/C Ratio		0.30	0.30	0.30		0.30			0.30	0.30		
Clearance Time (s)		4.5	4.5	4.5		4.5			4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0		3.0			3.0	3.0		
Lane Grp Cap (vph)		322	559	475		508			315	498		
v/s Ratio Prot			0.14							0.24		
v/s Ratio Perm		c0.23		0.02		0.11			0.07			
v/c Ratio		0.77	0.45	0.07		0.35			0.24	0.78		
Uniform Delay, d1		29.5	26.2	23.1		25.3			24.4	29.5		
Progression Factor		1.00	1.00	1.00		1.00			1.00	1.00		
Incremental Delay, d2		11.0	0.6	0.1		0.4			0.4	7.4		
Delay (s)		40.5	26.8	23.1		25.7			24.8	36.9		
Level of Service		D	C	C		C			C	D		
Approach Delay (s)			31.8			25.7				34.9		
Approach LOS			C			C				C		

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	93.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0		
Lane Util. Factor		1.00	1.00	1.00		1.00		
Frt		1.00	1.00	0.85		0.97		
Flt Protected		0.95	1.00	1.00		0.96		
Satd. Flow (prot)		1752	1845	1568		1721		
Flt Permitted		0.27	1.00	1.00		0.96		
Satd. Flow (perm)		500	1845	1568		1721		
Volume (vph)	15	98	167	27	48	203	53	23
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	109	186	30	53	226	59	26
RTOR Reduction (vph)	0	0	0	21	0	3	0	0
Lane Group Flow (vph)	0	126	186	9	0	361	0	0
Turn Type	Perm	Perm		Perm	Perm			
Protected Phases			2			3		
Permitted Phases	2	2		2	3			
Actuated Green, G (s)		27.8	27.8	27.8		24.1		
Effective Green, g (s)		28.3	28.3	28.3		24.6		
Actuated g/C Ratio		0.30	0.30	0.30		0.26		
Clearance Time (s)		4.5	4.5	4.5		4.5		
Vehicle Extension (s)		3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)		152	561	477		455		
v/s Ratio Prot			0.10					
v/s Ratio Perm		c0.25		0.01		0.21		
v/c Ratio		0.83	0.33	0.02		0.79		
Uniform Delay, d1		30.1	25.1	22.7		31.9		
Progression Factor		1.00	1.00	1.00		1.00		
Incremental Delay, d2		29.5	0.3	0.0		9.2		
Delay (s)		59.7	25.4	22.7		41.1		
Level of Service		E	C	C		D		
Approach Delay (s)			37.8			41.1		
Approach LOS			D			D		

Intersection Summary

SHORT REPORT

General Information		Site Information	
Analyst	*RLC*	Intersection	*Montevallo at Culver*
Agency or Co.	*Skipper Consulting*	Area Type	*All other areas*
Date Performed	*2/17/2009*	Jurisdiction	*City of Mountain Brook*
Time Period	*AM Peak Hour*	Analysis Year	*Existing 2007*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*1*	*1*	*0*				*1*	*1*	*0*	*1*	*1*	*0*
Lane Group	*L*	*TR*					*L*	*TR*		*L*	*TR*	
Volume (vph)	*121*	*61*	*42*				*55*	*194*	*14*	*75*	*376*	*277*
% Heavy Vehicles	*3*	*3*	*3*				*3*	*3*	*3*	*3*	*3*	*3*
PHF	*0.90*	*0.90*	*0.90*				*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Pretimed/Actuated (P/A)	*A*	*A*	*A*				*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type	*3*	*3*					*3*	*3*		*3*	*3*	
Unit Extension	*3.0*	*3.0*					*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*20*	*0*	*4*	*20*	*0*		*20*	*0*	*1*	*20*	*0*	*28*
Lane Width	*12.0*	*12.0*					*12.0*	*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*Y*	*N*	*0*	*N*
Parking/Hour									*20*			
Bus Stops/Hour	*0*	*0*					*0*	*0*		*0*	*0*	
Minimum Pedestrian Time		*3.3*			*3.3*			*3.3*			*3.3*	

Phasing	EB Only	02	03	04	NB Only	NS Perm	07	08
Timing	G = *18.0*	G =	G =	G =	G = *15.0*	G = *40.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =

Duration of Analysis (hrs) = *0.25* — Cycle Length C = *87.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	*134*	*110*					*61*	*230*		*83*	*695*	
Lane Group Capacity	*362*	*353*					*431*	*1007*		*514*	*791*	
v/c Ratio	*0.37*	*0.31*					*0.14*	*0.23*		*0.16*	*0.88*	
Green Ratio	*0.21*	*0.21*					*0.69*	*0.69*		*0.46*	*0.46*	
Uniform Delay d_1	*29.6*	*29.2*					*9.8*	*5.0*		*13.7*	*21.3*	
Delay Factor k	*0.11*	*0.11*					*0.11*	*0.11*		*0.11*	*0.41*	
Incremental Delay d_2	*0.6*	*0.5*					*0.2*	*0.1*		*0.1*	*11.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*		*1.000*	*1.000*	
Control Delay	*30.3*	*29.8*					*10.0*	*5.1*		*13.9*	*32.4*	
Lane Group LOS	*C*	*C*					*A*	*A*		*B*	*C*	
Approach Delay	*30.0*						*6.1*			*30.4*		
Approach LOS	*C*						*A*			*C*		
Intersection Delay	*25.0*			Intersection LOS						*C*		

SHORT REPORT

General Information		Site Information	
Analyst	*RLC*	Intersection	*Montevallo at Culver*
Agency or Co.	*Skipper Consulting*	Area Type	*All other areas*
Date Performed	*2/17/2009*	Jurisdiction	*City of Mountain Brook*
Time Period	*PM Peak Hour*	Analysis Year	*Existing 2007*

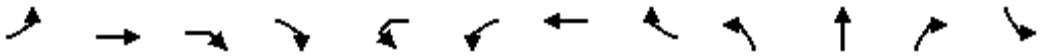
Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*1*	*1*	*0*				*1*	*1*	*0*	*1*	*1*	*0*
Lane Group	*L*	*TR*					*L*	*TR*		*L*	*TR*	
Volume (vph)	*241*	*67*	*42*				*113*	*414*	*14*	*46*	*270*	*121*
% Heavy Vehicles	*3*	*3*	*3*				*3*	*3*	*3*	*3*	*3*	*3*
PHF	*0.90*	*0.90*	*0.90*				*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Pretimed/Actuated (P/A)	*A*	*A*	*A*				*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Arrival Type	*3*	*3*					*3*	*3*		*3*	*3*	
Unit Extension	*3.0*	*3.0*					*3.0*	*3.0*		*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*20*	*0*	*4*	*20*	*0*		*20*	*0*	*1*	*20*	*0*	*12*
Lane Width	*12.0*	*12.0*					*12.0*	*12.0*		*12.0*	*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*Y*	*N*	*0*	*N*
Parking/Hour									*20*			
Bus Stops/Hour	*0*	*0*					*0*	*0*		*0*	*0*	
Minimum Pedestrian Time		*3.3*			*3.3*			*3.3*			*3.3*	

