LAI ENGINEERING

Traffic Impact Study
Line Creek Retail
Peachtree City, GA
LAI Project # 8139

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Prepared for:

Capital City Development
August 18, 2008

Integrated engineering solutions from a single source

Line Creek Retail
Traffic Impact Study
Peachtree City, Georgia

For:

Capital City Development

Prepared by:

Project # 8139

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Executive Summary

LAI Engineering (LAI) has been retained by Capital City Development to prepare a traffic impact study for Line Creek Retail. The developer proposes to construct a shopping center on the south side of State Route 54 between McDuff Parkway and Planterra Way in Peachtree City, Georgia (see **Figure 1**). The proposed site will consist of 188,565 square feet of retail development of which 175,000 square feet will be developed by Capital City and 13,565 square feet developed by others.

Both portions of the developments will utilize an existing roadway currently known as Line Creek Drive on SR 54 as their main access point into the site as shown in **Figure 2**. Access to the proposed development via Plantera Way or McDuff Parkway has been restricted by Peachtree City due to, right of way restrictions. The developments main access point at Line Creek Drive is proposed to be a fully accessible driveway aligned with an existing driveway located on the north side of SR 54. Driveway 2, a previously approved driveway for The Shoppes @ Village Plazza, is a right-in/right-out drive located approximately 450 feet west of Line Creek Drive. Left turns will access the site by means of an existing Type B median opening on SR 54. The proposed site is scheduled to be completely developed by 2009.

The purpose of this report is to document the potential impact that the proposed Line Creek Retail development will have on traffic operations within the area and to recommended improvements to intersections in the development area as they are needed. One of the recommended improvements in the report is to place a traffic signal at the intersection of SR 54 and Line Creek Drive.

Per the Manual on Uniform Traffic Control Devices (MUTCD) 2003 Edition, this report shows that projected traffic volumes at SR 54 and Line Creek Drive warrant the placement of a traffic signal. Not only does this report show that this intersection warrants a signal, it also shows the negative effect on adjacent signalized intersections without the addition of the proposed signal at SR 54 and Line Creek Drive.

LAI conducted capacity analyses to establish an existing level-of-service (LOS) for the intersections of McDuff Parkway at SR 54 and Planterra Way at SR 54. LAI then conducted capacity analyses under projected traffic conditions to show the future LOS at the existing and proposed intersections within the study area under a no-build and build scenario. The projected conditions comprised of 2008 existing background volumes projected one year at a growth rate of 3% to the build out year 2009 without and with the estimated site generated trips. The 3% growth rate was agreed upon by GDOT and was developed based on the Average Daily Traffic growth in the study area over the past five years. Traffic volumes for The Shoppes @ The Village Plazza, a previously approved but not yet completed development that is located just west of the Line Creek Retail site, were included in the projected background traffic also.

LAI utilized Synchro 7.0 to conduct the capacity analyses under the current and projected conditions during the PM peak period. The typical operating hours for the type of retail shopping expected to be located within the Line Creek Retail development will begin at 10:00 am. This will miss the AM Peak period therefore only the PM peak hour was required to be analyzed for this study. The results of the analyses indicate that the LOS at each intersection within the study area operates at LOS F or better under existing conditions. The projected analysis show that the intersections within the study area will operate at a LOS F or better for future conditions with the recommended improvements as summarized in **Table 1**. The standard LOS for these intersections is LOS D or better but is only required by Peachtree City to be maintained at the existing LOS conditions for this project.

LAI conducted a signal warrants analysis for the intersection of State Route 54 and Driveway 1 (Line Creek Drive). Based upon projected background traffic and future projected trips generated by the proposed development the study intersection met Warrants 1, 1A, 1B & 1A&B, 2, 3, 3A and 3B under future build-out traffic conditions. Projected right turns were also accounted for in the warrant analysis and removed from the volumes used in the evaluation of the signal warrants.

LAI recommends:

- A traffic signal be installed at the intersections of State Route 54 and Driveway 1(Line Creek Drive) to improve the flow of traffic along the corridor, to ease congestion and improve the LOS and functional operations of the adjacent intersections.
- A separate right turn lane and a shared thru/left lane be installed at the NB approach to SR 54 for Line Creek Drive.
- An exclusive right turn lane be added to the development directly across from Line Creek Dr in keeping with GDOT driveway access standards.

Table 1
Intersection Level of Service and Delay (in sec)
Existing and Proposed traffic for PM Peak hour conditions using 150 sec. Cycle Length

Road Name / Intersection	McDuff Parkway			Line Creek Drive				Planterra Way		
	Traffic Control	LOS Delay	V/C Ratio	Traffic Control	LOS Delay		V/C Ratio	Traffic Control	LOS Delay	V/C Ratio
2007 Existing	Signalized	B (12.3)	0.88	Un-Signalized	NBL	C (20.1)	0.64	Signalized	F (92.0)	1.53
					SBL	C (21.3)				
					EBL	C (21.2)				
2009 No-Build	Signalized	C (23.8)	1.31	Un-Signalized	NBL	C (24.6)	0.68	Signalized	F (117.6)	1.52
					SBL	D (29.6)				
					EBL	D (26.6)				
					WBL	B (12.5)				
2009 Build w/ Un-signalized full access driveway @ Line Creek Dr	Signalized	C (26.7)	1.40	Un-Signalized	NBL	F (899.9)	9.42	Signalized	F (144.4)	1.57
					SBL	(*)				
					EBL	C (23.9)				
					WBL	C (18.8)				
2009 Build w/ Right In / Right Out driveway @ Line Creek Dr	Signalized	D (34.1)	1.40	Un-Signalized	NBR	F (50.8)	0.90	Signalized	F (202.4)	3.19
					SBL	F (57.5)				
					EBL	D (32.2)				
2009 Build w/ Signalized Intersection @ Line Creek Dr	Signalized	C (26.4)	1.40	Signalized	A (5.2)		0.73	Signalized	F (117.9)	2.07

Note – All 2009 volumes include The Shoppes @ Village Plazza projected traffic
* = Delay is greater than 999.99 seconds and exceeds analysis parameters

I. Introduction

LAI Engineering (LAI) has been retained by Capital City Development to prepare a traffic impact study for Line Creek Retail. The developer proposes to construct a shopping center on the south side of State Route 54 between McDuff Parkway and Planterra Way in Peachtree City, Georgia (see **Figure 1**). The proposed site will consist of 188,565 square feet of retail development of which 175,000 square feet will be developed by Capital City and 13,565 square feet developed by others.

Both portions of the developments will utilize an existing roadway currently known as Line Creek Drive, on SR 54 as their main access point into the site as shown in **Figure 2**. The access point will be a fully accessible driveway aligned with an existing driveway located on the north side of SR 54. Left turns will access the site by means of an existing Type B median opening. The proposed site is scheduled to be completely developed by 2009.

The purpose of this report is to document the potential impact the proposed development will have on traffic operations within the study and recommended improvements to intersections in the development area. The study area was established and agreed to by GDOT's District Traffic Operations office.

LAI conducted capacity analyses to establish an existing level-of-service (LOS) for the intersections of McDuff Parkway at SR 54 and Planterra Way at SR 54. LAI then conducted capacity analyses under projected traffic conditions to show the future LOS at the existing and proposed intersections within the study area under a no-build and build scenario. The projected conditions comprised of 2008 existing background volumes projected one year at a growth rate of 3% to the build out year 2009 without and with the estimated site generated trips. The 3% growth rate was agreed upon by GDOT and was developed based on the Average Daily Traffic growth in the study area over the past five years. Background traffic volumes for The Shoppes @ The Village Plazza, a previously approved but not yet completed development that is located just west of the Line Creek Retail site, were included in the projected background traffic also.

LAI conducted a signal warrants analysis for the intersection of State Route 54 and Driveway 1. Based upon projected background traffic and future projected trips generated by the proposed development, the study intersection met Warrants 1, 1A, 1B & 1A&B, 2, 3, 3A and 3B under future build-out traffic conditions.

Recommendations were made for the required improvements needed to maintain an acceptable Level of Service (LOS) in accordance with the traffic impact requirements of Peachtree City, and Georgia Department of Transportation (GDOT).

The traffic impact study includes:

- A preliminary site investigation to gather existing data,
- Site traffic generation for the proposed development,
- Site traffic assignment for driveway access,
- Signal warrant analysis for the intersection of State Route 54 and Driveway 1,
- Capacity analysis to determine existing and proposed Level of Service (LOS),
- Conclusion and Recommendations

II. Area Conditions

The study area encompasses State Route 54 from McDuff Parkway west of the site to Planterra Way east of the site as designated by the Georgia Department of Transportation.

Currently, State Route 54 is a 4-lane divided roadway, functionally classified by GDOT as an urban principal arterial traveling east and west with a posted speed limit of 45 miles per hour within the study area. The land uses along this route are primarily commercial. The Average Daily Traffic (ADT) along SR 54 is 32,048 vehicles per day (vpd). ADT Volumes based on 2008 traffic counts taken by LAI Engineering.)

Planterra Way, south of SR 54 is a 2-lane divided roadway functionally classified by GDOT as an urban collector street. The posted speed limit on Planterra Way is 35 miles per hour within the study area. The land uses along Planterra Way is mostly residential and light commercial use. The north side of SR 54 and Planterra Way is a Wal-Mart driveway. The intersection of Planterra Way at SR 54 is signalized.

McDuff Parkway intersects into SR 54 from the north is a 2-lane divided roadway functionally classified by GDOT in sections as an urban local street and in other sections as a small urban local collector street. MucDuff Parkway has a posted speed limit of 35 miles per hour within the study area. The land uses along this route are mainly residential. A future retail development (The Shoppes @ Village Plazza) will use the south side of SR 54 / McDuff Parkway intersection as its main driveway and was included in future projection models. The intersection of McDuff Parkway at SR 54 is signalized.

Line Creek Drive intersects with SR 54 from the south and is currently an un-signalized intersection. Line Creek Drive is dead-end street that leads to an abandoned businesses park. Line Creek Drive's intersection will be utilized as the proposed site's main driveway as shown on the Site Plan in **Figure 3**.

Figure1. Location Map

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	STP-164-1(30)	192	406

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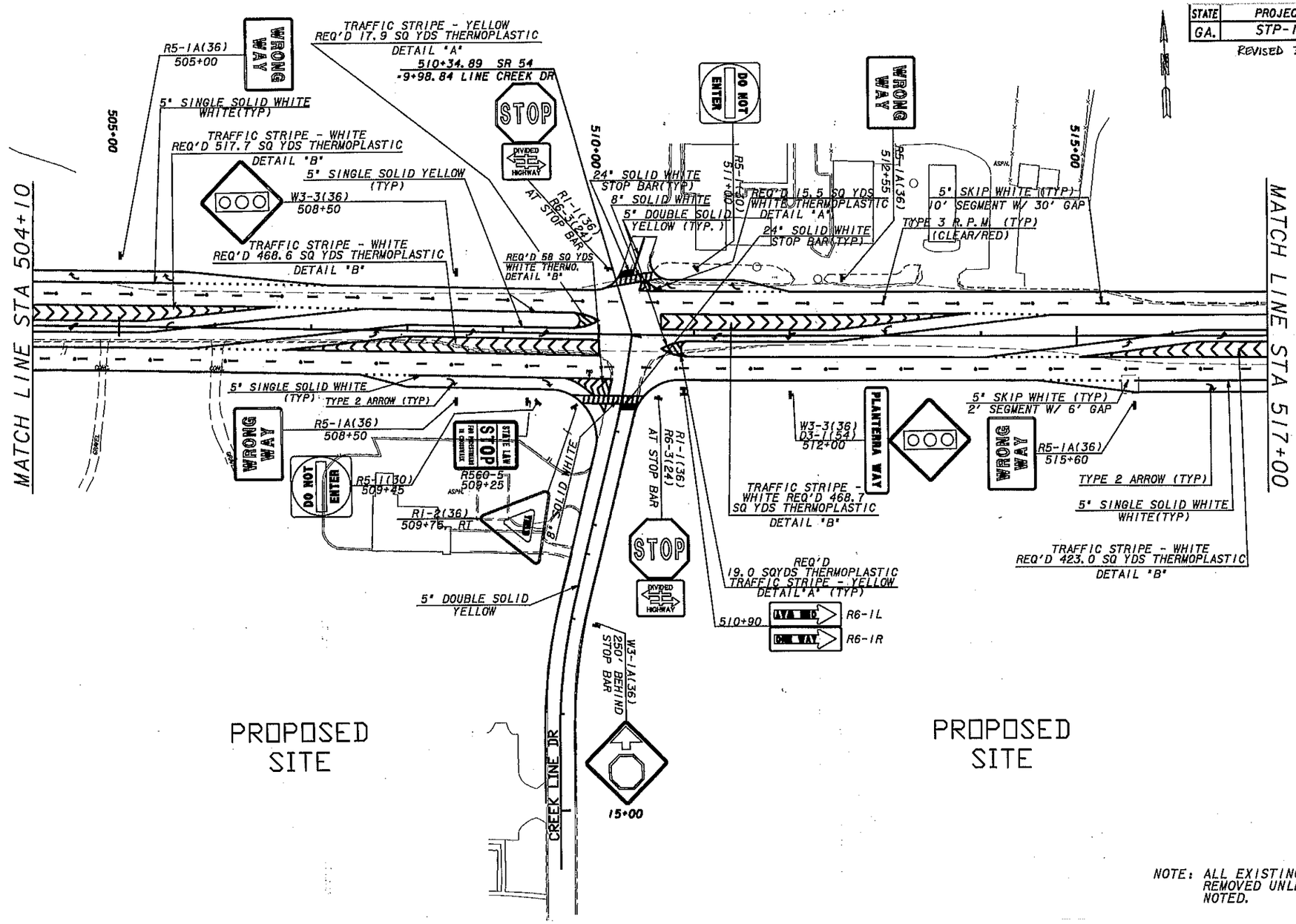

NOTE: ALL EXISTING SIGNS WILL BE REMOVED UNLESS OTHERWISE NOTED.

FIGURE 2 - EXISTING INTERSECTION PLAN

SOURCE: GEORGIA DEPARTMENT OF TRANSPORATION

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LINE CREEK RETAIL
PREPARED FOR
Capital City Development

Peachtree City, GA

FAYETTE COUNTY

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FIGURE 2

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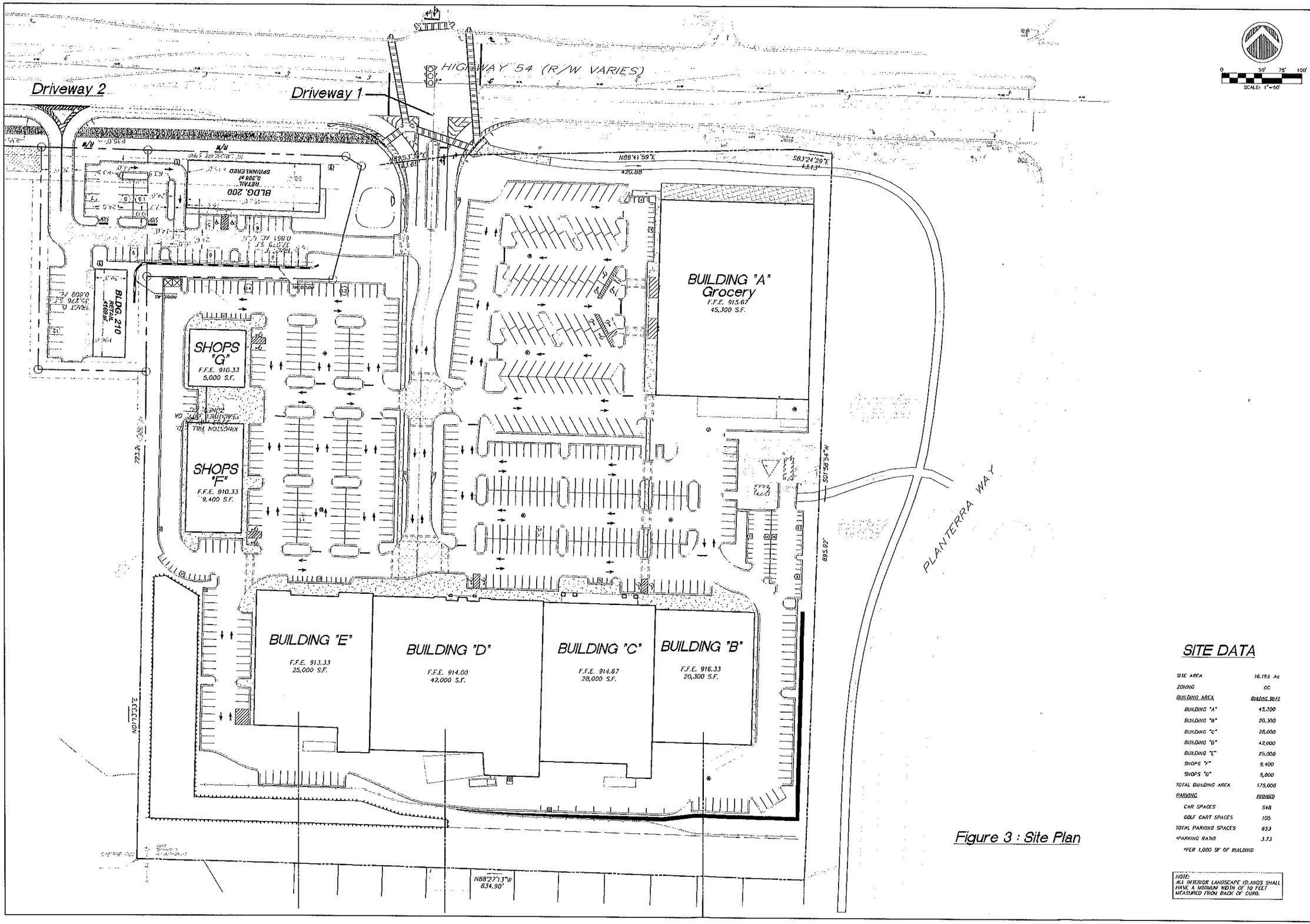

Figure 3 : Site Plan

SITE DATA

SITE AREA	16.19± Ac
ZONING	GC
BUILDING AREA	BUILDING SQ FT
BUILDING "A"	45,300
BUILDING "B"	20,300
BUILDING "C"	28,000
BUILDING "D"	42,000
BUILDING "E"	25,000
SHOPS "F"	9,400
SHOPS "G"	5,000
TOTAL BUILDING AREA	175,000
PARKING	PROVIDED
CAR SPACES	548
GOLF CART SPACES	105
TOTAL PARKING SPACES	653
*PARKING RATIO	3.73

*PER 1,000 SF OF BUILDING

NOTE:
ALL INTERIOR LANDSCAPE ISLANDS SHALL HAVE A MINIMUM WIDTH OF 10 FEET MEASURED FROM BACK OF CURB.