Phasing	EB Only	02	03	04	NB Only	NS Perm	07	08
Timing	G = *20.0*	G =	G =	G =	G = *13.0*	G = *40.0*	G =	G =
	Y = *4*	Y =	Y =	Y =	Y = *5*	Y = *5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *87.0*		

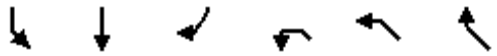
Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	*268*	*116*					*126*	*474*		*51*	*421*	
Lane Group Capacity	*403*	*395*					*591*	*979*		*412*	*806*	
v/c Ratio	*0.67*	*0.29*					*0.21*	*0.48*		*0.12*	*0.52*	
Green Ratio	*0.23*	*0.23*					*0.67*	*0.67*		*0.46*	*0.46*	
Uniform Delay d_1	*30.5*	*27.7*					*6.6*	*7.1*		*13.5*	*16.7*	
Delay Factor k	*0.24*	*0.11*					*0.11*	*0.11*		*0.11*	*0.13*	
Incremental Delay d_2	*4.1*	*0.4*					*0.2*	*0.4*		*0.1*	*0.6*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*		*1.000*	*1.000*	
Control Delay	*34.6*	*28.1*					*6.8*	*7.5*		*13.6*	*17.3*	
Lane Group LOS	*C*	*C*					*A*	*A*		*B*	*B*	
Approach Delay	*32.6*						*7.4*			*16.9*		
Approach LOS	*C*						*A*			*B*		
Intersection Delay	*17.1*			Intersection LOS			*B*					



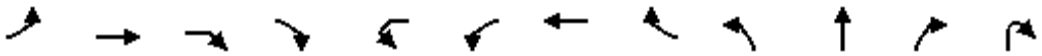
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00				1.00	1.00		1.00	1.00		
Frt	1.00	0.97				1.00	1.00		1.00	0.96		
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1816				1770	1859		1770	1785		
Flt Permitted	0.30	1.00				0.49	1.00		0.25	1.00		
Satd. Flow (perm)	567	1816				908	1859		474	1785		
Volume (vph)	108	186	3	35	1	74	298	4	38	197	76	5
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.76	0.76	0.76	0.84
Adj. Flow (vph)	119	204	3	38	1	89	359	5	50	259	100	6
RTOR Reduction (vph)	0	9	0	0	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	119	236	0	0	0	90	363	0	50	359	0	0
Turn Type	Perm				Perm	Perm			Perm			Perm
Protected Phases		3					3			2		
Permitted Phases	3				3	3			2			2
Actuated Green, G (s)	19.2	19.2				19.2	19.2		31.5	31.5		
Effective Green, g (s)	19.7	19.7				19.7	19.7		32.0	32.0		
Actuated g/C Ratio	0.28	0.28				0.28	0.28		0.46	0.46		
Clearance Time (s)	4.5	4.5				4.5	4.5		4.5	4.5		
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	160	513				257	525		218	820		
v/s Ratio Prot		0.13					0.20			0.20		
v/s Ratio Perm	c0.21					0.10			0.11			
v/c Ratio	0.74	0.46				0.35	0.69		0.23	0.44		
Uniform Delay, d1	22.7	20.6				19.9	22.3		11.4	12.8		
Progression Factor	1.00	1.00				1.00	1.00		1.00	1.00		
Incremental Delay, d2	17.0	0.7				0.8	3.9		2.4	1.7		
Delay (s)	39.7	21.3				20.7	26.2		13.8	14.5		
Level of Service	D	C				C	C		B	B		
Approach Delay (s)		27.3					25.1			14.4		
Approach LOS		C					C			B		

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	69.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	1.00			1.00	1.00
Frt	1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1768			1770	1583
Flt Permitted	0.45	1.00			0.95	1.00
Satd. Flow (perm)	847	1768			1770	1583
Volume (vph)	1	320	165	6	35	39
Peak-hour factor, PHF	0.84	0.84	0.84	0.63	0.63	0.63
Adj. Flow (vph)	1	381	196	10	56	62
RTOR Reduction (vph)	0	19	0	0	0	0
Lane Group Flow (vph)	7	558	0	0	66	62
Turn Type	Perm			Perm		Perm
Protected Phases		2			4	
Permitted Phases	2			4		4
Actuated Green, G (s)	31.5	31.5			5.5	5.5
Effective Green, g (s)	32.0	32.0			6.0	6.0
Actuated g/C Ratio	0.46	0.46			0.09	0.09
Clearance Time (s)	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	389	812			152	136
v/s Ratio Prot		c0.32				
v/s Ratio Perm	0.01				0.04	c0.04
v/c Ratio	0.02	0.69			0.43	0.46
Uniform Delay, d1	10.3	14.9			30.2	30.3
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.1	4.7			2.0	2.4
Delay (s)	10.4	19.6			32.2	32.7
Level of Service	B	B			C	C
Approach Delay (s)		19.5			32.5	
Approach LOS		B			C	

Intersection Summary



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
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	1.00		1.00	1.00		
Frt	1.00	0.98				1.00	1.00		1.00	0.95		
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1835				1770	1859		1770	1764		
Flt Permitted	0.50	1.00				0.26	1.00		0.33	1.00		
Satd. Flow (perm)	931	1835				484	1859		608	1764		
Volume (vph)	109	326	1	36	1	47	220	3	39	293	158	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.87
Adj. Flow (vph)	122	366	1	40	1	51	239	3	45	337	182	2
RTOR Reduction (vph)	0	6	0	0	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	122	401	0	0	0	52	241	0	45	521	0	0
Turn Type	Perm				Perm	Perm			Perm			
Protected Phases		3					3			2		
Permitted Phases	3				3	3			2			
Actuated Green, G (s)	20.6	20.6				20.6	20.6		31.5	31.5		
Effective Green, g (s)	21.1	21.1				21.1	21.1		32.0	32.0		
Actuated g/C Ratio	0.30	0.30				0.30	0.30		0.45	0.45		
Clearance Time (s)	4.5	4.5				4.5	4.5		4.5	4.5		
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	276	545				144	552		274	794		
v/s Ratio Prot		c0.22					0.13			c0.30		
v/s Ratio Perm	0.13					0.11			0.07			
v/c Ratio	0.44	0.74				0.36	0.44		0.16	0.66		
Uniform Delay, d1	20.2	22.5				19.7	20.2		11.6	15.3		
Progression Factor	1.00	1.00				1.00	1.00		1.00	1.00		
Incremental Delay, d2	1.1	5.1				1.5	0.6		1.3	4.2		
Delay (s)	21.4	27.6				21.2	20.8		12.9	19.5		
Level of Service	C	C				C	C		B	B		
Approach Delay (s)		26.2					20.8			18.9		
Approach LOS		C					C			B		