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LINE CREEK RETAIL
U.S. HIGHWAY 54
PREPARED FOR
CAPITAL CITY DEVELOPMENT
PEACHTREE CITY, GA
LAND LOT 160, 7TH DISTRICT

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JOB NO.: 6639
DWG NAME: 6639-PROJ

SITE PLAN

SHEET:
7

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III. Traffic Data

LAI Engineering collected peak period turning movement counts (TMC) and 24-hour counts for the study area. The TMC's were collected on a weekday during the PM peak hour periods of 4:00 pm to 6:00 pm on July 29th and August 6th 2008 at the study intersections.

Twenty-four hour traffic counts were collected on State Route 54 during the same period along the frontage of the proposed site. The total average daily trips (ADT) on State Route 54 are 32,048 vpd, with 16,145 vpd in the eastbound direction and 15,906 vpd in the westbound direction (See **Figure 4**). Copies of the traffic counts are included in **Appendix A**.

IV. Projected Traffic

LAI Engineering used Line Creek Retail site plan to develop traffic projections for the study area. The proposed shopping center development will have 175,000 square feet of retail space developed by Capital City and 13,565 square feet to be developed by others. Both developments are scheduled for build out in the year of 2009. Background traffic volumes for The Shoppes @ The Village Plazza, a previously approved but not yet completed development that is located just west of the Line Creek Retail site, were included in the projected background traffic also.

Trip Generation

LAI developed trip generation projections for the proposed site using Microtrans Trip Generation software (See **Appendix B**). This software estimates traffic trips for land uses in accordance with the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, 2003.

The proposed trips to the site are divided into primary and pass-by trips. Primary trips are trips made for the specific purpose of visiting the site. Pass-by trips are intermediate stops on the way from an origin to a primary trip destination without route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street that offers direct access to the generator. The pass-by rate for the proposed development is in accordance with the ITE's pass-by rates. The pass-by trips are added to the site driveways but are not added as new trips to the adjacent street system. **Table 2** shows the PM trip generation estimates for the site.

Table 2
PM Peak Trip Generation Projections

LAND USE	Primary Trips	Pass-by Trips	Total Trips
Shopping Center – LUC 820 (188,565 S.F)			
Enter	340	109	231
Exit	368	118	250
Total Trips	**708**	**227**	**481**

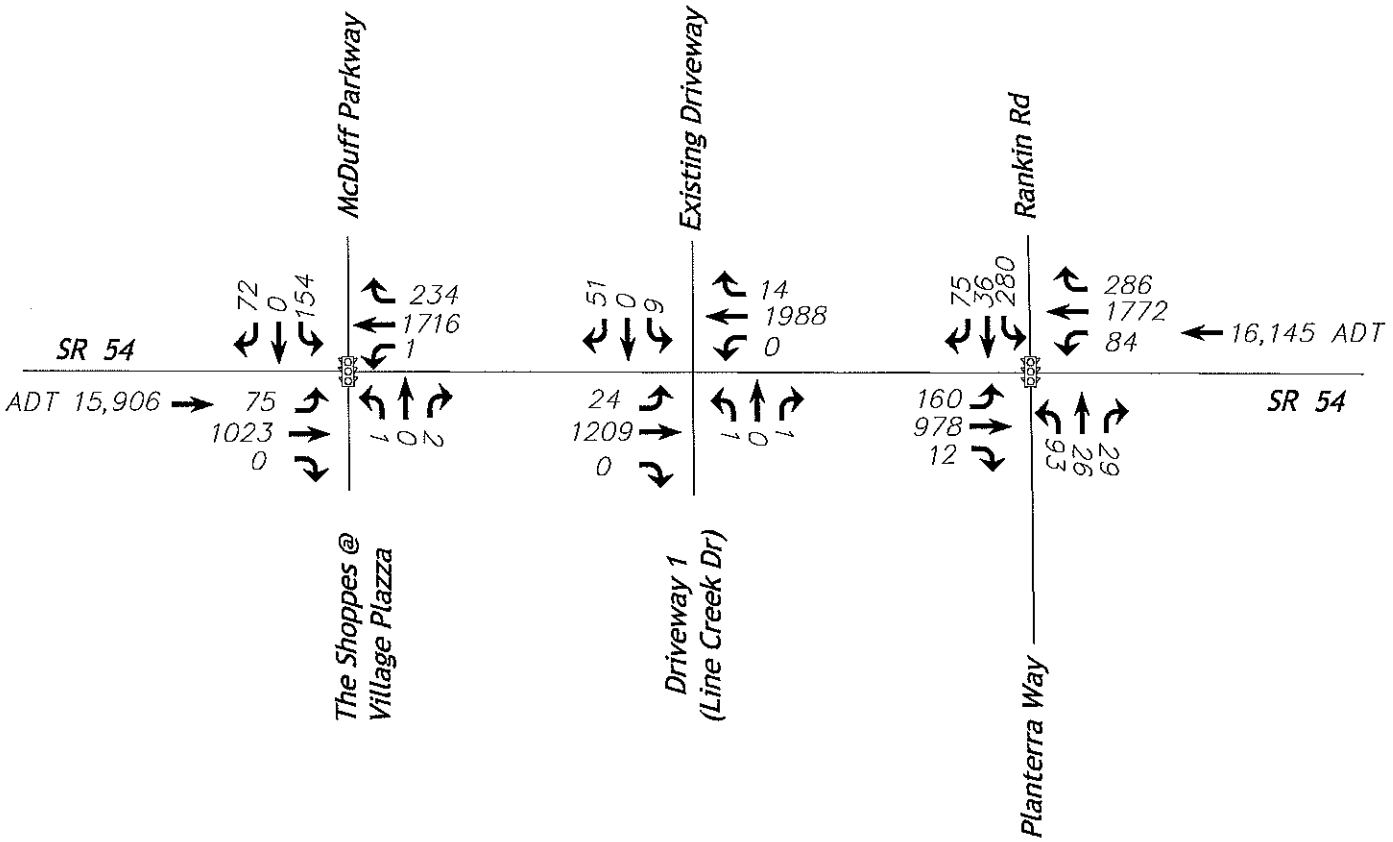

FIGURE 4. 2008 PM PEAK HOUR TRAFFIC & ADT

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Site Access

The proposed Line Creek Retail will be accessed by two driveways. The main driveway (Driveway 1) will be a full accessed signalized intersection located at the existing SR 54 and Line Creek Drive. Driveway 2 will be approximately 450 feet west of the SR54 and Line Creek Retail intersection and is a right-in right-out only driveway. Driveway 2 will access the 13,565 SF of retail space that is to be part of The Shoppes @ The Village Plazza development and was previously approved by Peachtree City & GDOT as part of that project. There will be an internal connection to a limited portion from the Shoppes @ Village Plazza to the internal Line Creek Dr that enters the Line Creek Retail development.

Trip Distribution and Assignment

In order to forecast traffic and distribute and assign trips generated by the development to the proposed and existing intersections in the study area, percentages were applied to the intersections representing traffic movements. The percentage of site traffic assigned to the study area intersections were based upon existing traffic conditions, proposed land uses, and the layout of the site.

Primary trips are trips predicted to visit the proposed site as their final destination and they exit the site in the opposite direction they entered. Pass-by trips are predicted to visit the site as a stop on their way to their final destination and they exit the site in the same direction from which they entered. **Figures 5** and **Figure 6** show the percentage of trips proposed to use each of the site driveways for primary and pass-by trips for the proposed development. The site traffic generation's trips entering and exiting the site is multiplied by the percentages to assign trips to the proposed development as shown in **Figure 7** and **Figure 8**. **Figure 9** and **Figure 10** show the total site generated trips and total projected volume, respectively.

Traffic Growth Rate

LAI utilized an annual traffic growth rate of 3% approved in the Georgia Department of Transportation (GDOT) widening and reconstruction of SR 54 project in 2003.

LAI projected the 2008 existing background traffic volumes on the adjacent streets one year to the build out year 2009 at an annual growth rate of 3%. However, LAI did not project the traffic exiting and entering the development on the north side of SR 54 directly across from Plantera Way or Line Creek Drive. These developments do not have the capacity to expand, therefore limiting the traffic volumes entering and exiting the developments to current volumes. Although the traffic volumes from the opposing developments may fluctuate daily, the traffic volumes will never grow as the adjacent street networks would.

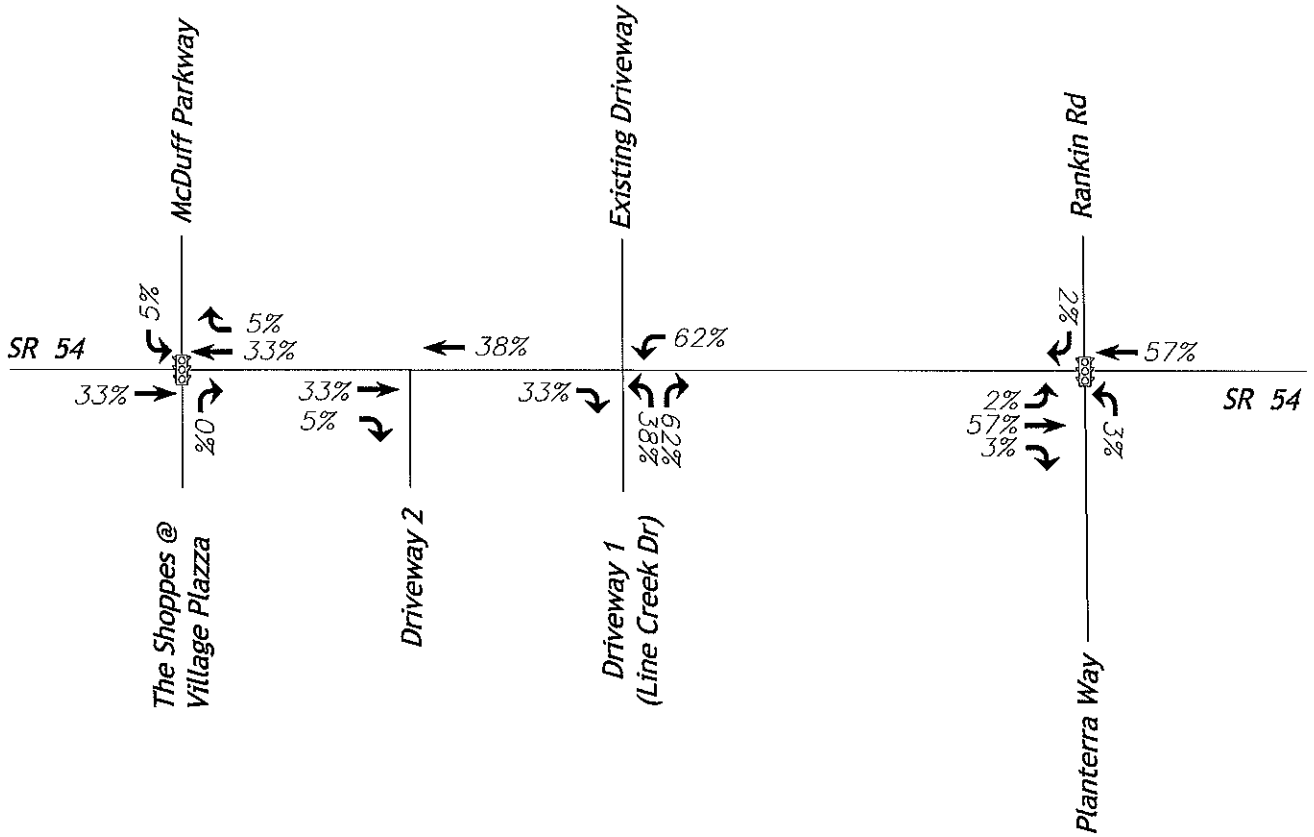

FIGURE 5. PRIMARY % TRIP DISTRIBUTION - PM PEAK

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Negative numbers are a net result of the Pass-By Trips generated by the site

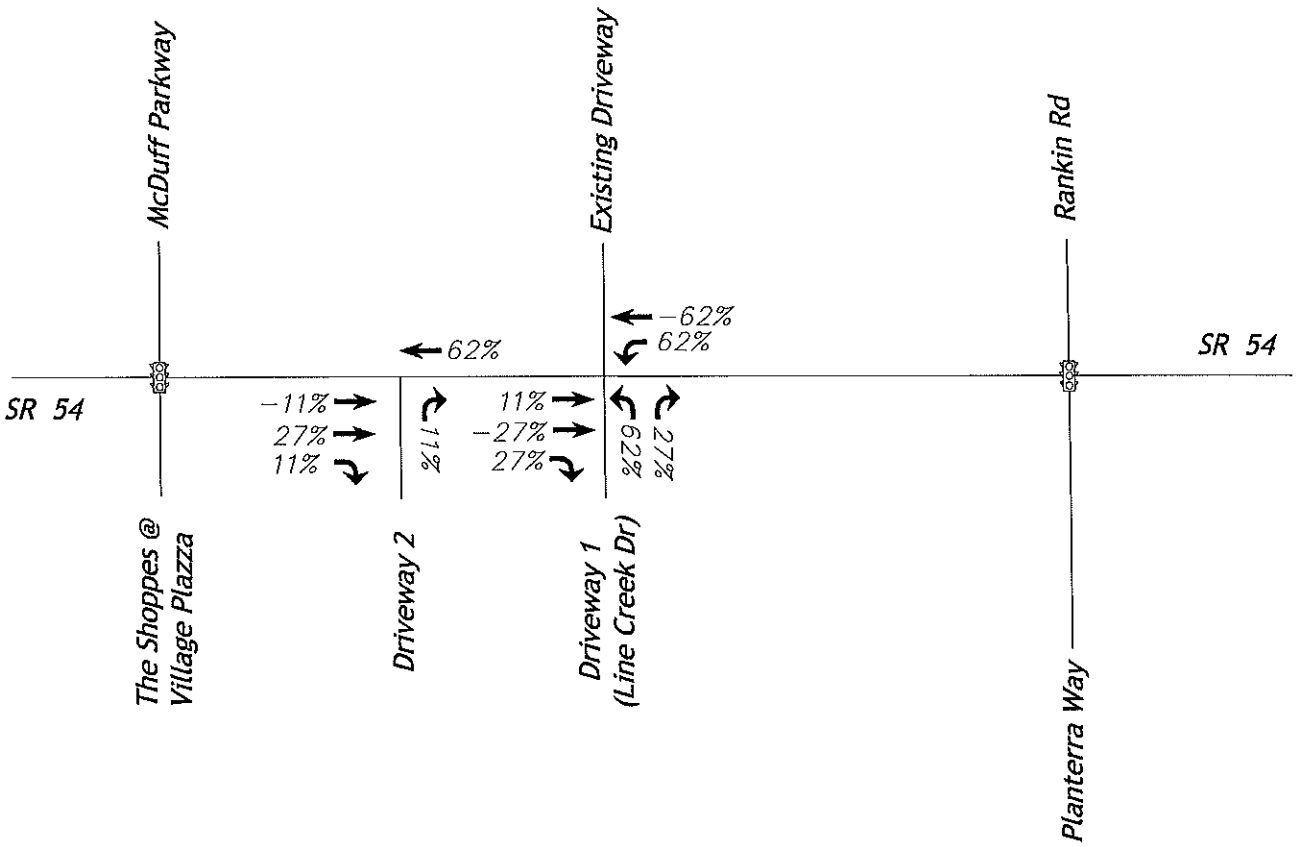

FIGURE 6. PASS-BY % TRIP DISTRIBUTION - PM PEAK

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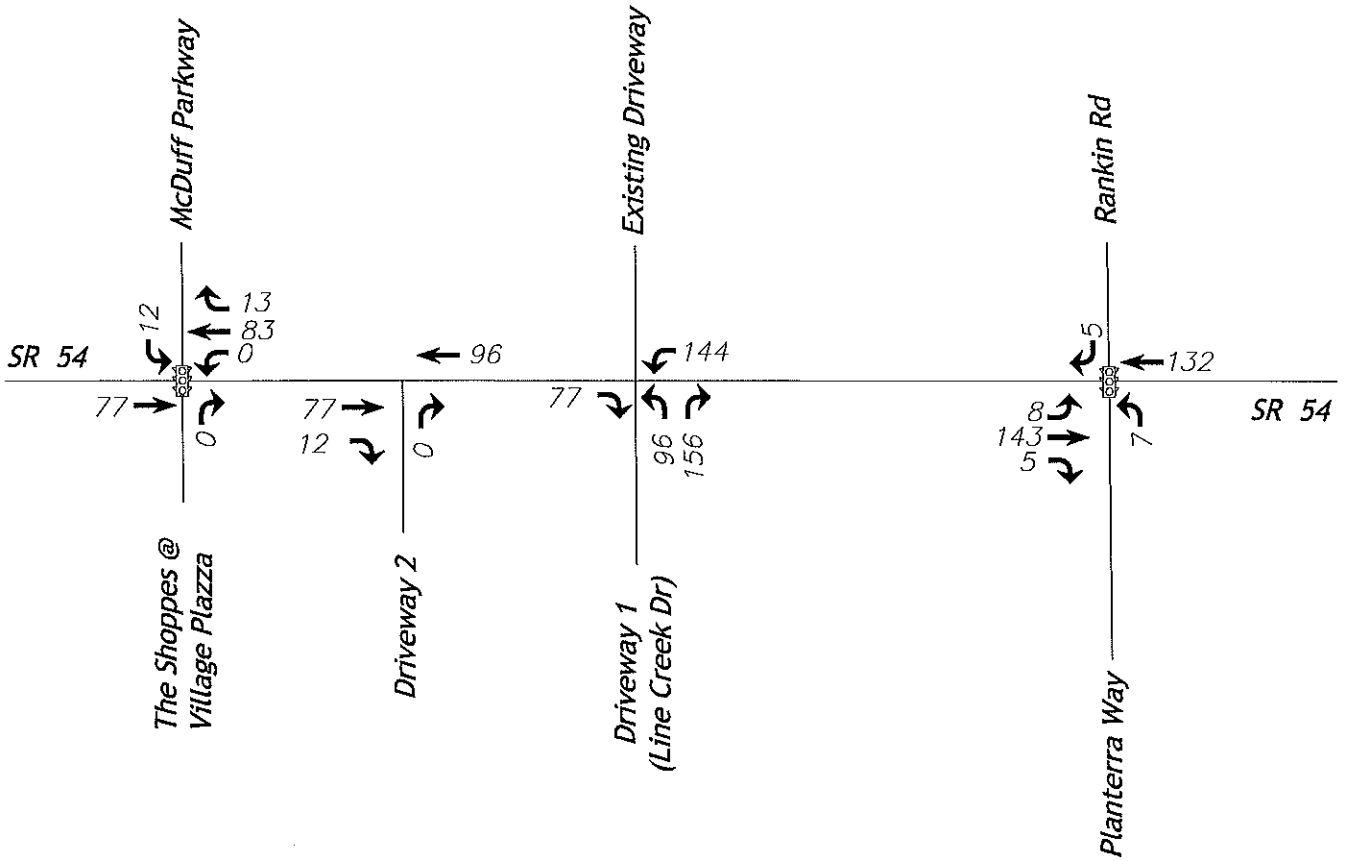

FIGURE 7. PRIMARY TRIPS - PM PEAK

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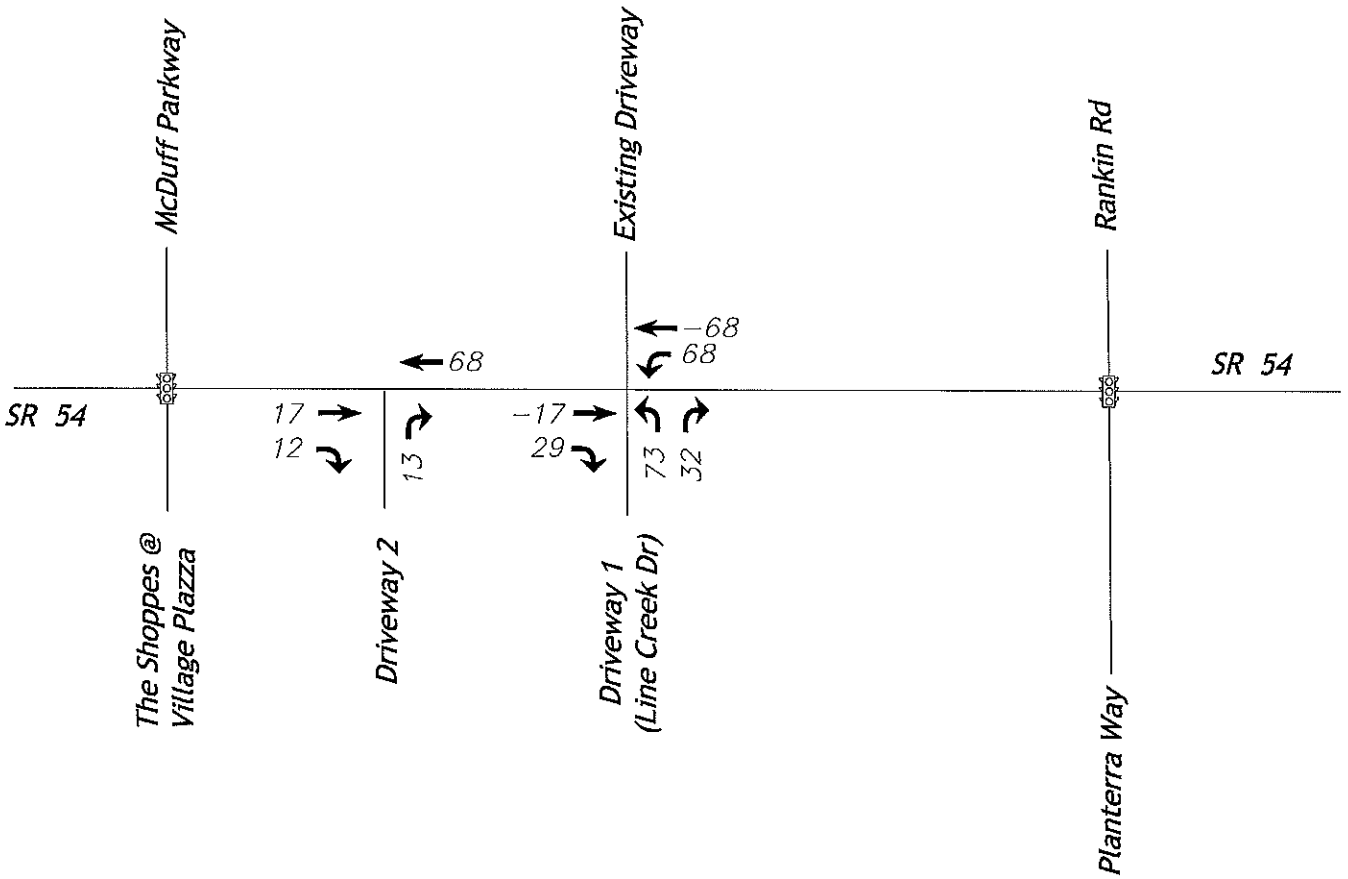

FIGURE 8. PASS-BY TRIPS - PM PEAK

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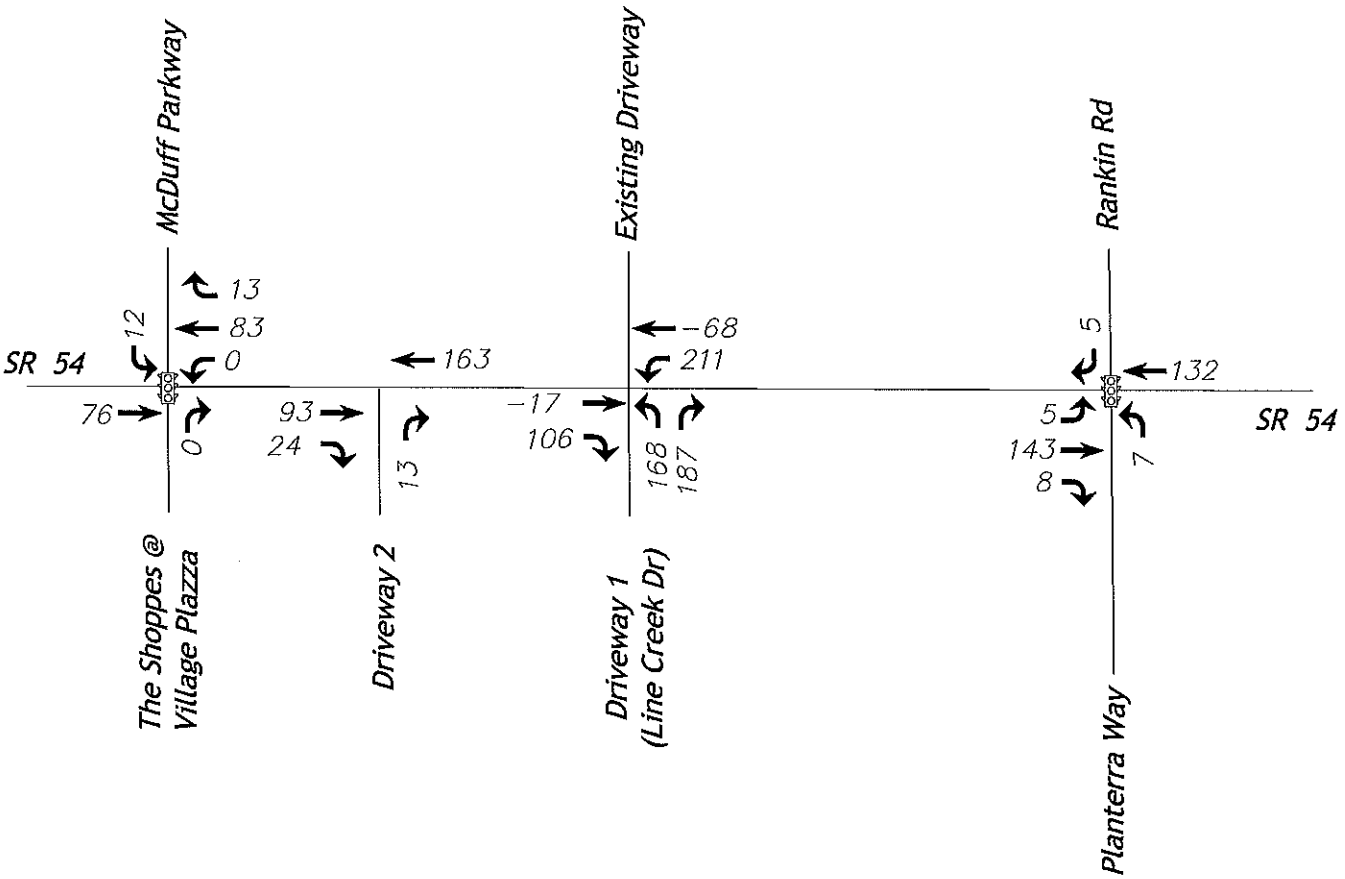

FIGURE 9. TOTAL SITE GENERATED TRIPS - PM PEAK

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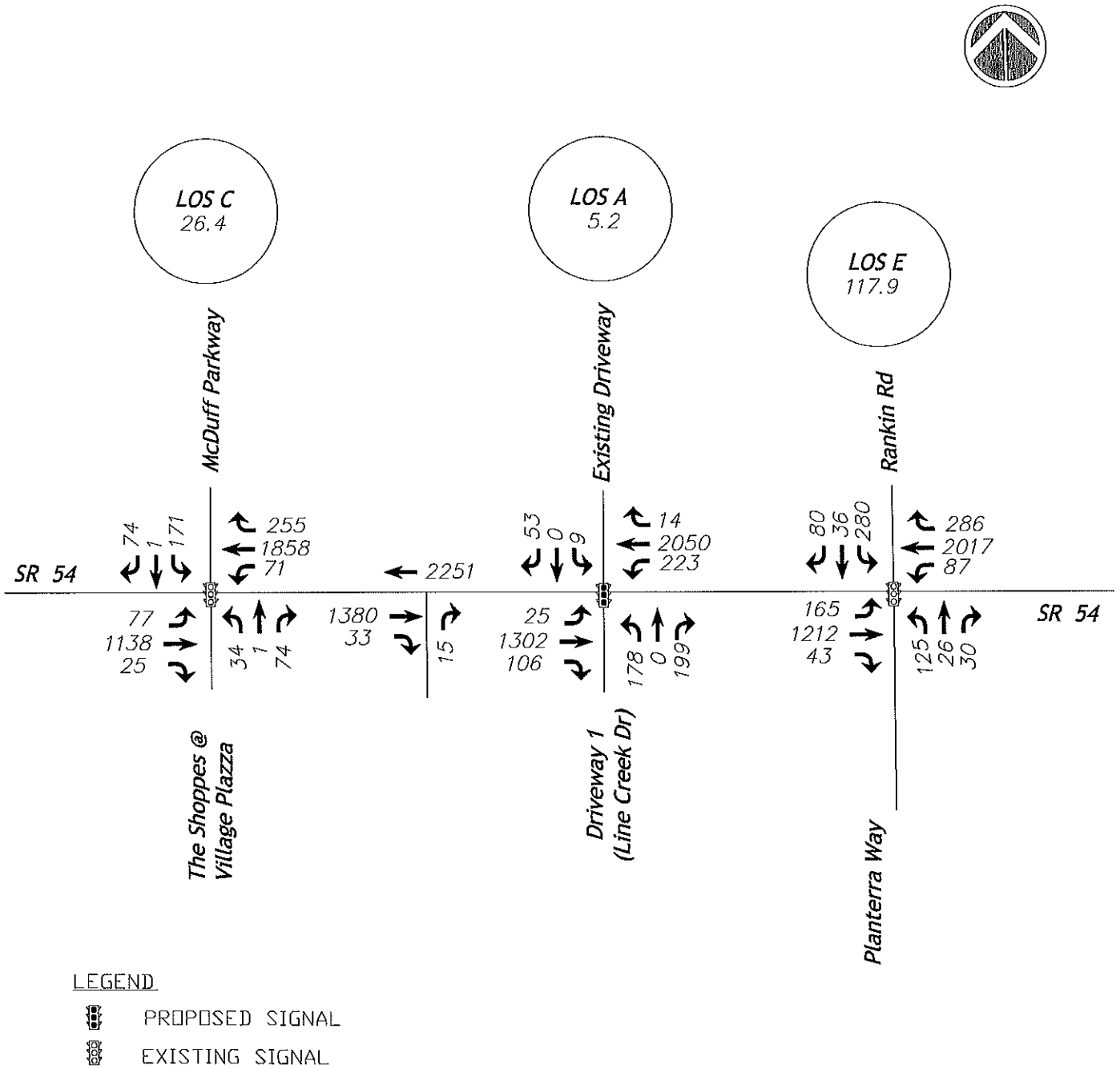

FIGURE 10. TOTAL 2009 PM PEAK PROJECTED TRAFFIC

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V. Traffic Analysis

Accident History

LAI collected four (4) years of crash data that occurred at this intersection from 2004 to 2007. A total of 206 accidents occurred at the study area intersections; of which 74% were of rear-end type. **Table 3** summarizes the accident types at the study intersection. Accident details are included in **Appendix C**.

Table 3
Accident History Summary

McDuff Parkway					
Accident Type	**2004**	**2005**	**2006**	**2007**	**Total**
Sideswipe	1	0	0	0	**1**
Rear End	16	10	5	7	**38**
Angle	2	0	1	0	**3**
Animal	0	0	0	1	**1**
Total	**19**	**10**	**6**	**8**	**43**
Line Creek Drive					
Accident Type	**2004**	**2005**	**2006**	**2007**	**Total**
Sideswipe	0	0	1	0	**1**
Rear End	12	7	6	3	**28**
Angle	10	5	3	2	**20**
Total	**22**	**12**	**10**	**5**	**49**
Planterra Way					
Accident Type	**2004**	**2005**	**2006**	**2007**	**Total**
Sideswipe	**1**	**2**	**1**	**1**	**5**
Rear End	**38**	**20**	**13**	**15**	**86**
Angle	**8**	**7**	**2**	**2**	**19**
Head On	**1**	**1**	**0**	**0**	**2**
Fixed Object	**0**	**1**	**0**	**1**	**2**
Total	**48**	**31**	**16**	**19**	**114**

Traffic Signal Warrants Analysis

A traffic signal warrant investigation must be conducted to determine whether the installation of a traffic control signal is justified at a particular location. The Manual on Uniform Traffic Control Devices (MUTCD) 2003 Edition, explains the methodology for conducting an investigation. The MUTCD describes eight warrants that may be considered and four of them are applicable to our investigations. The Signal Warrant analysis for Line Creek Dr. /Driveway 1 was based on the existing ADT volumes minus the right turns of the projected site generated volumes.

Warrant 1 – Eight-Hour Vehicular Volume

The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Warrant 1 is met if the requirements for Condition A or Condition B are fulfilled for any eight hours of an average day or if a Combination of Warrants, 80% of Condition A and 80% of Condition B, is fulfilled for any eight hours of an average day.

Warrant 2 – Four-Hour Vehicular Volume

The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. Warrant 2 is met if the requirements are met for any four hours of an average day.

Warrant 3 – Peak Hour

The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. This signal warrant shall be applied only in unusual cases. Such cases include, but are not limited to, office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

LAI prepared an analysis of the traffic signal warrants found in the MUTCD for intersections of State Route 54 and Driveway 1 using the 2003 version of PC-Warrants. This software compares traffic volumes and accident experience at an intersection with the traffic signal warrants found in the MUTCD.

Appendix D shows a printout of the results along with a breakdown of the traffic volumes used for the signal warrant analysis. **Table 4** summarizes the results of the traffic signal warrants analysis conducted.

Table 4 Traffic Signal Warrants Analysis			
MUTCD (2003) Warrant			
Number	**Condition**		**SR 54 @ Line Creek Dr**
1	8-Hour Vehicular Volume	Condition A	Satisfied
		Condition B	Satisfied
		Condition A & B	Satisfied
2	4-Hour Vehicular Volume		Satisfied
3	Peak Hour		Satisfied
Should a signal be considered further?			**Yes**

Capacity Analyses

A capacity analyses was conducted using projected PM peak hour volumes as discussed above. LAI utilized *Synchro* version 7.0 software to analyze the study intersections for the PM peak hour conditions. The typical operation hours for the type of retail shopping expected to be located within the Line Creek Retail development will begin at 10:00 am missing the AM Peak period therefore only the PM peak hour was analyzed for this study. *Synchro* documents procedures to determine the Levels of Service (LOS) ranging from "A", the best, to "F", the worst, for intersections. An intersection's LOS is based upon the delay per vehicle for various movements within the intersection. Delay is a measure of quality of service to the road user.