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0	
Lane Util. Factor		1.00	1.00			1.00	1.00	
Frt		1.00	0.94			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	1748			1770	1583	
Flt Permitted		0.30	1.00			0.95	1.00	
Satd. Flow (perm)		550	1748			1770	1583	
Volume (vph)	12	0	250	174	11	38	37	1
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.84	0.84	0.84	0.84
Adj. Flow (vph)	14	0	287	200	13	45	44	1
RTOR Reduction (vph)	0	0	27	0	0	0	1	0
Lane Group Flow (vph)	0	14	460	0	0	58	44	0
Turn Type	Perm	Perm			Perm		Perm	
Protected Phases			2			4		
Permitted Phases	2	2			4		4	
Actuated Green, G (s)		31.5	31.5			5.5	5.5	
Effective Green, g (s)		32.0	32.0			6.0	6.0	
Actuated g/C Ratio		0.45	0.45			0.08	0.08	
Clearance Time (s)		4.5	4.5			4.5	4.5	
Vehicle Extension (s)		3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)		248	787			149	134	
v/s Ratio Prot			0.26					
v/s Ratio Perm		0.03				0.03	0.03	
v/c Ratio		0.06	0.58			0.39	0.33	
Uniform Delay, d1		11.0	14.6			30.8	30.7	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		0.4	3.2			1.7	1.4	
Delay (s)		11.5	17.8			32.5	32.1	
Level of Service		B	B			C	C	
Approach Delay (s)			17.6			32.3		
Approach LOS			B			C		

Intersection Summary

Appendix F

Level of Service Chart

Level of Service Chart
By Roadway Type and Cross-Section
(based on ALDOT approved capacities)

Functional Classification	*Number of Lanes*	*Maximum Daily Flow Rate Related to Level of Service*					
		A	*B*	*C*	*D*	*E*	*F*
Freeway	4	23,800	34,000	42,160	51,000	68,000	>68,000
	6	35,700	51,000	63,240	76,500	102,000	>102,000
	8	47,600	68,000	84,320	102,000	136,000	>136,000
	10	59,500	85,000	105,400	127,500	170,000	>170,000
Expressway	4	17,500	25,000	31,000	37,500	50,000	>50,000
	6	26,250	37,500	46,500	56,250	75,000	>75,000
	8	35,000	50,000	62,000	75,000	100,000	>100,000
Arterial (Divided)	2	7,700	11,000	13,640	16,500	22,000	>22,000
	4	11,865	16,950	21,018	25,425	33,900	>33,900
	6	17,500	25,000	31,000	37,500	50,000	>50,000
	8	25,760	36,800	45,632	55,200	73,600	>73,600
Arterial (Undivided)	2	6,230	8,900	11,036	13,350	17,800	>17,800
	4	10,850	15,500	19,220	23,250	31,000	>31,000
	6	16,030	22,900	28,396	34,350	45,800	>45,800
	8	22,085	31,550	39,122	47,325	63,100	>63,100
Collector (Divided)	2	7,280	10,400	12,896	15,600	20,800	>20,800
	4	9,975	14,250	17,670	21,375	28,500	>28,500
	6	14,700	21,000	26,040	31,500	42,000	>42,000
Collector (Undivided)	2	5,810	8,300	10,292	12,450	16,600	>16,600
	4	9,170	13,100	16,244	19,650	26,200	>26,200
	6	13,545	19,350	23,994	29,025	38,700	>38,700

Appendix G

Future Capacity Analysis Worksheets

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*5/31/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at North Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *North Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*264*	*8*	*7*	*395*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*293*	*8*	*7*	*438*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*12*		*7*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*13*	*0*	*7*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*7*		*20*				
C (m) (veh/h)		*1254*		*550*				
v/c		*0.01*		*0.04*				
95% queue length		*0.02*		*0.11*				
Control Delay (s/veh)		*7.9*		*11.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at North Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *North Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*373*	*25*	*20*	*318*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*414*	*27*	*22*	*353*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*30*		*17*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*33*	*0*	*18*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*22*		*51*				
C (m) (veh/h)		*1114*		*502*				
v/c		*0.02*		*0.10*				
95% queue length		*0.06*		*0.34*				
Control Delay (s/veh)		*8.3*		*13.0*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.0*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at Center Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Center Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*263*	*2*	*10*	*397*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*292*	*2*	*11*	*441*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*21*		*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*23*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*11*		*33*				
C (m) (veh/h)		*1262*		*537*				
v/c		*0.01*		*0.06*				
95% queue length		*0.03*		*0.20*				
Control Delay (s/veh)		*7.9*		*12.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*12.1*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at Center Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Center Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*377*	*61*	*30*	*318*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*418*	*67*	*33*	*353*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*52*		*22*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*57*	*0*	*24*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*33*		*81*				
C (m) (veh/h)		*1073*		*474*				
v/c		*0.03*		*0.17*				
95% queue length		*0.10*		*0.61*				
Control Delay (s/veh)		*8.5*		*14.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at South Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *South Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*274*	*20*	*7*	*412*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*304*	*22*	*7*	*457*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*21*		*9*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*23*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*	*L*		*R*			
v (veh/h)		*7*	*23*		*10*			
C (m) (veh/h)		*1228*	*358*		*723*			
v/c		*0.01*	*0.06*		*0.01*			
95% queue length		*0.02*	*0.20*		*0.04*			
Control Delay (s/veh)		*7.9*	*15.7*		*10.0*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*14.0*					
Approach LOS	--	--	*B*					

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Generated: 5/31/2013 4:02 PM

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at South Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *South Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*416*	*61*	*20*	*350*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*462*	*67*	*22*	*388*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*52*		*22*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*57*	*0*	*24*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*	*L*		*R*			
v (veh/h)		*22*	*57*		*24*			
C (m) (veh/h)		*1033*	*290*		*572*			
v/c		*0.02*	*0.20*		*0.04*			
95% queue length		*0.07*	*0.72*		*0.13*			
Control Delay (s/veh)		*8.6*	*20.4*		*11.6*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*17.8*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Lane Park at Henry Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Henry Bldg Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*293*	*6*	*6*	*431*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*325*	*6*	*6*	*478*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*3*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*3*	*0*	*2*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*6*		*5*				
C (m) (veh/h)		*1223*		*533*				
v/c		*0.00*		*0.01*				
95% queue length		*0.01*		*0.03*				
Control Delay (s/veh)		*8.0*		*11.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*05/31/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Lane Park at Henry Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Henry Bldg Access* | North/South Street: *Lane Park Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*472*	*9*	*8*	*397*	
Peak-Hour Factor, PHF	*1.00*	*0.90*	*0.90*	*0.90*	*0.90*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*524*	*10*	*8*	*441*	*0*
Percent Heavy Vehicles	*0*	--	--	*3*	--	--
Median Type	*Two Way Left Turn Lane*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*9*		*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*8*		*20*				
C (m) (veh/h)		*1029*		*464*				
v/c		*0.01*		*0.04*				
95% queue length		*0.02*		*0.13*				
Control Delay (s/veh)		*8.5*		*13.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.1*					
Approach LOS	--	--	*B*					