Signalized intersection analyses include calculating the amount of control delay experienced by vehicles based upon the available capacity for each approach and the volume of traffic being served (v/c ratio). Once the delay per vehicle is determined each intersection is classified by its' LOS. Below is a description of each LOS category:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operation with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with food progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

LOS C describes operations with control delay greater than 20 and up to 35 seconds of delay per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with control delay in excess of 80 seconds per vehicle. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratio above 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

Volume to capacity ratio is a number based on traffic volume levels and available vehicle capacity of the roadway. Any number greater than 1.00 is an indicator that the volume of the roadway has exceeded the roadway capacity and could lead to larger delay times and lower levels of service.

The LOS for a two-way, stop-controlled (TWSC) intersection is determined by the computed control delay and is defined for each minor movement. The LOS criteria for un-signalized intersections are shown in **Table 5**.

Table 5
Un-signalized Intersection Level of Service Criteria

LOS	Delay Range (seconds/vehicle)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

Table 6 shows the delay and LOS for each intersection within the study area during the PM peak hour. A copy of the Synchro capacity analyses is included in **Appendix E**.

Table 6
Intersection Level of Service and Delay (in sec)
Existing and Proposed traffic for PM Peak hour conditions using 150 sec. Cycle Length

Road Name / Intersection	McDuff Parkway			Line Creek Drive				Planterra Way		
	Traffic Control	LOS Delay	V/C Ratio	Traffic Control	LOS Delay		V/C Ratio	Traffic Control	LOS Delay	V/C Ratio
2007 Existing	Signalized	B (12.3)	0.88	Un-Signalized	NBL	C (20.1)	0.64	Signalized	F (92.0)	1.53
					SBL	C (21.3)				
					EBL	C (21.2)				
2009 No-Build	Signalized	C (23.8)	1.31	Un-Signalized	NBL	C (24.6)	0.68	Signalized	F (117.6)	1.52
					SBL	D (29.6)				
					EBL	D (26.6)				
					WBL	B (12.5)				
2009 Build w/ Un-signalized full access driveway @ Line Creek Dr	Signalized	C (26.7)	1.40	Un-Signalized	NBL	F (899.9)	9.42	Signalized	F (144.4)	1.57
					SBL	(*)				
					EBL	C (23.9)				
					WBL	C (18.8)				
2009 Build w/ Right In / Right Out driveway @ Line Creek Dr	Signalized	D (34.1)	1.40	Un-Signalized	NBR	F (50.8)	0.90	Signalized	F (202.4)	3.19
					SBL	F (57.5)				
					EBL	D (32.2)				
2009 Build w/ Signalized Intersection @ Line Creek Dr	Signalized	C (26.4)	1.40	Signalized	A (5.2)		0.73	Signalized	F (117.9)	2.07

Note – All 2009 volumes include The Shoppes @ Village Plazza projected traffic
* = Delay is greater than 999.99 seconds and exceeds analysis parameters

LAI conducted capacity analyses of the existing intersections to establish current operating LOS at SR 54 and McDuff intersection and SR 54 at Planterra Way intersection. LAI then conducted capacity analyses of those same intersections with projected background traffic under a no-build scenario. This capacity analysis shows the intersection operating LOS without the site generated traffic added. LAI next conducted capacity analyses of all the intersections within the study area with the projected background traffic and the site generated trips added under a build condition. The results of the analyses show that the two existing intersections will operate at the same LOS in the projected year 2009, under the no-build and build conditions with a slightly higher intersection delay, respectively. The proposed SR 54 and Driveway 1 will operate better as a signalized intersection with traffic projections for the year 2009 along with the recommended intersection improvements.

VI. Conclusion & Recommendations

LAI conducted a signal warrants analysis for the intersections of State Route 54 and Driveway 1 (Line Creek Drive). Based upon projected background traffic and future projected trips generated by the proposed development the study intersections met Warrants 1, 1A, 1B & 1AB, 2, 3, 3A and 3B under future build-out traffic conditions. Projected right turns were also accounted for in the warrant analysis and removed from the volumes used to generate the warrants.

LAI recommends:

- A traffic signal be installed at the intersections of State Route 54 and Driveway 1(Line Creek Drive) to improve the flow of traffic along the corridor to ease the congestion and improve the LOS and functional operations of the adjacent intersections.

- A separate right turn lane and a shared thru/left lane installed at the NB approach to SR 54 for Line Creek Drive.

- An exclusive right turn lane be added to the development directly across from Line Creek Dr in keeping with GDOT driveway access standards.

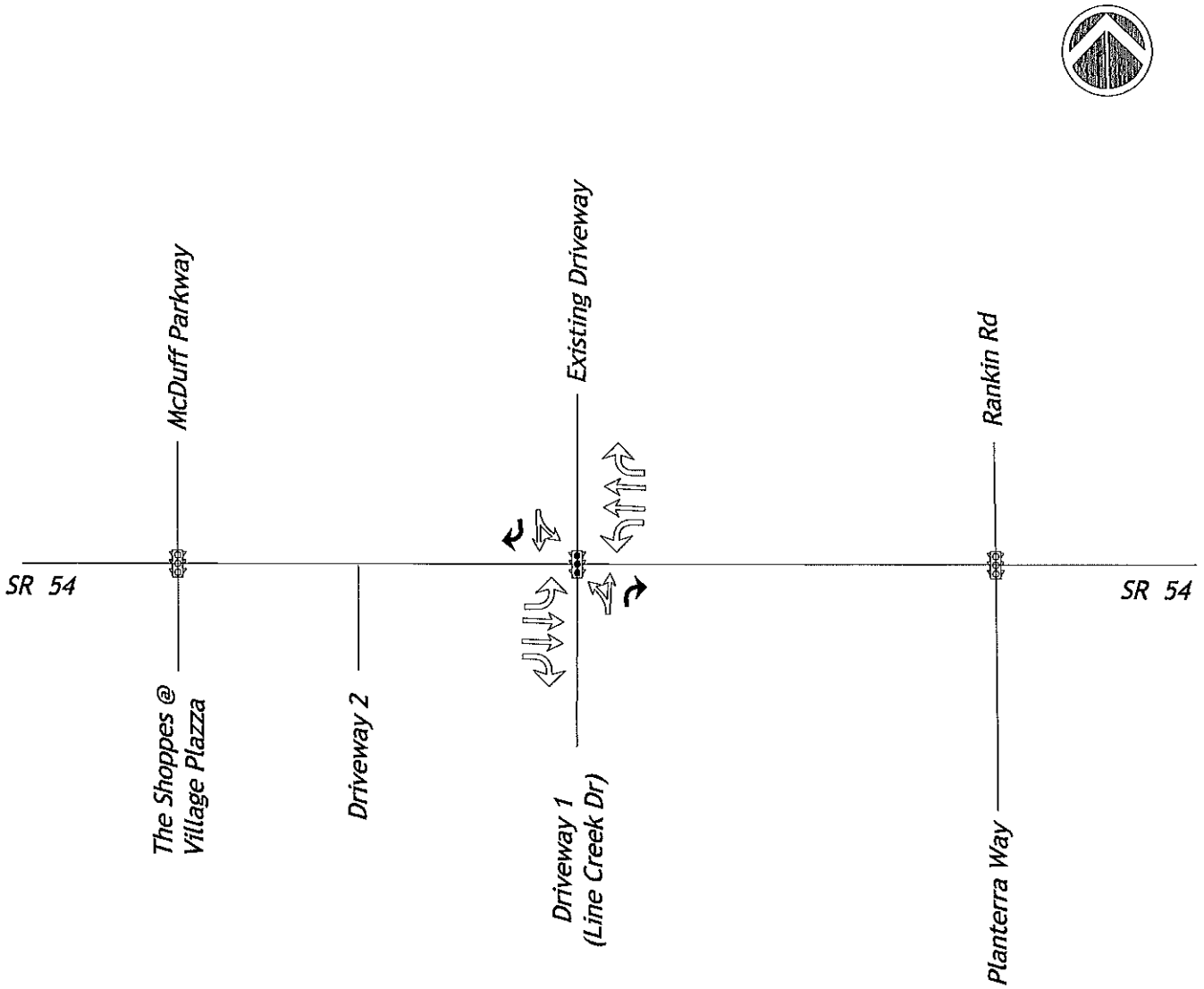
Figure 11 shows the 2009 proposed lane configurations with the proposed traffic signal.

RECOMMENDED BY: _____ Date: _____
LAI Engineering

RECOMMENDED BY: _____ Date: _____
District Traffic Engineer

RECOMMENDED BY: _____ Date: _____
State Traffic Operations Engineer

RECOMMENDED BY: _____ Date: _____
Director of Operations



LEGEND

- PROPOSED LANE
- EXISTING LANE
- PROPOSED SIGNAL
- EXISTING SIGNAL

FIGURE 11. RECOMMENDED LANE CONFIGURATIONS

LAI ENGINEERING
PARKWAY CENTER
1800 PARKWAY PL. - STE. 720
MARIETTA, GA 30067
PHONE: 770.423.0807
FAX: 770.423.1262
WWW.LAIENGINEERING.COM

Line Creek Retail

Prepared For

CAPITAL CITY DEVELOPMENT

Peachtree City, GA

DATE: 07/31/2008 JOB NO: 6175 DWG NAME: SHEET: 23

NOT FOR CONSTRUCTION

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VII. APPENDIX

APPENDIX A: Traffic Counts

APPENDIX B: Trip Generation

APPENDIX C: Accident History

APPENDIX D: Signal Warrant Analysis

APPENDIX E: Capacity Analysis

LAI ENGINEERING

Appendix A: Traffic Counts

Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 Fax: (770)578-8159
email: reliabletraffic@msn.com

Site Code: 26050102
Station ID: 7655
SR54 East of Planterra Way

Latitude: 0' 0.000 Undefined

Start Time	07-Aug-0 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		25	241			40	276				
12:15		19	256			25	283				
12:30		15	272			18	287				
12:45		22	291	81	1060	18	251	101	1097	182	2157
01:00		11	280			15	259				
01:15		17	249			10	244				
01:30		7	254			10	256				
01:45		9	261	44	1044	15	281	50	1040	94	2084
02:00		13	234			11	298				
02:15		7	257			12	292				
02:30		5	265			11	270				
02:45		8	242	33	998	8	263	42	1123	75	2121
03:00		8	253			6	297				
03:15		12	219			7	294				
03:30		8	275			4	343				
03:45		15	288	43	1035	4	389	21	1323	64	2358
04:00		10	285			5	397				
04:15		20	232			10	309				
04:30		18	264			11	389				
04:45		34	295	82	1076	13	361	39	1456	121	2532
05:00		34	270			13	450				
05:15		39	271			22	422				
05:30		90	260			33	471				
05:45		99	272	262	1073	39	453	107	1796	369	2869
06:00		100	277			54	369				
06:15		162	271			62	348				
06:30		259	221			81	327				
06:45		213	237	734	1006	96	262	293	1306	1027	2312
07:00		259	208			129	238				
07:15		309	160			129	257				
07:30		416	163			119	216				
07:45		461	169	1445	700	134	229	511	940	1956	1640
08:00		444	172			158	245				
08:15		291	164			171	218				
08:30		295	174			149	260				
08:45		278	147	1308	657	144	197	622	920	1930	1577
09:00		248	139			158	177				
09:15		214	121			149	157				
09:30		213	103			152	127				
09:45		254	87	929	450	183	103	642	564	1571	1014
10:00		217	97			172	90				
10:15		216	72			164	91				
10:30		226	65			172	66				
10:45		258	50	917	284	184	56	692	303	1609	587
11:00		223	53			229	50				
11:15		211	36			235	43				
11:30		236	29			237	37				
11:45		255	30	925	148	288	38	989	168	1914	316
Total		6803	9531			4109	12036			10912	21567
Percent		41.6%	58.4%			25.5%	74.5%			33.6%	66.4%
Grand Total		6803	9531			4109	12036			10912	21567
Percent		41.6%	58.4%			25.5%	74.5%			33.6%	66.4%

ADT Not Calculated

Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 Fax: (770)578-8159
email: reliabletraffic@msn.com

Site Code: 26050101
Station ID: 7973
SR54 West of MacDuff Pkwy

Latitude: 0' 0.000 Undefined

Start Time	07-Aug-0 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		12	191			23	237				
12:15		8	223			14	238				
12:30		7	213			21	233				
12:45		8	269	35	896	17	196	75	904	110	1800
01:00		8	218			20	239				
01:15		6	226			13	243				
01:30		4	204			12	259				
01:45		5	224	23	872	2	220	47	961	70	1833
02:00		5	197			13	251				
02:15		3	189			14	276				
02:30		3	221			7	292				
02:45		9	267	20	874	12	303	46	1122	66	1996
03:00		9	286			4	292				
03:15		9	249			10	325				
03:30		23	224			4	327				
03:45		14	244	55	1003	6	361	24	1305	79	2308
04:00		11	258			4	381				
04:15		13	268			8	461				
04:30		34	274			8	425				
04:45		44	272	102	1072	19	443	39	1710	141	2782
05:00		37	285			25	487				
05:15		56	264			24	496				
05:30		99	318			44	518				
05:45		141	258	333	1125	35	387	128	1888	461	3013
06:00		152	270			66	382				
06:15		202	236			83	318				
06:30		362	239			90	280				
06:45		342	221	1058	966	107	264	346	1244	1404	2210
07:00		304	209			119	243				
07:15		373	160			164	235				
07:30		514	155			211	198				
07:45		491	87	1682	611	232	185	726	861	2408	1472
08:00		367	115			188	186				
08:15		375	111			183	150				
08:30		344	116			165	171				
08:45		323	92	1409	434	166	187	702	694	2111	1128
09:00		247	101			165	186				
09:15		226	76			174	145				
09:30		229	90			162	127				
09:45		213	81	915	348	158	114	659	572	1574	920
10:00		209	85			160	98				
10:15		216	81			166	75				
10:30		198	52			166	76				
10:45		219	33	842	251	164	52	656	301	1498	552
11:00		185	40			173	73				
11:15		216	36			197	64				
11:30		208	35			201	46				
11:45		239	21	848	132	224	33	795	216	1643	348
Total		7322	8584			4243	11778			11565	20362
Percent		46.0%	54.0%			26.5%	73.5%			36.2%	63.8%
Grand Total		7322	8584			4243	11778			11565	20362
Percent		46.0%	54.0%			26.5%	73.5%			36.2%	63.8%

ADT Not Calculated

N
Macduff Pkwy (35 mph)
Plantera Way (25 mph)
Wal Mart Dwy
Sarah (25 mph)

Reliable Traffic Data Services, LLC
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TMC Data
SR 54 and Line Creek Dr

File Name : 26030001
Site Code : 26030001
Start Date : 7/29/2008
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Line Creek Dr Northbound					Commercial Drwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	3	0	15	0	18	2	273	0	0	275	0	328	4	0	332	625
04:15 PM	1	0	1	0	2	3	0	13	0	16	6	258	0	0	264	0	369	2	0	371	653
04:30 PM	1	1	0	0	2	2	0	17	0	19	11	246	0	0	257	0	436	6	0	442	720
04:45 PM	0	0	0	0	0	3	0	12	0	15	7	277	0	0	284	0	458	7	0	465	764
Total	2	1	1	0	4	11	0	57	0	68	26	1054	0	0	1080	0	1591	19	0	1610	2762
05:00 PM	0	0	0	0	0	1	0	15	0	16	8	291	0	0	299	0	534	4	0	538	853
05:15 PM	1	0	0	0	1	3	0	13	0	16	5	300	0	0	305	0	503	2	0	505	827
05:30 PM	0	0	1	0	1	2	0	11	0	13	4	313	0	0	317	0	489	3	0	492	823
05:45 PM	0	0	0	0	0	3	0	12	0	15	7	304	0	0	311	0	462	5	0	467	793
Total	1	0	1	0	2	9	0	51	0	60	24	1208	0	0	1232	0	1988	14	0	2002	3296
Grand Total	3	1	2	0	6	20	0	108	0	128	50	2262	0	0	2312	0	3579	33	0	3612	6058
Apprch %	50	16.7	33.3	0		15.6	0	84.4	0		2.2	97.8	0	0		0	99.1	0.9	0		
Total %	0	0	0	0	0.1	0.3	0	1.8	0	2.1	0.8	37.3	0	0	38.2	0	59.1	0.5	0	59.6	