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Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt		1.00	1.00	0.85	1.00	0.98			1.00	0.90		
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1752	1845	1568	1752	1799			1752	1652		
Flt Permitted		0.21	1.00	1.00	0.68	1.00			0.65	1.00		
Satd. Flow (perm)		388	1845	1568	1254	1799			1195	1652		
Volume (vph)	21	112	108	175	17	230	39	6	114	80	158	26
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	124	120	194	19	256	43	7	127	89	176	29
RTOR Reduction (vph)	0	0	0	125	0	1	0	0	0	4	0	0
Lane Group Flow (vph)	0	147	120	69	19	305	0	0	127	290	0	0
Turn Type	pm+pt	pm+pt		Perm	Perm				Perm			
Protected Phases	1	1	6			2				3		
Permitted Phases	6	6		6	2				3			
Actuated Green, G (s)		33.0	33.0	33.0	19.5	19.5			21.9	21.9		
Effective Green, g (s)		33.5	33.5	33.5	20.0	20.0			22.4	22.4		
Actuated g/C Ratio		0.36	0.36	0.36	0.21	0.21			0.24	0.24		
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5			4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)		276	656	558	266	382			284	393		
v/s Ratio Prot		c0.05	0.07			c0.17				c0.18		
v/s Ratio Perm		0.14		0.04	0.02				0.11			
v/c Ratio		0.53	0.18	0.12	0.07	0.80			0.45	0.74		
Uniform Delay, d1		22.8	20.9	20.5	29.7	35.2			30.6	33.2		
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2		2.0	0.1	0.1	0.1	11.1			1.1	7.1		
Delay (s)		24.7	21.1	20.6	29.8	46.3			31.7	40.3		
Level of Service		C	C	C	C	D			C	D		
Approach Delay (s)			22.0			45.3				37.7		
Approach LOS			C			D				D		

Intersection Summary			
HCM Average Control Delay	37.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	94.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00	0.85	1.00	0.95		
Flt Protected		0.95	1.00	1.00	0.95	0.97		
Satd. Flow (prot)		1752	1845	1568	1752	1690		
Flt Permitted		0.32	1.00	1.00	0.95	0.97		
Satd. Flow (perm)		592	1845	1568	1752	1690		
Volume (vph)	12	25	107	37	41	249	88	55
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	28	119	41	46	277	98	61
RTOR Reduction (vph)	0	0	0	31	0	5	0	0
Lane Group Flow (vph)	0	41	119	10	46	431	0	0
Turn Type	Perm	Perm		Perm	Perm			
Protected Phases			3			4		
Permitted Phases	3	3		3	4			
Actuated Green, G (s)		21.9	21.9	21.9	25.8	25.8		
Effective Green, g (s)		22.4	22.4	22.4	26.3	26.3		
Actuated g/C Ratio		0.24	0.24	0.24	0.28	0.28		
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		141	439	373	489	472		
v/s Ratio Prot			0.06			c0.25		
v/s Ratio Perm		0.07		0.01	0.03			
v/c Ratio		0.29	0.27	0.03	0.09	0.91		
Uniform Delay, d1		29.4	29.2	27.5	25.1	32.8		
Progression Factor		1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		1.1	0.3	0.0	0.1	22.0		
Delay (s)		30.5	29.6	27.6	25.2	54.8		
Level of Service		C	C	C	C	D		
Approach Delay (s)			29.4			52.0		
Approach LOS			C			D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Frt		1.00	1.00	0.85	1.00	0.93			1.00	0.89		
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.95	1.00		
Satd. Flow (prot)		1752	1845	1568	1752	1713			1752	1634		
Flt Permitted		0.42	1.00	1.00	0.60	1.00			0.59	1.00		
Satd. Flow (perm)		777	1845	1568	1100	1713			1080	1634		
Volume (vph)	38	208	238	85	53	63	42	15	68	85	203	64
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	231	264	94	59	70	47	17	76	94	226	71
RTOR Reduction (vph)	0	0	0	67	0	6	0	0	0	8	0	0
Lane Group Flow (vph)	0	273	264	27	59	128	0	0	76	383	0	0
Turn Type	pm+pt	pm+pt		Perm	Perm				Perm			
Protected Phases	1	1	6			2				3		
Permitted Phases	6	6		6	2				3			
Actuated Green, G (s)		24.7	24.7	24.7	11.6	11.6			27.8	27.8		
Effective Green, g (s)		25.2	25.2	25.2	12.1	12.1			28.3	28.3		
Actuated g/C Ratio		0.29	0.29	0.29	0.14	0.14			0.33	0.33		
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5			4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)		328	536	456	154	239			353	533		
v/s Ratio Prot		c0.09	0.14			0.07				0.23		
v/s Ratio Perm		c0.15		0.02	0.05				0.07			
v/c Ratio		0.83	0.49	0.06	0.38	0.54			0.22	0.72		
Uniform Delay, d1		27.3	25.5	22.2	33.9	34.7			21.2	25.7		
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2		16.3	0.7	0.1	1.6	2.3			0.3	4.6		
Delay (s)		43.6	26.2	22.3	35.5	37.0			21.5	30.3		
Level of Service		D	C	C	D	D			C	C		
Approach Delay (s)			33.1			36.5				28.9		
Approach LOS			C			D				C		

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00	0.85	1.00	0.93		
Flt Protected		0.95	1.00	1.00	0.95	0.97		
Satd. Flow (prot)		1752	1845	1568	1752	1673		
Flt Permitted		0.30	1.00	1.00	0.95	0.97		
Satd. Flow (perm)		557	1845	1568	1752	1673		
Volume (vph)	42	94	163	27	69	182	98	53
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	104	181	30	77	202	109	59
RTOR Reduction (vph)	0	0	0	20	0	7	0	0
Lane Group Flow (vph)	0	151	181	10	77	363	0	0
Turn Type	Perm	Perm		Perm	Perm			
Protected Phases			3			4		
Permitted Phases	3	3		3	4			
Actuated Green, G (s)		27.8	27.8	27.8	20.7	20.7		
Effective Green, g (s)		28.3	28.3	28.3	21.2	21.2		
Actuated g/C Ratio		0.33	0.33	0.33	0.24	0.24		
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		182	602	512	428	409		
v/s Ratio Prot			0.10			c0.22		
v/s Ratio Perm		c0.27		0.01	0.04			
v/c Ratio		0.83	0.30	0.02	0.18	0.89		
Uniform Delay, d1		27.0	21.8	19.8	25.9	31.6		
Progression Factor		1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		25.7	0.3	0.0	0.2	20.1		
Delay (s)		52.7	22.1	19.8	26.1	51.8		
Level of Service		D	C	B	C	D		
Approach Delay (s)			34.7			47.3		
Approach LOS			C			D		