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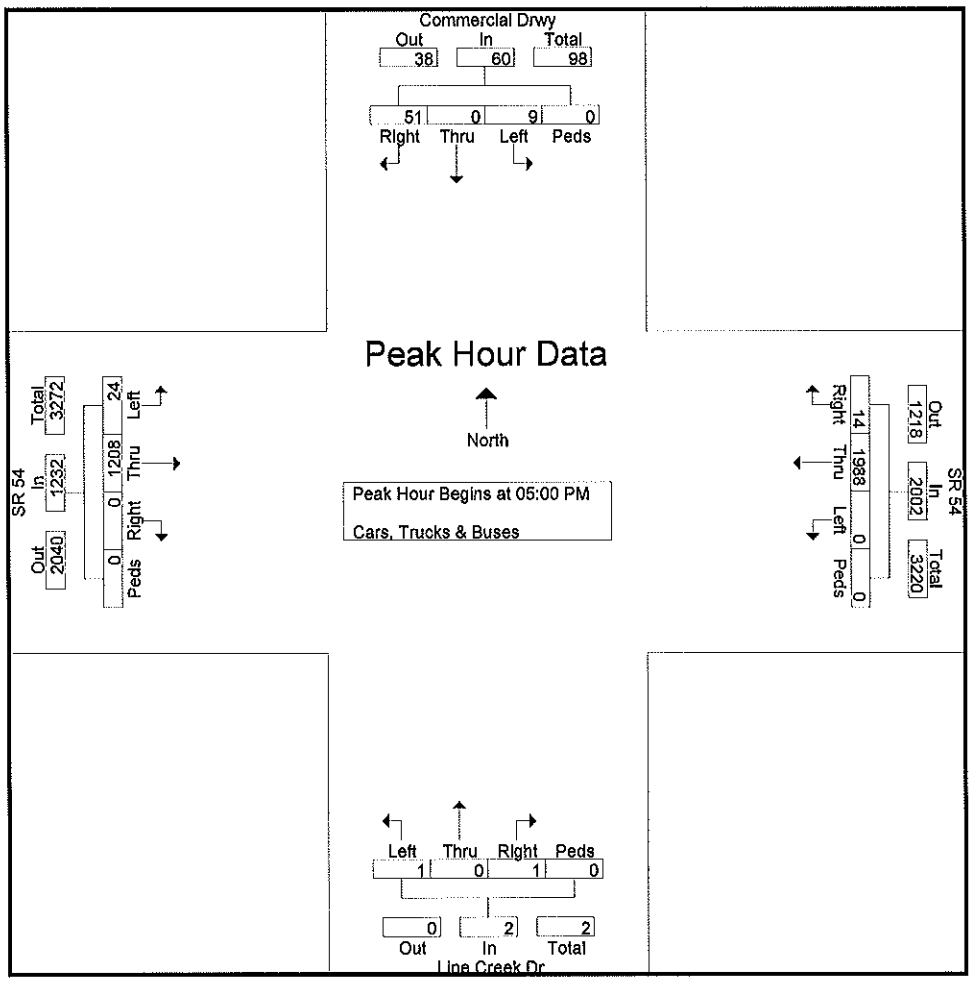
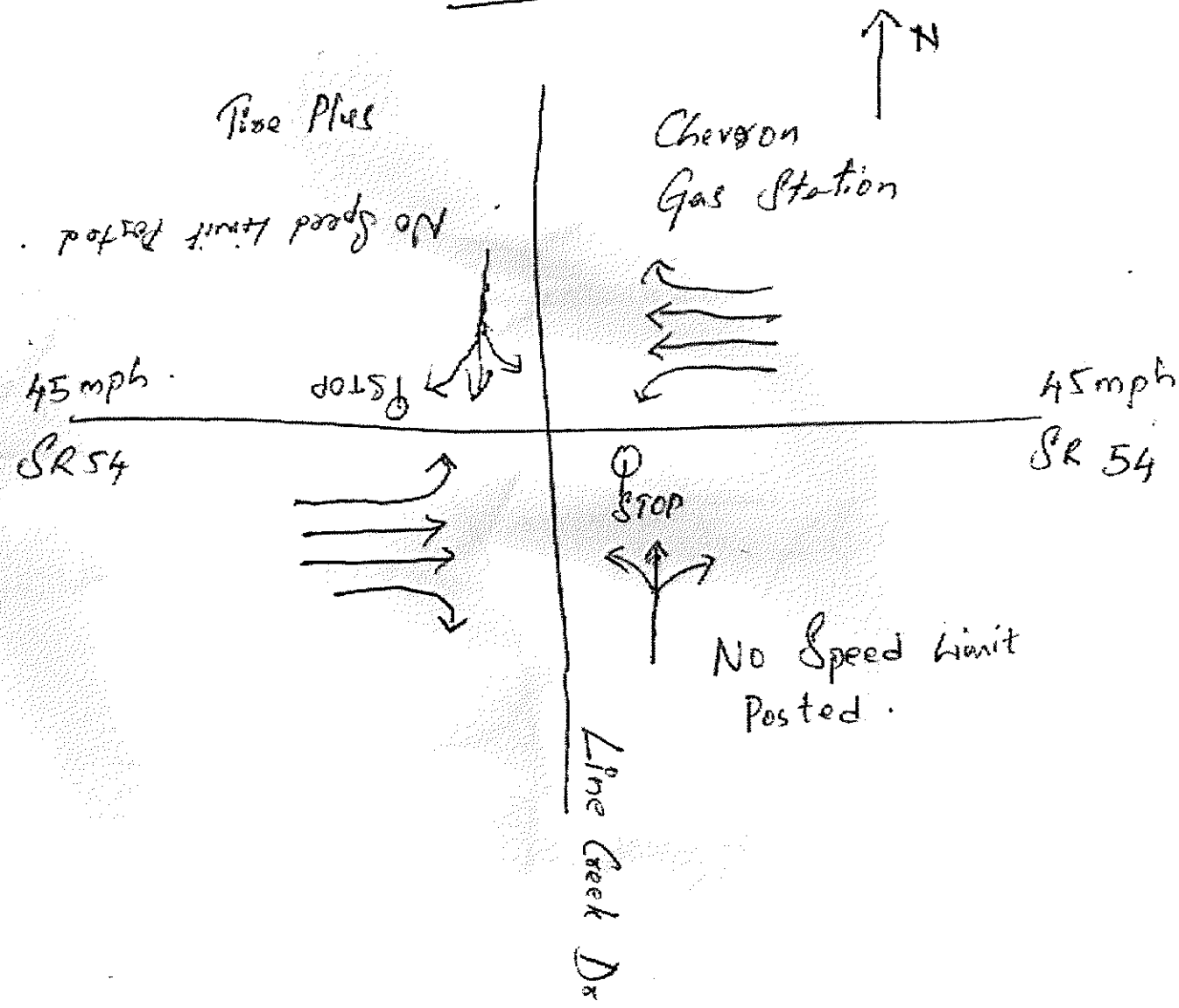
TMC Data
SR 54 and Line Creek Dr

File Name : 26030001
Site Code : 26030001
Start Date : 7/29/2008
Page No : 2

	Line Creek Dr Northbound					Commercial Drwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	1	0	15	0	16	8	291	0	0	299	0	534	4	0	538	853
05:15 PM	1	0	0	0	1	3	0	13	0	16	5	300	0	0	305	0	503	2	0	505	827
05:30 PM	0	0	1	0	1	2	0	11	0	13	4	313	0	0	317	0	489	3	0	492	823
05:45 PM	0	0	0	0	0	3	0	12	0	15	7	304	0	0	311	0	462	5	0	467	793
Total Volume	1	0	1	0	2	9	0	51	0	60	24	1208	0	0	1232	0	1988	14	0	2002	3296
% App. Total	50	0	50	0		15	0	85	0		1.9	98.1	0	0		0	99.3	0.7	0		
PHF	.250	.000	.250	.000	.500	.750	.000	.850	.000	.938	.750	.965	.000	.000	.972	.000	.931	.700	.000	.930	.966



26030001


N
Chevron
Gas Station
Tire Plus
No Speed Limit Posted.
45mph
SR 54
STOP
45mph
SR 54
STOP
No Speed Limit
Posted.
Line Creek Dr

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 26050001pm
Site Code : 26050001
Start Date : 8/6/2008
Page No : 1

Groups Printed- Cars, Trucks & Buses

	New Construction Site Northbound					MacDuff Pkwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	1	0	1	0	2	30	0	21	0	51	17	227	0	0	244	0	367	47	0	414	711
04:15 PM	0	0	1	0	1	35	0	15	0	50	22	238	0	0	260	0	374	52	0	426	737
04:30 PM	0	0	1	0	1	32	0	12	0	44	12	241	1	0	254	1	386	45	0	432	731
04:45 PM	0	0	2	0	2	38	0	14	0	52	18	257	0	0	275	0	374	52	0	426	755
Total	1	0	5	0	6	135	0	62	0	197	69	963	1	0	1033	1	1501	196	0	1698	2934
05:00 PM	0	0	0	0	0	36	0	16	0	52	21	264	0	0	285	0	430	59	0	489	826
05:15 PM	0	0	1	0	1	41	0	18	0	59	18	259	0	0	277	1	444	54	0	499	836
05:30 PM	1	0	0	0	1	38	0	21	0	59	17	253	0	0	270	0	427	62	0	489	819
05:45 PM	0	0	1	0	1	39	0	17	0	56	19	247	0	0	266	0	415	59	0	474	797
Total	1	0	2	0	3	154	0	72	0	226	75	1023	0	0	1098	1	1716	234	0	1951	3278
Grand Total	2	0	7	0	9	289	0	134	0	423	144	1986	1	0	2131	2	3217	430	0	3649	6212
Apprch %	22.2	0	77.8	0		68.3	0	31.7	0		6.8	93.2	0	0		0.1	88.2	11.8	0		
Total %	0	0	0.1	0	0.1	4.7	0	2.2	0	6.8	2.3	32	0	0	34.3	0	51.8	6.9	0	58.7	

Reliable Traffic Data Services, LLC
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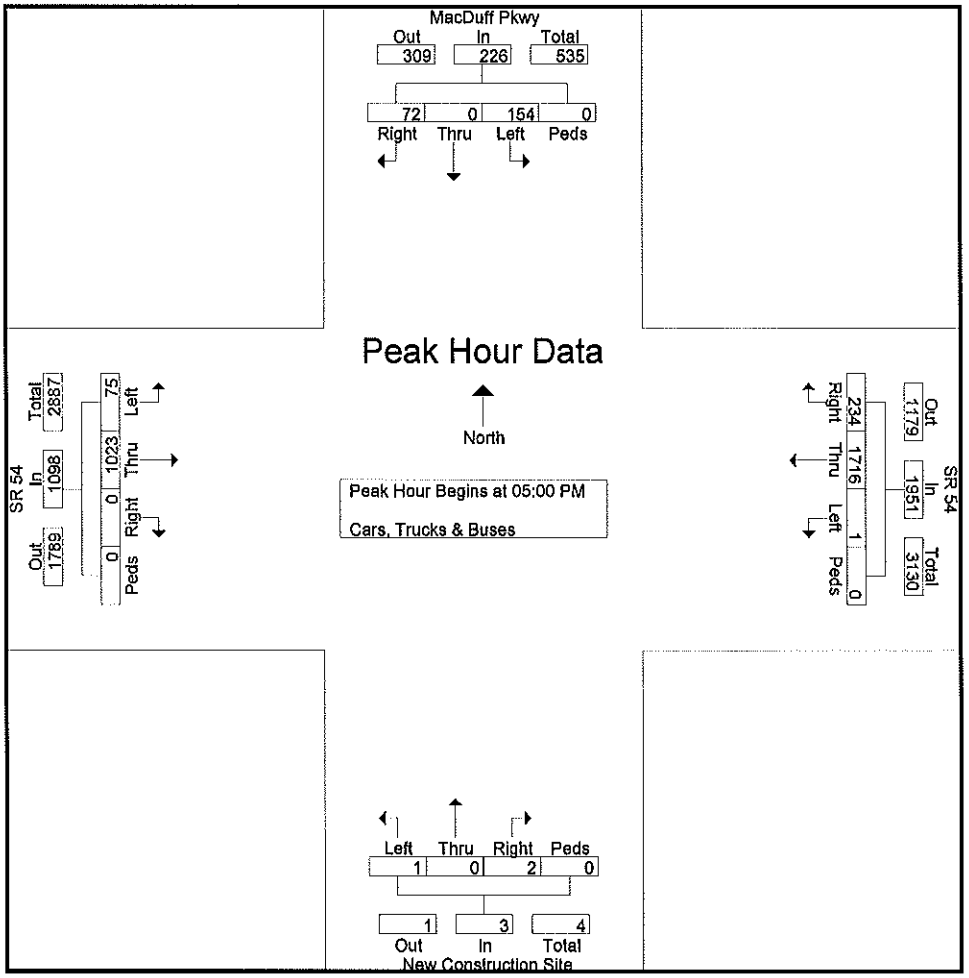
Email: reliabletraffic@msn.com

TMC Data

File Name : 26050001pm
Site Code : 26050001
Start Date : 8/6/2008
Page No : 2

	New Construction Site Northbound					MacDuff Pkwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	36	0	16	0	52	21	264	0	0	285	0	430	59	0	489	826
05:15 PM	0	0	1	0	1	41	0	18	0	59	18	259	0	0	277	1	444	54	0	499	836
05:30 PM	1	0	0	0	1	38	0	21	0	59	17	253	0	0	270	0	427	62	0	489	819
05:45 PM	0	0	1	0	1	39	0	17	0	56	19	247	0	0	266	0	415	59	0	474	797
Total Volume	1	0	2	0	3	154	0	72	0	226	75	1023	0	0	1098	1	1716	234	0	1951	3278
% App. Total	33.3	0	66.7	0		68.1	0	31.9	0		6.8	93.2	0	0		0.1	88	12	0		
PHF	.250	.000	.500	.000	.750	.939	.000	.857	.000	.958	.893	.969	.000	.000	.963	.250	.966	.944	.000	.977	.980



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
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TMC Data

File Name : 26050002pm
Site Code : 26050002
Start Date : 8/6/2008
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Planterra Way Northbound					Wal Mart Drwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	11	5	7	0	23	80	3	11	0	94	50	187	1	0	238	25	358	75	0	458	813
04:15 PM	15	5	6	0	26	65	4	15	0	84	54	254	2	0	310	18	364	84	0	466	886
04:30 PM	13	5	6	0	24	76	4	11	0	91	22	182	5	0	209	21	403	98	0	522	846
04:45 PM	17	5	5	0	27	66	11	24	0	101	32	247	8	0	287	25	437	95	0	557	972
Total	56	20	24	0	100	287	22	61	0	370	158	870	16	0	1044	89	1562	352	0	2003	3517
05:00 PM	23	6	6	0	35	76	13	20	0	109	40	240	3	0	283	18	420	68	0	506	933
05:15 PM	29	4	5	0	38	75	7	24	0	106	39	237	4	0	280	23	439	63	0	525	949
05:30 PM	26	8	9	0	43	63	9	11	0	83	46	230	2	0	278	21	447	79	0	547	951
05:45 PM	15	8	9	0	32	66	7	20	0	93	35	271	3	0	309	22	466	76	0	564	998
Total	93	26	29	0	148	280	36	75	0	391	160	978	12	0	1150	84	1772	286	0	2142	3831
Grand Total	149	46	53	0	248	567	58	136	0	761	318	1848	28	0	2194	173	3334	638	0	4145	7348
Apprch %	60.1	18.5	21.4	0		74.5	7.6	17.9	0		14.5	84.2	1.3	0		4.2	80.4	15.4	0		
Total %	2	0.6	0.7	0	3.4	7.7	0.8	1.9	0	10.4	4.3	25.1	0.4	0	29.9	2.4	45.4	8.7	0	56.4	

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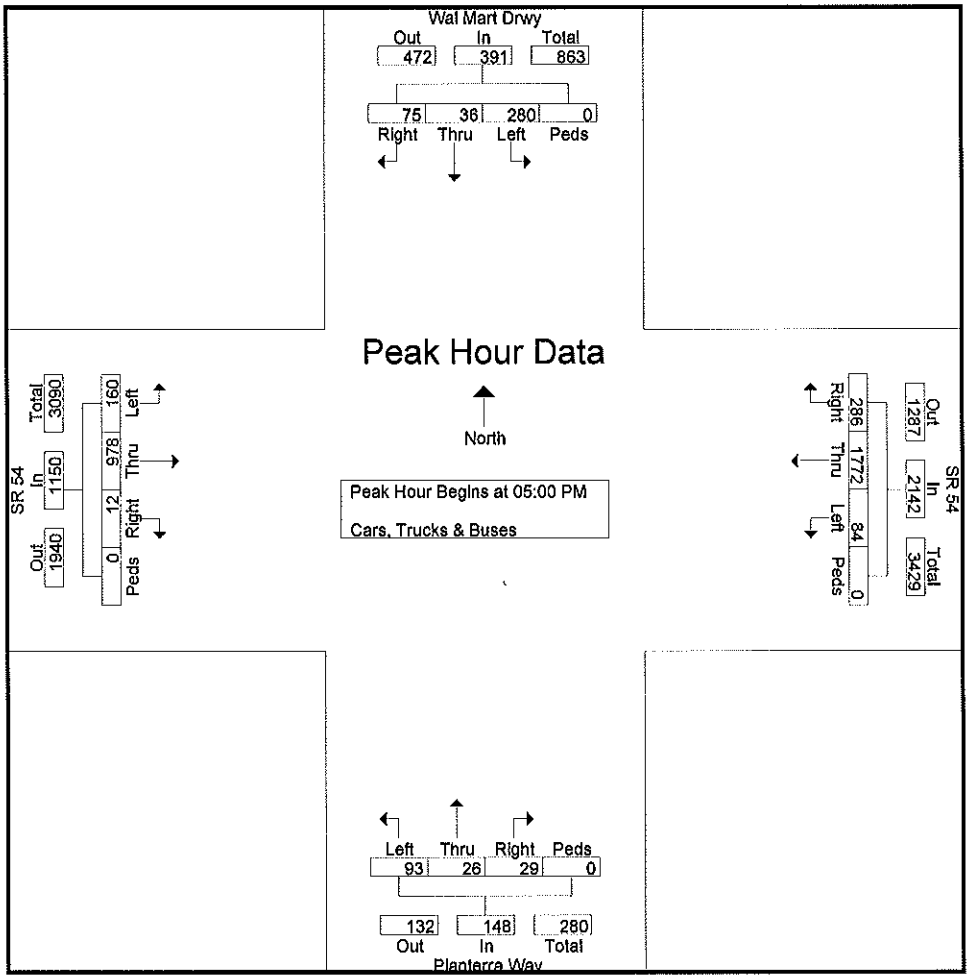
TMC Data

File Name : 26050002pm
Site Code : 26050002
Start Date : 8/6/2008
Page No : 2

	Planterra Way Northbound					Wal Mart Drwy Southbound					SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	23	6	6	0	35	76	13	20	0	109	40	240	3	0	283	18	420	68	0	506	933
05:15 PM	29	4	5	0	38	75	7	24	0	106	39	237	4	0	280	23	439	63	0	525	949
05:30 PM	26	8	9	0	43	63	9	11	0	83	46	230	2	0	278	21	447	79	0	547	951
05:45 PM	15	8	9	0	32	66	7	20	0	93	35	271	3	0	309	22	466	76	0	564	998
Total Volume	93	26	29	0	148	280	36	75	0	391	160	978	12	0	1150	84	1772	286	0	2142	3831
% App. Total	62.8	17.6	19.6	0		71.6	9.2	19.2	0		13.9	85	1	0		3.9	82.7	13.4	0		
PHF	.802	.813	.806	.000	.860	.921	.692	.781	.000	.897	.870	.902	.750	.000	.930	.913	.951	.905	.000	.949	.960



LAI ENGINEERING

Appendix B: Trip Generation

Land Use	Total	Internal	External	Pass-by	Net-New / Primary
PROPOSED DEVELOPMENT					
Retail Shopping Center – LUC 820 (188,565 S.F)					
Enter	340	0	340	109	231
Exit	368	0	368	118	250
TOTAL TRIPS					
Enter	**340**	**0**	**340**	**109**	**231**
Exit	**368**	**0**	**368**	**118**	**250**

TOTAL PM PEAK NET NEW TRIPS GENERATED					
Land Use	**Total**	**Internal**	**External**	**Pass-by**	**Net-New / Primary**
Enter	**340**	**0**	**340**	**109**	**231**
Exit	**368**	**0**	**368**	**118**	**250**

Table 2 - Proposed PM Peak Trip Generation

Land Use	Total	Internal	External	Pass-by	Net-New / Primary
PROPOSED DEVELOPMENT					
Retail Shopping Center – LUC 820 (81,300 S.F)					
Enter	146	0	146	60	86
Exit	159	0	159	66	93
High Turnover Sit Down Restaurant – LUC 932 (3,000 S.F)					
Enter	20	0	20	9	11
Exit	13	0	13	6	7
Drive-In Bank – LUC 912 (3,500 S.F)					
Enter	51	0	51	24	27
Exit	51	0	51	24	27
TOTAL TRIPS					
Enter	**217**	**0**	**217**	**93**	**124**
Exit	**223**	**0**	**223**	**96**	**127**

TOTAL PM PEAK NET NEW TRIPS GENERATED					
Land Use	**Total**	**Internal**	**External**	**Pass-by**	**Net-New / Primary**
Enter	**217**	**0**	**217**	**93**	**124**
Exit	**223**	**0**	**223**	**96**	**127**

Table 2 - Proposed PM Peak Trip Generation

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes
July 30, 2008

Land Use	Size	24 Hour Two-Way Volume	AM Pk Hour Enter	AM Pk Hour Exit	PM Pk Hour Enter	PM Pk Hour Exit
Shopping Center	186.459 T.G.L.A.	8007	117	75	336	364
Automobile Care Center	2.106 Th.Gr.Sq.Ft.	0	4	2	4	4
Total		8007	121	77	340	368

Note: A zero indicates no data available.