Intersection Summary

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Culver at Henry Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Culver Road* | North/South Street: *Henry Bldg. Access*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*199*			*289*	*2*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*221*	*0*	*0*	*321*	*2*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*2*		*2*
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*2*	*0*	*2*
Percent Heavy Vehicles	*3*	*0*	*3*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration							*LR*	
v (veh/h)							*4*	
C (m) (veh/h)							*588*	
v/c							*0.01*	
95% queue length							*0.02*	
Control Delay (s/veh)							*11.2*	
LOS							*B*	
Approach Delay (s/veh)	--	--					*11.2*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Culver at Henry Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Culver Road* | North/South Street: *Henry Bldg. Access*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*466*			*169*	*5*
Peak-Hour Factor, PHF	*1.00*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*517*	*0*	*0*	*187*	*5*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*4*		*4*
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*4*	*0*	*4*
Percent Heavy Vehicles	*3*	*0*	*3*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration							*LR*	
v (veh/h)							*8*	
C (m) (veh/h)							*544*	
v/c							*0.01*	
95% queue length							*0.04*	
Control Delay (s/veh)							*11.7*	
LOS							*B*	
Approach Delay (s/veh)	--	--					*11.7*	
Approach LOS	--	--					*B*	

HCS+™ Version 5.6

Generated: 6/1/2013 9:37 AM

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Culver at Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Culver Road* | North/South Street: *Access*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*29*	*172*			*261*	*13*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*32*	*191*	*0*	*0*	*290*	*14*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*14*		*30*
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*15*	*0*	*33*
Percent Heavy Vehicles	*3*	*0*	*3*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*32*					*15*		*33*
C (m) (veh/h)	*1251*					*480*		*740*
v/c	*0.03*					*0.03*		*0.04*
95% queue length	*0.08*					*0.10*		*0.14*
Control Delay (s/veh)	*8.0*					*12.7*		*10.1*
LOS	*A*					*B*		*B*
Approach Delay (s/veh)	--	--				*10.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Culver at Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Culver Road* | North/South Street: *Access*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*86*	*384*			*100*	*40*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*95*	*426*	*0*	*0*	*111*	*44*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*35*		*74*
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*38*	*0*	*82*
Percent Heavy Vehicles	*3*	*0*	*3*	*3*	*0*	*3*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*95*					*38*		*82*
C (m) (veh/h)	*1419*					*353*		*913*
v/c	*0.07*					*0.11*		*0.09*
95% queue length	*0.21*					*0.36*		*0.30*
Control Delay (s/veh)	*7.7*					*16.4*		*9.3*
LOS	*A*					*C*		*A*
Approach Delay (s/veh)	--	--				*11.6*		
Approach LOS	--	--				*B*		

HCS+™ Version 5.6 Generated: 6/1/2013 9:39 AM

Movement	EBL2	EBL	EBR	EBR2	NEL2	NEL	NET	NER	SWL	SWT	SWR	SWR2
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	1.00		1.00	1.00		
Frt		1.00	0.85			1.00	0.99		1.00	0.94		
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1752	1568			1752	1826		1752	1737		
Flt Permitted		0.95	1.00			0.25	1.00		0.61	1.00		
Satd. Flow (perm)		1752	1568			467	1826		1116	1737		
Volume (vph)	5	68	62	51	22	5	208	15	78	404	252	5
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	76	69	57	24	6	231	17	87	449	280	6
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	82	126	0	0	30	248	0	87	735	0	0
Turn Type	Perm		Perm		pm+pt	pm+pt			Perm			
Protected Phases		4			1	1	6			2		
Permitted Phases	4		4		6	6			2			
Actuated Green, G (s)		10.5	10.5			54.4	54.4		47.0	47.0		
Effective Green, g (s)		10.5	10.5			55.4	55.4		48.0	48.0		
Actuated g/C Ratio		0.14	0.14			0.75	0.75		0.65	0.65		
Clearance Time (s)		4.0	4.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		249	223			409	1369		725	1128		
v/s Ratio Prot						0.00	c0.14			c0.42		
v/s Ratio Perm		0.05	c0.08			0.05			0.08			
v/c Ratio		0.33	0.57			0.07	0.18		0.12	0.65		
Uniform Delay, d1		28.5	29.6			4.6	2.7		4.9	7.9		
Progression Factor		1.00	1.00			1.00	1.00		1.00	1.00		
Incremental Delay, d2		0.8	3.3			0.1	0.1		0.1	1.4		
Delay (s)		29.3	32.8			4.7	2.7		5.0	9.2		
Level of Service		C	C			A	A		A	A		
Approach Delay (s)		31.4					3.0			8.8		
Approach LOS		C					A			A		

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBR	EBR2	NEL2	NEL	NET	NER	SWL	SWT	SWR	SWR2
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	1.00		1.00	1.00		
Frt		1.00	0.85			1.00	0.99		1.00	0.97		
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1752	1568			1752	1835		1752	1784		
Flt Permitted		0.95	1.00			0.33	1.00		0.48	1.00		
Satd. Flow (perm)		1752	1568			613	1835		878	1784		
Volume (vph)	15	280	64	60	75	15	444	15	43	291	66	15
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	311	71	67	83	17	493	17	48	323	73	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	328	138	0	0	100	510	0	48	413	0	0
Turn Type	Perm		Perm		pm+pt	pm+pt			Perm			
Protected Phases		4			1	1	6			2		
Permitted Phases	4		4		6	6			2			
Actuated Green, G (s)		14.9	14.9			30.1	30.1		21.2	21.2		
Effective Green, g (s)		14.9	14.9			31.1	31.1		22.2	22.2		
Actuated g/C Ratio		0.28	0.28			0.58	0.58		0.41	0.41		
Clearance Time (s)		4.0	4.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		483	433			456	1057		361	733		
v/s Ratio Prot						0.02	c0.28			c0.23		
v/s Ratio Perm		0.19	0.09			0.11			0.05			
v/c Ratio		0.68	0.32			0.22	0.48		0.13	0.56		
Uniform Delay, d1		17.4	15.5			6.1	6.7		9.9	12.2		
Progression Factor		1.00	1.00			1.00	1.00		1.00	1.00		
Incremental Delay, d2		3.8	0.4			0.2	0.3		0.2	1.0		
Delay (s)		21.2	15.9			6.3	7.1		10.1	13.2		
Level of Service		C	B			A	A		B	B		
Approach Delay (s)		19.6					6.9			12.9		
Approach LOS		B					A			B		

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Montevallo at Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Access* | North/South Street: *Montevallo Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*8*	*268*			*720*	*25*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*8*	*297*	*0*	*0*	*800*	*27*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*27*		*19*			
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*30*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*3*	*0*	*3*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*8*					*30*		*21*
C (m) (veh/h)	*800*					*223*		*376*
v/c	*0.01*					*0.13*		*0.06*
95% queue length	*0.03*					*0.46*		*0.18*
Control Delay (s/veh)	*9.5*					*23.6*		*15.1*
LOS	*A*					*C*		*C*
Approach Delay (s/veh)	--	--				*20.1*		
Approach LOS	--	--				*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Montevallo at Access*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*2015 Buildout*