TRIP GENERATION BY MICROTRANS

Summary of Pass-By Trips
For 186.459 T.G.L.A. of Shopping Center
July 30, 2008

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	117	0	117
7-9 AM Peak Hour Exit	75	0	75
7-9 AM Peak Hour Total	192	0	192
4-6 PM Peak Hour Enter	336	109	227
4-6 PM Peak Hour Exit	364	118	246
4-6 PM Peak Hour Total	699	227	472
Saturday			
Saturday Peak Hour Enter	481	164	317
Saturday Peak Hour Exit	446	152	294
Saturday Peak Hour Total	927	316	611

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Handbook, March, 2001

TRIP GENERATION BY MICROTRANS

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes
July 30, 2008

Land Use	Size	24 Hour Two-Way Volume	AM Pk Hour Enter	AM Pk Hour Exit	PM Pk Hour Enter	PM Pk Hour Exit
Shopping Center	81.300 T.G.L.A.	3491	51	33	146	159
High Turnover (Sit-Down) Restaurant	3.0 Th.Gr.Sq.Ft.	381	18	17	20	13
Drive-in Bank	2 Drive-In Lanes	822	22	16	51	51
Total		4694	91	66	217	223

Note: A zero indicates no data available.

TRIP GENERATION BY MICROTRANS

Summary of Pass-By Trips
For 81.300 T.G.L.A. of Shopping Center
July 30, 2008

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	51	0	51
7-9 AM Peak Hour Exit	33	0	33
7-9 AM Peak Hour Total	84	0	84
4-6 PM Peak Hour Enter	146	60	86
4-6 PM Peak Hour Exit	159	66	93
4-6 PM Peak Hour Total	305	126	179
Saturday			
Saturday Peak Hour Enter	210	77	133
Saturday Peak Hour Exit	194	71	123
Saturday Peak Hour Total	404	148	256

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Handbook, March, 2001

TRIP GENERATION BY MICROTRANS

Summary of Pass-By Trips
For 3 Th.Gr.Sq.Ft. of High Turnover (Sit-Down) Restaurant
July 30, 2008

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	18	0	18
7-9 AM Peak Hour Exit	17	0	17
7-9 AM Peak Hour Total	35	0	35
4-6 PM Peak Hour Enter	20	9	11
4-6 PM Peak Hour Exit	13	6	7
4-6 PM Peak Hour Total	33	14	19
Saturday			
Saturday Peak Hour Enter	38	0	38
Saturday Peak Hour Exit	22	0	22
Saturday Peak Hour Total	60	0	60

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Handbook, March, 2001

TRIP GENERATION BY MICROTRANS

Summary of Pass-By Trips
For 2 Drive-In Lanes of Drive-in Bank
July 30, 2008

	Driveway Volume	Pass-By Trips	Volume Added to Adjacent Streets
Average Weekday			
7-9 AM Peak Hour Enter	22	0	22
7-9 AM Peak Hour Exit	16	0	16
7-9 AM Peak Hour Total	39	0	39
4-6 PM Peak Hour Enter	51	24	27
4-6 PM Peak Hour Exit	51	24	27
4-6 PM Peak Hour Total	102	48	54
Saturday			
Saturday Peak Hour Enter	70	0	70
Saturday Peak Hour Exit	64	0	64
Saturday Peak Hour Total	134	0	134

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Handbook, March, 2001

TRIP GENERATION BY MICROTRANS

LAI ENGINEERING

Appendix C: Accident History

FAYETTE COUNTY, SR 64 @ McDuff Parkway (CS 095607)																			
Accident No	Date	Time	County	Route Type	Route	Milelog	Intersecting Rt Type	Intersecting Rt	Injuries	Fatalities	Harmful Event	Collision	Location of Impact	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
'44810326	11/20/2004	8:30 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Daylight	Wet	W	W	Changing Lanes	Turning Left
'44810367	11/9/2004	5:32 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dusk	Dry	E	E	Straight	Straight
'45160393	12/30/2004	3:40 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42420612	6/26/2004	2:16 PM	Fayette	State Route	'005400	0.33	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'40940011	3/4/2004	3:40 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'40600013	2/2/2004	7:55 AM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Straight
'40600035	2/15/2004	2:56 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Stopped
'40940019	3/7/2004	4:28 PM	Fayette	State Route	'005400	0.33	3	'095607	1	0	Motor Vehicle in Motion	Angle	Off Roadway	Daylight	Dry	E	E	Straight	Straight
'42860309	7/24/2004	7:04 PM	Fayette	State Route	'005400	0.33	3	'095607	2	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	W	W	Making U-Turn	Straight
'42860300	7/19/2004	5:08 AM	Fayette	State Route	'005400	0.33	3	'095607	2	0	Motor Vehicle in Motion	Rear End	On Roadway	Dawn	Dry	W	W	Straight	Stopped
'41340216	4/9/2004	9:19 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Wet	W	S	Straight	Stopped
'43240338	7/27/2004	12:41 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43610097	9/24/2004	11:58 AM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43610087	9/19/2004	3:35 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'43610064	9/1/2004	5:30 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42420604	6/23/2004	11:09 AM	Fayette	State Route	'005400	0.33	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42860312	7/29/2004	12:49 PM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'42860271	7/6/2004	8:23 AM	Fayette	State Route	'005400	0.33	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'40940050	3/23/2004	2:30 PM	Fayette	State Route	'005400	0.33	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'51900495	4/13/2005	9:10 AM	Fayette	State Route	'005400	0.32	3	'095607	3	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'52950708	6/28/2005	12:40 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'51290418	3/20/2005	2:17 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'53760125	8/16/2005	1:54 PM	Fayette	State Route	'005400	0.32	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'53740640	7/31/2005	11:29 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'54700377	10/20/2005	9:44 PM	Fayette	State Route	'005400	0.32	3	'095607	3	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	E	E	Straight	Stopped
'54700379	10/23/2005	7:22 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Parked Motor Vehicle	Rear End	On Roadway	Dark-Lighted	Dry	W	W	Stopped	Stopped
'54700366	10/14/2005	3:25 PM	Fayette	State Route	'005400	0.32	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'53740554	7/16/2005	1:32 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Stopped	Stopped
'51290381	3/7/2005	1:15 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61540534	3/27/2006	10:14 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'61080723	2/22/2006	10:46 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Wet	W	S	Straight	Turning Left
'61540500	3/15/2006	7:25 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'63180280	7/19/2006	9:20 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'61540546	3/30/2006	7:59 AM	Fayette	State Route	'005400	0.32	3	'095607	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Turning Left	Stopped
'61540515	3/17/2006	3:35 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Parked Motor Vehicle	Rear End	On Roadway	Daylight	Dry	W	W	Changing Lanes	Stopped
'72780392	5/5/2007	7:17 PM	Fayette	State Route	'005400	0.32	3	'095607	2	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'71530590	3/9/2007	6:02 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Deer	Not A Collision With A Motor Vehicle	On Roadway	Dark-Lighted	Dry	E		Straight	
'72140408	4/9/2007	8:16 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'73990051	7/24/2007	9:50 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'74280264	9/4/2007	5:37 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	N	S	Turning Left	Stopped
'74280308	9/21/2007	8:10 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'73990089	8/15/2007	5:39 PM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'72780343	5/10/2007	9:11 AM	Fayette	State Route	'005400	0.32	3	'095607	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight

FAYETTE COUNTY, SR 54 @ Line Creek Drive (CS 044507)																			
Accident No	Date	Time	County	Route Type	Route	Milelog	Intersecting Rt Type	Intersecting Rt	Injuries	Fatalities	Harmful Event	Collision	Location of Impact	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
'41340262	4/27/2004	5:38 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'40940018	3/5/2004	6:18 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'40240372	1/5/2004	11:24 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Stopped
'40240414	1/19/2004	4:10 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'45070134	12/15/2004	11:35 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	W	Turning Left	Straight
'44810323	11/18/2004	12:24 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'44810311	11/16/2004	5:32 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	W	Turning Left	Straight
'44140331	10/20/2004	4:09 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'42420563	6/7/2004	6:50 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Turning Left	Straight
'41760334	3/20/2004	6:18 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Other Object (Not Fixed)	Angle	On Roadway	Daylight	Dry	E	S	Stopped	Turning Left
'42080213	5/8/2004	12:07 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'42080209	5/4/2004	8:29 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080268	5/26/2004	6:00 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080262	5/25/2004	6:30 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'42420580	6/11/2004	5:23 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Angle	On Roadway	Dawn	Dry	W	W	Straight	Stopped
'42420576	6/10/2004	5:45 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'42420571	6/9/2004	12:10 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Turning Left
'41340227	4/15/2004	7:50 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43610066	9/7/2004	4:18 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Changing Lanes	Straight
'41340265	4/28/2004	4:15 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'40240398	1/14/2004	3:17 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	W	Turning Left	Straight
'40940048	3/20/2004	6:18 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Other Object (Not Fixed)	Angle	On Roadway	Daylight	Dry	E	S	Stopped	Turning Left
'50590563	1/5/2005	1:00 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'51730239	4/30/2005	2:32 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Straight
'54700464	11/29/2005	11:35 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	N	Turning Left	Turning Left
'55210346	12/12/2005	6:35 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	W	Turning Left	Straight
'55220051	10/11/2005	3:57 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	N	Backing	Stopped
'55210412	12/28/2005	1:29 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Wet	N	S	Backing	Stopped
'54250155	9/8/2005	12:57 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'53760129	8/19/2005	9:10 AM	Fayette	State Route	'005400	0.46	3	'044507	2	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'53760122	8/12/2005	10:33 AM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'50960280	2/22/2005	7:01 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'50960231	2/16/2005	12:06 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'51290391	3/10/2005	5:54 PM	Fayette	State Route	'005400	0.46	3	'044507	2	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight
'60640579	1/2/2006	2:10 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Stopped
'61540511	3/18/2006	1:14 PM	Fayette	State Route	'005400	0.46	3	'044507	1	0	Parked Motor Vehicle	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61540510	3/18/2006	11:59 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	W	Turning Left	Straight
'65460776	12/9/2006	6:13 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	E	E	Straight	Straight
'63690108	8/7/2006	9:12 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'63180249	7/6/2006	7:00 PM	Fayette	State Route	'005400	0.46	3	'044507	2	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'62130559	4/28/2006	5:35 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Lighted	Dry	E	E	Making U-Turn	Straight
'61990163	4/20/2006	6:50 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'60640640	1/26/2006	7:06 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	W	W	Straight	Stopped
'61540477	3/5/2006	1:41 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	E	Straight	Straight
'71530588	3/7/2007	1:53 PM	Fayette	State Route	'005400	0.46	3	'044507	2	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	W	Straight	Straight
'71530621	3/4/2007	7:56 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Not Lighted	Dry	S	E	Turning Left	Straight
'75620309	11/21/2007	8:00 AM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'75080415	10/19/2007	5:20 PM	Fayette	State Route	'005400	0.46	3	'044507	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight
'75080392	10/11/2007	3:50 PM	Fayette	State Route	'005400	0.46	3	'044507	3	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight

FAYETTE COUNTY, SR 54 @ Planters Way (CS 049007)

Accident No	Date	Time	County	Route Type	Route	Milelog	Intersecting Rt Type	Intersecting Rt	Injuries	Fatalities	Harmful Event	Collision	Location of Impact	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2
'41340206	4/5/2004	4:41 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	E	Passing	Changing Lanes
'41340337	4/18/2004	2:37 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'41340213	4/8/2004	12:11 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'41340260	4/27/2004	3:30 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080246	6/19/2004	4:23 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'42080240	6/17/2004	11:37 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Dark-Lighted	Dry	W	W	Changing Lanes	Straight
'42080227	6/13/2004	5:45 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080225	6/13/2004	4:19 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'42080217	5/11/2004	4:58 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'40940055	3/24/2004	7:20 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'40940020	3/7/2004	7:51 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Lighted	Dry	E	W	Turning Left	Straight
'40240451	1/31/2004	12:20 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'40240409	1/17/2004	11:20 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'40240401	1/15/2004	9:15 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Head On	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'40240391	1/12/2004	12:18 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	N	Turning Left	Straight
'40240389	1/11/2004	2:19 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'40240368	1/11/2004	8:32 AM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Lighted	Dry	E	S	Straight	Turning Left
'40600045	2/20/2004	7:53 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	S	S	Straight	Stopped
'44140318	10/11/2004	4:27 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'44140315	10/10/2004	3:29 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Turning Right
'44140307	10/2/2004	9:12 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'44140304	10/1/2004	9:11 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	W	S	Straight	Turning Left
'44140303	10/2/2004	3:01 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Stopped
'44140299	10/5/2004	5:17 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	W	Turning Left	Straight
'44140297	10/8/2004	8:31 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'44140282	10/16/2004	8:35 PM	Fayette	State Route	'005400	0.62	3	'049007	3	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43200563	8/24/2004	1:41 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Stopped
'45070139	12/15/2004	2:28 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	E	Changing Lanes	Turning Left
'45070138	12/4/2004	3:12 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'44810383	12/1/2004	9:34 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'44810356	11/5/2004	7:10 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	S	S	Straight	Stopped
'44140338	10/26/2004	9:52 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Backing	Straight
'43200562	8/23/2004	9:50 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Turning Right	Stopped
'43200548	8/17/2004	3:01 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43200547	8/16/2004	1:20 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'43200524	8/8/2004	5:33 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'43240342	7/29/2004	7:32 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	S	S	Straight	Straight
'43810069	9/25/2004	4:55 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'43810071	6/8/2004	5:23 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight
'42080210	5/4/2004	9:54 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'43200575	8/30/2004	4:53 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'42080207	5/3/2004	5:24 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080278	5/29/2004	10:50 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'42080284	5/28/2004	8:51 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'42080283	5/28/2004	8:03 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Shoulder	Daylight	Dry	E	E	Straight	Stopped
'42420603	8/22/2004	11:51 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Shoulder	Dawn	Dry	E	E	Straight	Stopped
'42880305	7/22/2004	8:51 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'40600023	2/5/2004	6:44 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	S	S	Backing	Stopped
'50960262	2/14/2005	6:32 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Dusk	Dry	W	E	Straight	Straight
'55590602	1/31/2005	1:45 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Head On	On Roadway	Daylight	Dry	E	S	Changing Lanes	Turning Left
'51730201	4/11/2005	7:00 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'51730230	4/30/2005	12:41 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Straight
'55220058	10/5/2005	9:44 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Wet	W	W	Straight	Straight
'54700355	10/4/2005	2:08 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'54700409	11/3/2005	6:09 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Not Lighted	Dry	N	S	Turning Left	Straight
'54700405	11/4/2005	2:57 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	W	Straight	Straight
'54700404	11/8/2005	6:12 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	W	W	Turning Right	Turning Right
'54250212	6/30/2005	6:19 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'54250175	9/15/2005	6:17 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'54250156	9/8/2005	10:38 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'54250153	9/7/2005	9:17 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	E	Passing	Straight
'53740542	7/10/2005	12:23 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Straight
'53760139	8/23/2005	3:15 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'53760134	8/19/2005	5:03 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Daylight	Dry	N	N	Changing Lanes	Straight
'53770135	7/27/2005	9:38 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Other Fixed Object	Not A Collision With A Motor Vehicle	On Roadway	Daylight	Dry	E		Turning Left	
'52950703	6/23/2005	5:13 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'52950698	6/22/2005	5:32 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Sideswipe - Opposite Direction	On Roadway	Daylight	Dry	S	S	Turning Left	Straight
'52950676	6/7/2005	11:24 AM	Fayette	State Route	'005400	0.62	3	'049007	3	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	N	Straight	Straight
'52950658	6/1/2005	3:16 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Stopped
'51290445	3/29/2005	10:44 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'51290438	3/27/2005	9:34 AM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'51290395	3/14/2005	4:26 PM	Fayette	State Route	'005400	0.62	3	'049007	2	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	N	W	Turning Left	Straight
'51730213	4/17/2005	4:48 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'51900526	4/5/2005	1:54 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'55210338	12/9/2005	2:19 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	N	Turning Left	Straight
'55220054	10/8/2005	3:03 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'52410055	5/14/2005	12:25 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Straight
'50590557	1/3/2005	4:22 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'50590589	1/17/2005	8:59 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61090688	2/4/2006	3:08 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Stopped
'63180246	7/5/2006	12:22 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'62810600	8/10/2006	10:15 AM	Fayette	State Route	'005400	0.62	3	'049007	2	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'62810588	8/7/2006	3:52 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'62840576	5/21/2006	2:00 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	W	S	Turning Left	Straight
'62840574	5/20/2006	3:17 AM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Not Lighted	Dry	W	W	Straight	Straight
'62840570	5/18/2006	1:54 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'62840559	5/12/2006	4:59 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Parked Motor Vehicle	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61890145	5/15/2006	11:25 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61540545	3/23/2006	3:44 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Straight	Stopped
'65000201	11/4/2006	1:56 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'64010587	9/9/2006	12:39 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Turning Left	Turning Left
'63180285	7/28/2006	2:00 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'61080730	2/23/2006	4:22 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	E	N	Turning Left	Straight
'61540472	2/24/2006	4:00 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'61540492	3/13/2006	10:41 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Daylight	Dry	S	S	Changing Lanes	Straight
'70570498	1/28/2007	1:45 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Turning Right
'72140391	4/1/2007	6:13 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Curb	Not A Collision With A Motor Vehicle	On Shoulder	Daylight	Wet	E	E	Changing Lanes	Turning Left
'70570492	1/24/2007	11:59 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Turning Right
'70570500	1/27/2007	6:01 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Dark-Lighted	Dry	N	E	Negotiating a Curve	Negotiating a Curve
'72140418	4/8/2007	1:09 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Angle	On Roadway	Daylight	Dry	S	W	Turning Left	Straight
'72780321	5/28/2007	1:08 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Sideswipe - Same Direction	On Roadway	Daylight	Dry	W	W	Changing Lanes	Turning Left
'72780323	4/30/2007	12:42 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'72780371	4/30/2007	12:42 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'71090145	2/8/2007	5:08 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	E	E	Straight	Stopped
'71090144	2/8/2007	4:57 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Wet	W	W	Straight	Straight
'71090131	2/16/2007	12:55 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'71090113	2/28/2007	8:15 PM	Fayette	State Route	'005400	0.62	3	'049007	1	0	Motor Vehicle in Motion	Angle	On Roadway	Dark-Lighted	Dry	S	E	Turning Left	Straight
'75620335	11/29/2007	4:10 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Straight
'75620276	11/10/2007	11:11 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'75080411	10/17/2007	8:11 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	S	S	Straight	Stopped
'75080408	10/14/2007	8:25 AM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	E	E	Straight	Stopped
'72780378	5/18/2007	2:38 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Turning Right
'72780358	5/10/2007	7:08 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	N	N	Straight	Stopped
'72780316	6/1/2007	3:13 PM	Fayette	State Route	'005400	0.62	3	'049007	0	0	Motor Vehicle in Motion	Rear End	On Roadway	Daylight	Dry	W	W	Turning Right	Turning Right