Project Description *Lane Parke*

East/West Street: *Access* | North/South Street: *Montevallo Road*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*25*	*699*			*368*	*76*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*27*	*776*	*0*	*0*	*408*	*84*
Percent Heavy Vehicles	*3*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*65*		*48*			
Peak-Hour Factor, PHF	*0.90*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*72*	*0*	*53*	*0*	*0*	*0*
Percent Heavy Vehicles	*3*	*0*	*3*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (veh/h)	*27*					*72*		*53*
C (m) (veh/h)	*1066*					*177*		*607*
v/c	*0.03*					*0.41*		*0.09*
95% queue length	*0.08*					*1.81*		*0.29*
Control Delay (s/veh)	*8.5*					*38.6*		*11.5*
LOS	*A*					*E*		*B*
Approach Delay (s/veh)	--	--				*27.1*		
Approach LOS	--	--				*D*		

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2
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	1.00		1.00	1.00		
Frt	1.00	0.97				1.00	1.00		1.00	0.96		
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1811				1770	1860		1770	1795		
Flt Permitted	0.26	1.00				0.53	1.00		0.16	1.00		
Satd. Flow (perm)	481	1811				978	1860		300	1795		
Volume (vph)	111	175	3	37	1	95	355	4	40	217	69	5
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.83	0.83	0.83	0.83	0.76	0.76	0.76	0.84
Adj. Flow (vph)	122	192	3	41	1	114	428	5	53	286	91	6
RTOR Reduction (vph)	0	11	0	0	0	0	1	0	0	0	0	0
Lane Group Flow (vph)	122	225	0	0	0	115	432	0	53	377	0	0
Turn Type	Perm				Perm	Perm			Perm			Perm
Protected Phases		3					3			2		
Permitted Phases	3				3	3			2			2
Actuated Green, G (s)	21.8	21.8				21.8	21.8		29.5	29.5		
Effective Green, g (s)	22.3	22.3				22.3	22.3		30.0	30.0		
Actuated g/C Ratio	0.32	0.32				0.32	0.32		0.43	0.43		
Clearance Time (s)	4.5	4.5				4.5	4.5		4.5	4.5		
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	154	579				313	595		129	773		
v/s Ratio Prot		0.12					0.23			0.21		
v/s Ratio Perm	c0.25					0.12			0.18			
v/c Ratio	0.79	0.39				0.37	0.73		0.41	0.49		
Uniform Delay, d1	21.6	18.4				18.3	21.0		13.7	14.3		
Progression Factor	1.00	1.00				1.00	1.00		1.00	1.00		
Incremental Delay, d2	23.7	0.4				0.7	4.4		9.4	2.2		
Delay (s)	45.3	18.8				19.0	25.4		23.1	16.5		
Level of Service	D	B				B	C		C	B		
Approach Delay (s)		27.8					24.1			17.3		
Approach LOS		C					C			B		

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	69.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	1.00			1.00	1.00
Frt	1.00	0.95			1.00	0.85
Flt Protected	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1772			1770	1583
Flt Permitted	0.42	1.00			0.95	1.00
Satd. Flow (perm)	784	1772			1770	1583
Volume (vph)	1	369	177	6	37	46
Peak-hour factor, PHF	0.84	0.84	0.84	0.63	0.63	0.63
Adj. Flow (vph)	1	439	211	10	59	73
RTOR Reduction (vph)	0	19	0	0	0	0
Lane Group Flow (vph)	7	631	0	0	69	73
Turn Type	Perm			Perm		Perm
Protected Phases		2			4	
Permitted Phases	2			4		4
Actuated Green, G (s)	29.5	29.5			4.9	4.9
Effective Green, g (s)	30.0	30.0			5.4	5.4
Actuated g/C Ratio	0.43	0.43			0.08	0.08
Clearance Time (s)	4.5	4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	337	763			137	123
v/s Ratio Prot		c0.36				
v/s Ratio Perm	0.01				0.04	c0.05
v/c Ratio	0.02	0.83			0.50	0.59
Uniform Delay, d1	11.4	17.6			30.9	31.1
Progression Factor	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.1	10.0			2.9	7.5
Delay (s)	11.5	27.6			33.8	38.6
Level of Service	B	C			C	D
Approach Delay (s)		27.4			36.2	
Approach LOS		C			D	

Intersection Summary

Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
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	1.00		1.00	1.00			
Frt	1.00	0.99			1.00	1.00		1.00	0.94			
Flt Protected	0.95	1.00			0.95	1.00		0.95	1.00			
Satd. Flow (prot)	1770	1835			1770	1860		1770	1757			
Flt Permitted	0.43	1.00			0.23	1.00		0.25	1.00			
Satd. Flow (perm)	797	1835			421	1860		473	1757			
Volume (vph)	93	361	1	38	75	272	3	41	287	174	2	13
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	104	406	1	43	82	296	3	47	330	200	2	15
RTOR Reduction (vph)	0	5	0	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	104	445	0	0	82	298	0	47	532	0	0	0
Turn Type	Perm				Perm			Perm				Perm
Protected Phases		3				3			2			
Permitted Phases	3				3			2				2
Actuated Green, G (s)	22.5	22.5			22.5	22.5		31.5	31.5			
Effective Green, g (s)	23.0	23.0			23.0	23.0		32.0	32.0			
Actuated g/C Ratio	0.32	0.32			0.32	0.32		0.44	0.44			
Clearance Time (s)	4.5	4.5			4.5	4.5		4.5	4.5			
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	251	578			133	586		207	770			
v/s Ratio Prot		c0.24				0.16			c0.30			
v/s Ratio Perm	0.13				0.19			0.10				
v/c Ratio	0.41	0.77			0.62	0.51		0.23	0.69			
Uniform Delay, d1	19.7	22.6			21.3	20.4		12.8	16.5			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.1	6.3			8.2	0.7		2.5	5.0			
Delay (s)	20.8	28.9			29.5	21.1		15.3	21.6			
Level of Service	C	C			C	C		B	C			
Approach Delay (s)		27.4				22.9			21.1			
Approach LOS		C				C			C			

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	73.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	
Frt	1.00	0.94			1.00	0.85	
Flt Protected	0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1770	1751			1770	1583	
Flt Permitted	0.27	1.00			0.95	1.00	
Satd. Flow (perm)	510	1751			1770	1583	
Volume (vph)	0	289	193	12	40	37	1
Peak-hour factor, PHF	0.87	0.87	0.87	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	332	222	14	48	44	1
RTOR Reduction (vph)	0	26	0	0	0	1	0
Lane Group Flow (vph)	15	528	0	0	62	44	0
Turn Type	Perm			Perm		Perm	
Protected Phases		2			4		
Permitted Phases	2			4		4	
Actuated Green, G (s)	31.5	31.5			5.5	5.5	
Effective Green, g (s)	32.0	32.0			6.0	6.0	
Actuated g/C Ratio	0.44	0.44			0.08	0.08	
Clearance Time (s)	4.5	4.5			4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	224	768			145	130	
v/s Ratio Prot		0.30					
v/s Ratio Perm	0.03				0.04	0.03	
v/c Ratio	0.07	0.69			0.43	0.34	
Uniform Delay, d1	11.9	16.5			31.9	31.6	
Progression Factor	1.00	1.00			1.00	1.00	
Incremental Delay, d2	0.6	5.0			2.0	1.6	
Delay (s)	12.4	21.4			33.9	33.2	
Level of Service	B	C			C	C	
Approach Delay (s)		21.2			33.6		
Approach LOS		C			C		

Intersection Summary

Appendix H

Turn Lane Warrant Graphs

Left Turn Lane Warrant

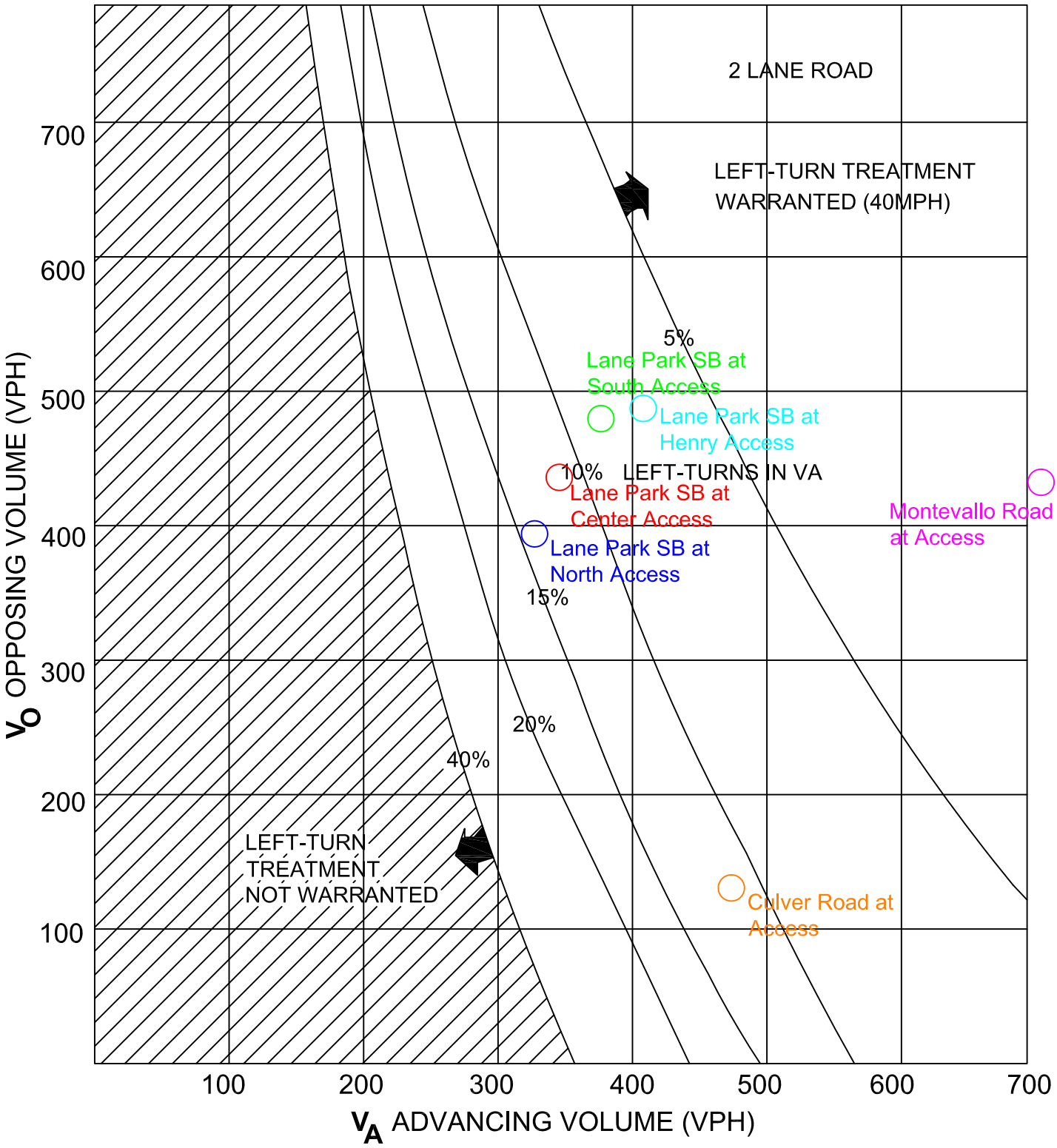
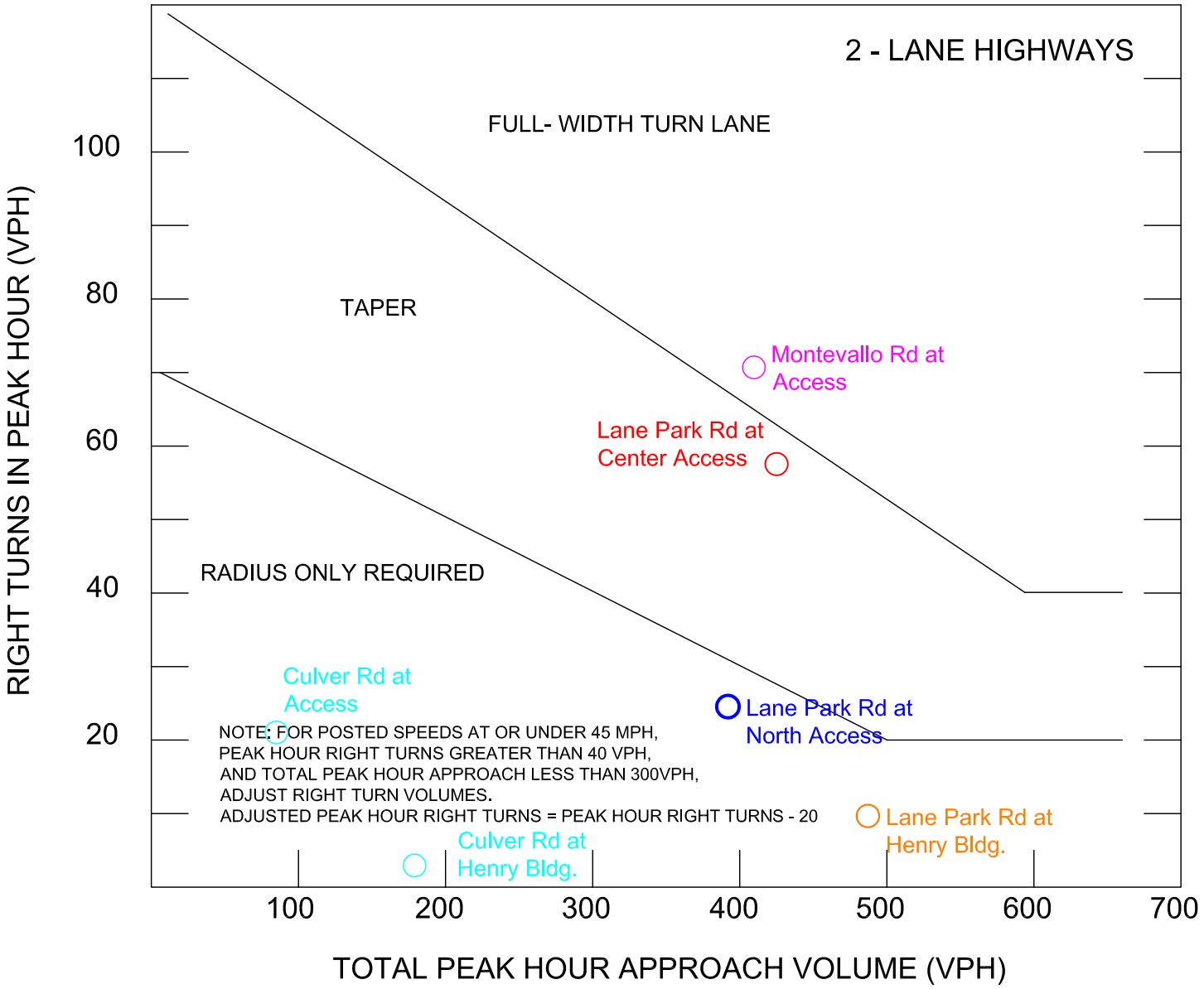