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Appendix D: Signal Warrant Analyses

LAI Engineering
1800 Parkway Place, Suite 720
Marietta, GA 30067

Study Name : **Line Creek Retail**
Study Date : **08/12/08**
Page No. : **1**

Signal Warrants - Summary

Major Street Approaches

Eastbound:
Number of Lanes: **2**
Approach Speed: **45**
Total Approach Volume: **16,382**

Westbound:
Number of Lanes: **2**
Approach Speed: **45**
Total Approach Volume: **20,960**

Minor Street Approaches

Northbound:
Number of Lanes: **2**

Total Approach Volume: **2,708**

Southbound:
Number of Lanes: **2**

Total Approach Volume: **0**

Warrant Summary (Urban values apply.}

Warrant 1 - Eight Hour Vehicular Volumes ..... Satisfied

Warrant 1A - Minimum Vehicular Volume ..... Satisfied
Required volumes reached for 8 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic ..... Satisfied
Required volumes reached for 11 hours, 8 are needed

Warrant 1 A&B - Combination of Warrants ..... Satisfied
Required volumes reached for 10 hours, 8 are needed

Warrant 2 - Four Hour Volumes ..... Satisfied
Number of hours (11) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour ..... Satisfied

Warrant 3A - Peak Hour Volumes ..... Satisfied
Volumes exceed minimums for at least one hour.

Warrant 3B - Peak Hour Delay ..... Satisfied
Number of hours (40) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 4 - Pedestrian Volumes ..... **Not Evaluated**

Warrant 5 - School Crossing ..... **Not Satisfied**
Number of gaps > .0 seconds (0) exceeds the number of minutes in the crossing period (0).

Warrant 6 - Coordinated Signal System ..... **Not Satisfied**
Nearest coordinated signal (760) is less than 1,000 feet away.

Warrant 7 - Crash Experience ..... **Not Satisfied**
Number of accidents (4) is less than minimum (5). Volume minimums are met.

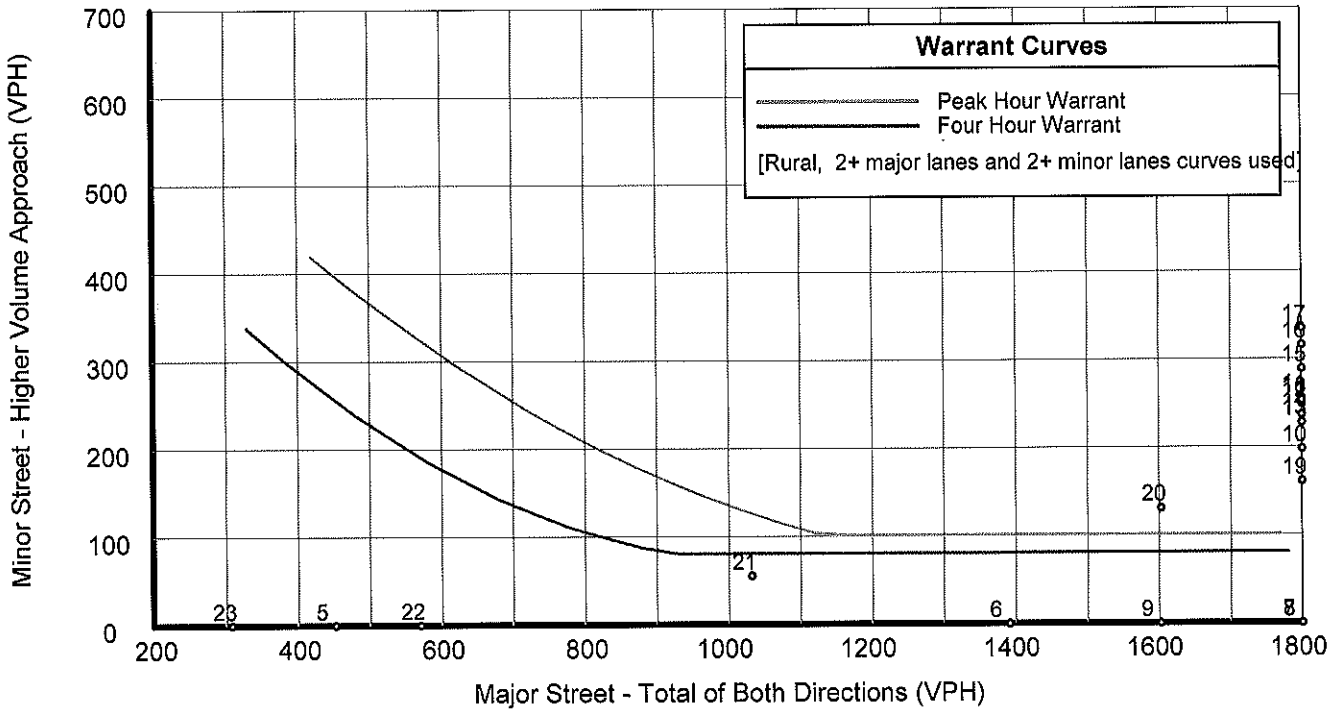
Warrant 8 - Roadway Network ..... **Not Evaluated**

LAI Engineering

1800 Parkway Place, Suite 720
Marietta, GA 30067

Study Name : **Line Creek Retail**
Study Date : **08/12/08**
Page No. : **2**

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants (Maj Crit = Major Criteria, Min Crit = Minor Criteria):

Hour	Major	Higher Minor		War-1A			War-1B			War-1A&B		
Begin	Total	Vol	Dir	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?	Major Crit	Minor Crit	Meets?
00:00	140	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
01:00	76	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
02:00	64	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
03:00	79	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
04:00	145	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
05:00	453	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
06:00	1,392	0	NB	600-Yes	200-No	Major	900-Yes	100-No	Major	720-Yes	160-No	Major
07:00	2,258	0	NB	600-Yes	200-No	Major	900-Yes	100-No	Major	720-Yes	160-No	Major
08:00	2,092	0	NB	600-Yes	200-No	Major	900-Yes	100-No	Major	720-Yes	160-No	Major
09:00	1,603	0	NB	600-Yes	200-No	Major	900-Yes	100-No	Major	720-Yes	160-No	Major
10:00	1,957	198	NB	600-Yes	200-No	Major	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
11:00	2,269	256	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
12:00	2,430	249	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
13:00	2,312	228	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
14:00	2,504	237	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
15:00	2,873	289	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
16:00	3,086	316	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
17:00	3,520	335	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
18:00	2,707	253	NB	600-Yes	200-Yes	Both	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
19:00	1,865	161	NB	600-Yes	200-No	Major	900-Yes	100-Yes	Both	720-Yes	160-Yes	Both
20:00	1,604	131	NB	600-Yes	200-No	Major	900-Yes	100-Yes	Both	720-Yes	160-No	Major
21:00	1,033	55	NB	600-Yes	200-No	Major	900-Yes	100-No	Major	720-Yes	160-No	Major
22:00	571	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---
23:00	309	0	NB	600-No	200-No	---	900-No	100-No	---	720-No	160-No	---

Hourly Variation in Trips

Total Trips for the Driveway One (8,007 trips/day)						
	% of 24-Hr Entering Traffic*	% of 24-Hr Exiting Traffic*	Enter from EB (right) Total	Enter from WB (left) Total	Exit to WB (left) Total	Exit to EB (right) Total
mid-1 am						
1-2 am						
2-3 am						
3-4 am						
4-5 am						
5-6 am						
6-7 am						
7-8 am						
8-9 am						
9-10 am						
10-11 am	7.6	6.5	231	377	198	323
11-12 noon	7.6	8.4	231	377	256	417
12-1 pm	7.6	8.2	231	377	249	407
1-2 pm	6.9	7.5	210	343	228	372
2-3 pm	9	7.8	274	447	237	387
3-4 pm	9.6	9.5	292	477	289	472
4-5 pm	9.7	10.4	295	482	316	516
5-6 pm	10.3	11	313	511	335	546
6-7 pm	7.4	8.3	225	367	253	412
7-8 pm	5.4	5.3	164	268	161	263
8-9 pm	4.2	4.3	128	209	131	213
9-10 pm	1.9	1.8	58	94	55	89
10-11 pm						
11-mid						

** Percentages based **Trip Generation's** Hourly Variation in Shopping Center Traffic*

24-Hour Traffic Data
SR 54 and Line Creek Drive

	Existing (Aug 2008)			Seasonal & Daily Adjustment Factors (2008)			% Directional Distribution		Background 2008 (3.00% growth/year)		
	EB	WB	Both Dir.	EB	WB	Both Dir.	EB	WB	EB	WB	Both Dir.
mid-1 am	35	101	136	35	101	136	26%	74%	36	104	140
1-2 am	23	50	73	23	50	73	32%	68%	24	52	75
2-3 am	20	42	62	20	42	62	32%	68%	21	43	64
3-4 am	55	21	76	55	21	76	72%	28%	57	22	78
4-5 am	102	39	141	102	39	141	72%	28%	105	40	145
5-6 am	333	107	440	333	107	440	76%	24%	343	110	453
6-7 am	1058	293	1351	1058	293	1351	78%	22%	1090	302	1392
7-8 am	1682	511	2193	1682	511	2193	77%	23%	1732	526	2259
8-9 am	1409	622	2031	1409	622	2031	69%	31%	1451	641	2092
9-10 am	915	642	1557	915	642	1557	59%	41%	942	661	1604
10-11 am	842	692	1534	842	692	1534	55%	45%	867	713	1580
11-12 noon	848	989	1837	848	989	1837	46%	54%	873	1019	1892
12-1 pm	896	1097	1993	896	1097	1993	45%	55%	923	1130	2053
1-2 pm	872	1040	1912	872	1040	1912	46%	54%	898	1071	1969
2-3 pm	874	1123	1997	874	1123	1997	44%	56%	900	1157	2057
3-4 pm	1003	1323	2326	1003	1323	2326	43%	57%	1033	1363	2396
4-5 pm	1072	1456	2528	1072	1456	2528	42%	58%	1104	1500	2604
5-6 pm	1125	1796	2921	1125	1796	2921	39%	61%	1159	1850	3009
6-7 pm	966	1306	2272	966	1306	2272	43%	57%	995	1345	2340
7-8 pm	611	940	1551	611	940	1551	39%	61%	629	968	1598
8-9 pm	434	920	1354	434	920	1354	32%	68%	447	948	1395
9-10 pm	348	564	912	348	564	912	38%	62%	358	581	939
10-11 pm	251	303	554	251	303	554	45%	55%	259	312	571
11-mid	132	168	300	132	168	300	44%	56%	136	173	309
	15906	16145	32051	15906	16145	32051	50%	50%	16383	16629	33013

Adjustment Factors:

Seasonal	*1.00*	43%	57%
Daily	*1.00*		

2008 Total Hourly Traffic Volumes for Signal Warrants Analysis
SR 54 & Line Creek Drive

SR 54				
	EB		WB	
	Thru	Right	Thru	Left
mid-1 am	36		104	
1-2 am	24		52	
2-3 am	21		43	
3-4 am	57		22	
4-5 am	105		40	
5-6 am	343		110	
6-7 am	1090		302	
7-8 am	1732		526	
8-9 am	1451		641	
9-10 am	942		661	
10-11 am	867	231	713	377
11-12 noon	873	231	1019	377
12-1 pm	923	231	1130	377
1-2 pm	898	210	1071	343
2-3 pm	900	274	1157	447
3-4 pm	1033	292	1363	477
4-5 pm	1104	295	1500	482
5-6 pm	1159	313	1850	511
6-7 pm	995	225	1345	367
7-8 pm	629	164	968	268
8-9 pm	447	128	948	209
9-10 pm	358	58	581	94
10-11 pm	259		312	
11-mid	136		173	
	16383	2653	16629	4329

Line Creek Drive		
	NB	
	Left	Right
mid-1 am		
1-2 am		
2-3 am		
3-4 am		
4-5 am		
5-6 am		
6-7 am		
7-8 am		
8-9 am		
9-10 am		
10-11 am	198	323
11-12 noon	256	417
12-1 pm	249	407
1-2 pm	228	372
2-3 pm	237	387
3-4 pm	289	472
4-5 pm	316	516
5-6 pm	335	546
6-7 pm	253	412
7-8 pm	161	263
8-9 pm	131	213
9-10 pm	55	89
10-11 pm		
11-mid		
	2708	4418

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Appendix E: Capacity Analyses

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Existing Traffic Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	1023	0	1	1716	234	1	0	2	154	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		0	225		255	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	115		25	130		155	25		25	25		25
Satd. Flow (prot)	1770	3406	0	1805	3406	1583	0	1701	0	1770	1583	0
Flt Permitted	0.047			0.241				0.939		0.750		
Satd. Flow (perm)	88	3406	0	458	3406	1583	0	1624	0	1397	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						237		8			89	
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		415			760			336			348	
Travel Time (s)		6.3			17.3			7.6			7.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.25	0.25	0.25	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	0%	0%	6%	2%	0%	0%	0%	2%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1162	0	1	2019	275	0	12	0	192	90	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		2	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	
Total Split (s)	11.0	121.0	0.0	110.0	110.0	110.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	7.3%	80.7%	0.0%	73.3%	73.3%	73.3%	19.3%	19.3%	0.0%	19.3%	19.3%	0.0%
Maximum Green (s)	7.0	117.0		106.0	106.0	106.0	25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		6.0		6.0	6.0	6.0	11.0	11.0		11.0	11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	118.7	118.7		108.0	108.0	108.0		23.3		23.3	23.3	
Actuated g/C Ratio	0.79	0.79		0.72	0.72	0.72		0.16		0.16	0.16	
v/c Ratio	0.59	0.43		0.00	0.82	0.23		0.05		0.88	0.28	
Control Delay	32.1	5.7		1.0	8.6	0.0		32.7		98.7	12.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	32.1	5.7		1.0	8.6	0.0		32.7		98.7	12.6	
LOS	C	A		A	A	A		C		F	B	
Approach Delay		7.5			7.5			32.7			71.2	
Approach LOS		A			A			C			E	
Queue Length 50th (ft)	17	174		0	120	0		3		184	1	
Queue Length 95th (ft)	72	198		m0	m104	m0		2		#257	37	
Internal Link Dist (ft)		335			680			256			268	
Turn Bay Length (ft)	230			225		255						
Base Capacity (vph)	148	2696		330	2453	1206		277		233	338	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.57	0.43		0.00	0.82	0.23		0.04		0.82	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 140 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR 54 & McDuff Pkwy