Figure taken from Figure 4-12 from the Intersection Channelization Design Guide, Report 279

RIGHT TURN LANE WARRANT



Appendix I

Internal Intersection Capacity Analysis Worksheets

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Main St at Jemison Ln*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Future 2015*

Project ID *Lane Parke*

East/West Street: *Jemsion Lane* | North/South Street: *Main Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*15*	*15*	*10*	*20*	*15*	*15*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*15*	*35*	*15*	*25*	*20*	*15*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.90*		*0.90*		*0.90*		*0.90*	
Flow Rate (veh/h)	*43*		*54*		*70*		*65*	
% Heavy Vehicles	*3*		*3*		*3*		*3*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*		*0.4*		*0.2*		*0.4*	
Prop. Right-Turns	*0.3*		*0.3*		*0.2*		*0.2*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*		*-0.0*		*-0.0*		*-0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.04*		*0.05*		*0.06*		*0.06*	
hd, final value (s)	*4.23*		*4.20*		*4.14*		*4.17*	
x, final value	*0.05*		*0.06*		*0.08*		*0.08*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.2*		*2.2*		*2.1*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*293*		*304*		*320*		*315*	
Delay (s/veh)	*7.45*		*7.48*		*7.51*		*7.51*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*7.45*		*7.48*		*7.51*		*7.51*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*7.49*							
Intersection LOS	*A*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Main St at Jemison Ln*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Future 2015*

Project ID *Lane Parke*

East/West Street: *Jemsion Lane* | North/South Street: *Main Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*35*	*35*	*15*	*55*	*30*	*30*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*30*	*80*	*30*	*65*	*55*	*30*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.90*		*0.90*		*0.90*		*0.90*	
Flow Rate (veh/h)	*92*		*127*		*154*		*166*	
% Heavy Vehicles	*3*		*3*		*3*		*3*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.4*		*0.5*		*0.2*		*0.4*	
Prop. Right-Turns	*0.2*		*0.3*		*0.2*		*0.2*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*		*-0.0*		*-0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.08*		*0.11*		*0.14*		*0.15*	
hd, final value (s)	*4.88*		*4.79*		*4.63*		*4.67*	
x, final value	*0.12*		*0.17*		*0.20*		*0.22*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.9*		*2.8*		*2.6*		*2.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*342*		*377*		*404*		*416*	
Delay (s/veh)	*8.57*		*8.77*		*8.77*		*8.94*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.57*		*8.77*		*8.77*		*8.94*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.79*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Main St at Park Lane Ct S*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Future 2015*

Project ID *Lane Parke*

East/West Street: *Park Lane Ct S* | North/South Street: *Main Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*10*	*15*	*15*	*25*	*15*	*10*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*15*	*20*	*30*	*10*	*15*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.90*		*0.90*		*0.90*		*0.90*	
Flow Rate (veh/h)	*43*		*54*		*71*		*38*	
% Heavy Vehicles	*3*		*3*		*3*		*3*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*		*0.5*		*0.2*		*0.3*	
Prop. Right-Turns	*0.4*		*0.2*		*0.5*		*0.3*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*		*0.0*		*-0.2*		*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.04*		*0.05*		*0.06*		*0.03*	
hd, final value (s)	*4.07*		*4.20*		*3.97*		*4.12*	
x, final value	*0.05*		*0.06*		*0.08*		*0.04*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.1*		*2.2*		*2.0*		*2.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*293*		*304*		*321*		*288*	
Delay (s/veh)	*7.28*		*7.49*		*7.31*		*7.30*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*7.28*		*7.49*		*7.31*		*7.30*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*7.35*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*RLC*
Agency/Co.	*Skipper Consulting*
Date Performed	*06/01/13*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Main St at Park Lane Ct S*
Jurisdiction	*City of Mountain Brook*
Analysis Year	*Future 2015*

Project ID *Lane Parke*

East/West Street: *Park Lane Ct S* North/South Street: *Main Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*20*	*35*	*35*	*70*	*35*	*15*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*35*	*45*	*65*	*15*	*45*	*15*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*LTR*		*LTR*		*LTR*	
PHF	*0.90*		*0.90*		*0.90*		*0.90*	
Flow Rate (veh/h)	*98*		*131*		*160*		*82*	
% Heavy Vehicles	*3*		*3*		*3*		*3*	
No. Lanes	*1*		*1*		*1*		*1*	
Geometry Group	*1*		*1*		*1*		*1*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*		*0.6*		*0.2*		*0.2*	
Prop. Right-Turns	*0.4*		*0.1*		*0.4*		*0.2*	
Prop. Heavy Vehicle	*0.0*		*0.0*		*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*		*0.1*		*-0.2*		*-0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*		*3.20*		*3.20*	
x, initial	*0.09*		*0.12*		*0.14*		*0.07*	
hd, final value (s)	*4.50*		*4.68*		*4.38*		*4.62*	
x, final value	*0.12*		*0.17*		*0.19*		*0.11*	
Move-up time, m (s)	*2.0*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*2.5*		*2.7*		*2.4*		*2.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*348*		*381*		*410*		*332*	
Delay (s/veh)	*8.12*		*8.64*		*8.44*		*8.16*	
LOS	*A*		*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.12*		*8.64*		*8.44*		*8.16*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.38*							
Intersection LOS	*A*							

HCS+™ Version 5.6 Generated: 6/1/2013 1:51 PM