ø1	ø2	ø4
11 s	110 s	29 s
ø6		ø8
121 s		29 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	978	12	84	1772	286	93	26	29	280	36	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		225	160		300	0		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	130		100	130		95	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	1770	1716	0	1681	1630	0
Flt Permitted	0.054			0.145			0.950			0.950	0.979	
Satd. Flow (perm)	101	3406	1583	270	3406	1583	1770	1716	0	1681	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			7			126		36			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		816			379			355			361	
Travel Time (s)		18.5			8.6			8.1			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.67	0.67	0.67	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										29%		
Lane Group Flow (vph)	184	1124	14	95	2014	325	139	82	0	265	256	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	4	4		3	3	
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	7.0	42.0	42.0	7.0	23.0	23.0	46.0	46.0		48.0	48.0	
Total Split (s)	12.0	42.0	42.0	12.0	42.0	42.0	47.0	47.0	0.0	49.0	49.0	0.0
Total Split (%)	8.0%	28.0%	28.0%	8.0%	28.0%	28.0%	31.3%	31.3%	0.0%	32.7%	32.7%	0.0%
Maximum Green (s)	6.0	36.0	36.0	6.0	36.0	36.0	41.0	41.0		43.0	43.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Flash Dont Walk (s)		31.0	31.0		13.0	13.0	36.0	36.0		38.0	38.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	79.6	73.6	73.6	79.6	73.6	73.6	17.2	17.2		29.2	29.2	
Actuated g/C Ratio	0.53	0.49	0.49	0.53	0.49	0.49	0.11	0.11		0.19	0.19	
v/c Ratio	1.53	0.67	0.02	0.47	1.20	0.39	0.68	0.36		0.81	0.76	
Control Delay	304.4	26.9	14.3	37.5	132.3	17.5	80.3	38.8		76.0	66.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	304.4	26.9	14.3	37.5	132.3	17.5	80.3	38.8		76.0	66.4	
LOS	F	C	B	D	F	B	F	D		E	E	
Approach Delay		65.4			113.3			64.9			71.3	
Approach LOS		E			F			E			E	
Queue Length 50th (ft)	~203	332	2	41	~1256	116	133	42		264	231	
Queue Length 95th (ft)	m#358	451	m11	86	#1531	227	144	59		277	248	
Internal Link Dist (ft)		736			299			275			281	
Turn Bay Length (ft)	180		225	160		300						
Base Capacity (vph)	120	1672	780	203	1672	841	484	495		482	483	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.53	0.67	0.02	0.47	1.20	0.39	0.29	0.17		0.55	0.53	

Intersection Summary

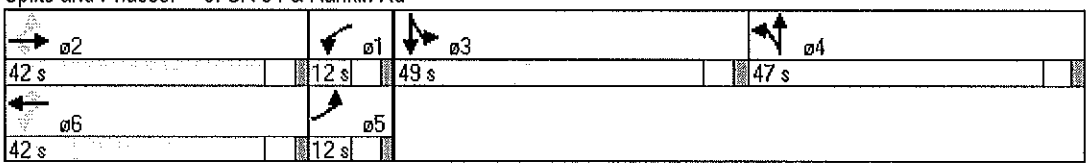
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 2 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.53
Intersection Signal Delay: 92.0 Intersection LOS: F
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: SR 54 & Rankin Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	1209	0	0	1988	14	1	0	1	9	0	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	210		160	185		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	130		45	150		45	25		25	25		25
Satd. Flow (prot)	1770	3406	0	1863	3406	1583	0	1694	0	1770	0	0
Flt Permitted	0.950							0.976		0.950	0.999	
Satd. Flow (perm)	1770	3406	0	1863	3406	1583	0	1694	0	1770	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		760			816			268			227	
Travel Time (s)		17.3			18.5			6.1			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91	0.91	0.92	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	26	1314	0	0	2161	15	0	2	0	9	56	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization Err% ICU Level of Service H
Analysis Period (min) 15

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Future Traffic Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1062	25	71	1775	242	34	1	74	160	1	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		150	225		175	0		0	0		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	115		25	130		155	25		25	25		25
Satd. Flow (prot)	1770	3406	1615	1805	3406	1583	0	1813	1615	1770	1587	0
Flt Permitted	0.036			0.226				0.590		0.493		
Satd. Flow (perm)	67	3406	1615	429	3406	1583	0	1121	1615	918	1587	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			28			170			142		86	
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		415			307			336			348	
Travel Time (s)		6.3			7.0			7.6			7.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.25	0.25	0.25	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	0%	0%	6%	2%	0%	0%	0%	2%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	1207	28	84	2088	285	0	140	296	200	93	0
Turn Type	pm+pt		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases	1	6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Detector Phase	1	6	6	2	2	2	4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	11.0	121.0	121.0	110.0	110.0	110.0	29.0	29.0	29.0	29.0	29.0	0.0
Total Split (%)	7.3%	80.7%	80.7%	73.3%	73.3%	73.3%	19.3%	19.3%	19.3%	19.3%	19.3%	0.0%
Maximum Green (s)	7.0	117.0	117.0	106.0	106.0	106.0	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		6.0	6.0	6.0	6.0	6.0	11.0	11.0	11.0	11.0	11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0	0	0	0	
Act Effct Green (s)	117.0	117.0	117.0	106.1	106.1	106.1		25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.78	0.78	0.78	0.71	0.71	0.71		0.17	0.17	0.17	0.17	
v/c Ratio	0.68	0.45	0.02	0.28	0.87	0.24		0.75	0.76	1.31	0.28	
Control Delay	50.4	6.3	1.2	2.2	11.5	0.1		83.8	44.3	224.3	14.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	50.4	6.3	1.2	2.2	11.5	0.1		83.8	44.3	224.3	14.5	
LOS	D	A	A	A	B	A		F	D	F	B	
Approach Delay		9.1			9.9			57.0			157.7	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	34	185	0	9	141	3		132	149	~251	6	
Queue Length 95th (ft)	#108	210	7	m4	m94	m0		52	0	#354	44	
Internal Link Dist (ft)		335			227			256			268	
Turn Bay Length (ft)	230		150	225		175						
Base Capacity (vph)	132	2657	1266	303	2410	1170		187	388	153	336	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.67	0.45	0.02	0.28	0.87	0.24		0.75	0.76	1.31	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 140 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 23.8 — Intersection LOS: C
Intersection Capacity Utilization 78.9% — ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR 54 & McDuff Pkwy

ø1	ø2	ø4
11 s	110 s	29 s
ø6		ø8
121 s		29 s

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Volume (vph)	1286	9	0	2089	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)		25	25		25	25
Satd. Flow (prot)	3539	1583	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1583	0	3539	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	307			453	208	
Travel Time (s)	7.0			10.3	4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1413	10	0	2296	0	2
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	1069	35	87	1885	286	118	26	30	280	36	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		225	160		300	0		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	130		100	130		95	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	1770	1714	0	1681	1630	0
Flt Permitted	0.057			0.103			0.950			0.950	0.979	
Satd. Flow (perm)	106	3406	1583	192	3406	1583	1770	1714	0	1681	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			20			118		38			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		816			379			355			361	
Travel Time (s)		18.5			8.6			8.1			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.67	0.67	0.67	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										29%		
Lane Group Flow (vph)	184	1229	40	99	2142	325	176	84	0	265	256	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	4	4		3	3	
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	7.0	42.0	42.0	7.0	23.0	23.0	46.0	46.0		48.0	48.0	
Total Split (s)	12.0	42.0	42.0	12.0	42.0	42.0	47.0	47.0	0.0	49.0	49.0	0.0
Total Split (%)	8.0%	28.0%	28.0%	8.0%	28.0%	28.0%	31.3%	31.3%	0.0%	32.7%	32.7%	0.0%
Maximum Green (s)	6.0	36.0	36.0	6.0	36.0	36.0	41.0	41.0		43.0	43.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Flash Dont Walk (s)		31.0	31.0		13.0	13.0	36.0	36.0		38.0	38.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	76.5	70.5	70.5	76.5	70.5	70.5	20.3	20.3		29.2	29.2	
Actuated g/C Ratio	0.51	0.47	0.47	0.51	0.47	0.47	0.14	0.14		0.19	0.19	
v/c Ratio	1.52	0.77	0.05	0.61	1.34	0.40	0.73	0.32		0.81	0.76	
Control Delay	300.8	29.9	11.7	55.5	189.6	19.8	79.4	35.1		76.0	66.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	300.8	29.9	11.7	55.5	189.6	19.8	79.4	35.1		76.0	66.4	
LOS	F	C	B	E	F	B	E	D		E	E	
Approach Delay		63.7			162.9			65.1			71.3	
Approach LOS		E			F			E			E	
Queue Length 50th (ft)	~202	384	6	45	~1431	127	168	41		264	231	
Queue Length 95th (ft)	m#343	m#693	m22	#113	#1709	244	172	57		277	248	
Internal Link Dist (ft)		736			299			275			281	
Turn Bay Length (ft)	180		225	160		300						
Base Capacity (vph)	121	1600	754	161	1600	806	484	496		482	483	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.52	0.77	0.05	0.61	1.34	0.40	0.36	0.17		0.55	0.53	

Intersection Summary

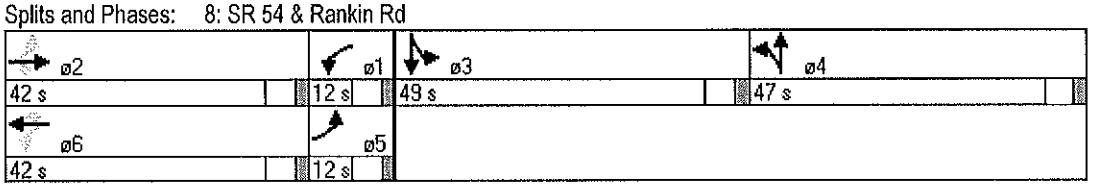
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 1 (1%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.52
Intersection Signal Delay: 117.6 Intersection LOS: F
Intersection Capacity Utilization 93.6% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: SR 54 & Rankin Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1319	0	12	2118	14	10	0	13	9	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	210		160	185		90	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	130		45	150		45	25		25	25		25
Satd. Flow (prot)	1770	3406	0	1770	3406	1583	0	1683	0	1770	0	0
Flt Permitted	0.950			0.950				0.978		0.950	0.999	
Satd. Flow (perm)	1770	3406	0	1770	3406	1583	0	1683	0	1770	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		453			816			298			227	
Travel Time (s)		10.3			18.5			6.8			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91	0.91	0.92	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	27	1434	0	13	2302	15	0	25	0	9	59	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization Err% ICU Level of Service H
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	77	1138	25	223	71	1858	255	34	1	74	171	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	230		150		225		175	0		0	0	
Storage Lanes	1		1		1		1	0		1	1	
Taper Length (ft)	115		25		130		155	25		25	25	
Satd. Flow (prot)	1770	3406	1615	0	1779	3406	1583	0	1813	1615	1770	1587
Flt Permitted	0.036				0.203				0.590		0.493	
Satd. Flow (perm)	67	3406	1615	0	380	3406	1583	0	1121	1615	918	1587
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)			28				171			79		83
Link Speed (mph)		45				30			30			30
Link Distance (ft)		415				307			336			348
Travel Time (s)		6.3				7.0			7.6			7.9
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.91	0.85	0.85	0.85	0.25	0.25	0.25	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	0%	2%	0%	6%	2%	0%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	1293	28	0	329	2186	300	0	140	296	214	93
Turn Type	pm+pt		Perm	Perm	Perm		Perm	Perm		Perm	Perm	
Protected Phases	1	6				2			4			8
Permitted Phases	6		6	2	2		2	4		4	8	
Detector Phase	1	6	6	2	2	2	2	4	4	4	8	8
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	121.0	121.0	110.0	110.0	110.0	110.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	7.3%	80.7%	80.7%	73.3%	73.3%	73.3%	73.3%	19.3%	19.3%	19.3%	19.3%	19.3%
Maximum Green (s)	7.0	117.0	117.0	106.0	106.0	106.0	106.0	25.0	25.0	25.0	25.0	25.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None
Walk Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		6.0	6.0	6.0	6.0	6.0	6.0	11.0	11.0	11.0	11.0	11.0

Lane Group	SBR
Lane Configurations	
Volume (vph)	74
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	25
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.80
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	

Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	117.0	117.0	117.0		106.1	106.1	106.1		25.0	25.0	25.0	25.0
Actuated g/C Ratio	0.78	0.78	0.78		0.71	0.71	0.71		0.17	0.17	0.17	0.17
v/c Ratio	0.68	0.49	0.02		1.22	0.91	0.26		0.75	0.88	1.40	0.28
Control Delay	50.4	6.6	1.2		122.9	12.1	0.1		83.8	71.4	257.9	15.5
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	50.4	6.6	1.2		122.9	12.1	0.1		83.8	71.4	257.9	15.5
LOS	D	A	A		F	B	A		F	E	F	B
Approach Delay		9.2				23.8			75.4			184.5
Approach LOS		A				C			E			F
Queue Length 50th (ft)	34	205	0		~403	153	2		132	216	~279	8
Queue Length 95th (ft)	#108	233	7		m92	m66	m0		52	25	#384	46
Internal Link Dist (ft)		335				227			256			268
Turn Bay Length (ft)	230		150		225		175					
Base Capacity (vph)	132	2657	1266		269	2410	1170		187	335	153	334
Starvation Cap Reductn	0	0	0		0	0	0		0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0		0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0		0	0	0	0
Reduced v/c Ratio	0.67	0.49	0.02		1.22	0.91	0.26		0.75	0.88	1.40	0.28

Intersection Summary

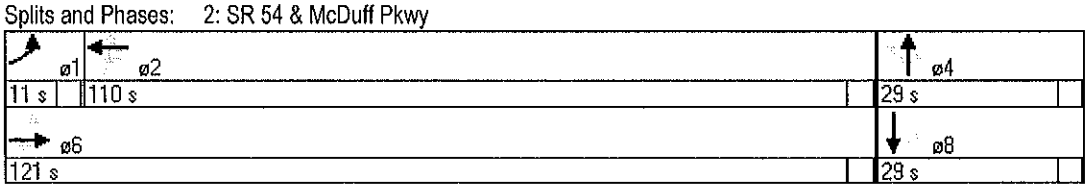
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 144 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 34.1 — Intersection LOS: C
Intersection Capacity Utilization 81.8% — ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR 54 & McDuff Pkwy



Lane Group	SBR
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1603	33	0	2474	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)		25	25		25	25
Satd. Flow (prot)	3539	1583	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1583	0	3539	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	307			453	208	
Travel Time (s)	7.0			10.3	4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1762	36	0	2719	0	16
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	178	165	1212	43	87	2017	286	125	26	30	280	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		180		225	160		300	0		0	0	
Storage Lanes		1		1	1		1	1		0	1	
Taper Length (ft)		130		100	130		95	25		25	25	
Satd. Flow (prot)	0	1770	3406	1583	1770	3406	1583	1770	1714	0	1681	1627
Flt Permitted		0.058			0.058			0.950			0.950	0.980
Satd. Flow (perm)	0	108	3406	1583	108	3406	1583	1770	1714	0	1681	1627
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				21			111		38			24
Link Speed (mph)			30			30			30			30
Link Distance (ft)			816			379			355			361
Travel Time (s)			18.5			8.6			8.1			8.2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.87	0.87	0.87	0.88	0.88	0.88	0.67	0.67	0.67	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Shared Lane Traffic (%)											28%	
Lane Group Flow (vph)	0	386	1393	49	99	2292	325	187	84	0	269	259
Turn Type	custom	pm+pt		Perm	pm+pt		Perm	Split			Split	
Protected Phases		5	2		1	6		4	4		3	3
Permitted Phases	5	2		2	6		6					
Detector Phase	5	5	2	2	1	6	6	4	4		3	3
Switch Phase												
Minimum Initial (s)	1.0	1.0	4.0	4.0	1.0	4.0	4.0	2.0	2.0		2.0	2.0
Minimum Split (s)	7.0	7.0	42.0	42.0	7.0	23.0	23.0	46.0	46.0		48.0	48.0
Total Split (s)	12.0	12.0	42.0	42.0	12.0	42.0	42.0	47.0	47.0	0.0	49.0	49.0
Total Split (%)	8.0%	8.0%	28.0%	28.0%	8.0%	28.0%	28.0%	31.3%	31.3%	0.0%	32.7%	32.7%
Maximum Green (s)	6.0	6.0	36.0	36.0	6.0	36.0	36.0	41.0	41.0		43.0	43.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None
Walk Time (s)			4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0
Flash Dont Walk (s)			31.0	31.0		13.0	13.0	36.0	36.0		38.0	38.0

Lane Group	SBR
Lane Configurations	
Volume (vph)	80
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	25
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.75
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Pedestrian Calls (#/hr)			0	0		0	0	0	0		0	0
Act Effct Green (s)		75.0	69.0	69.0	75.0	69.0	69.0	21.3	21.3		29.7	29.7
Actuated g/C Ratio		0.50	0.46	0.46	0.50	0.46	0.46	0.14	0.14		0.20	0.20
v/c Ratio		3.19	0.89	0.07	0.82	1.46	0.41	0.75	0.30		0.81	0.76
Control Delay		1026.0	40.1	15.5	94.3	243.3	21.3	79.0	34.2		75.2	65.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		1026.0	40.1	15.5	94.3	243.3	21.3	79.0	34.2		75.2	65.0
LOS		F	D	B	F	F	C	E	C		E	E
Approach Delay			247.6			211.3			65.2			70.2
Approach LOS			F			F			E			E
Queue Length 50th (ft)		~617	574	11	46	~1608	134	178	40		268	232
Queue Length 95th (ft)		m#750	m#859	m34	#173	#1882	255	180	57		281	249
Internal Link Dist (ft)			736			299			275			281
Turn Bay Length (ft)		180		225	160		300					
Base Capacity (vph)		121	1567	740	121	1567	788	484	496		482	484
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		3.19	0.89	0.07	0.82	1.46	0.41	0.39	0.17		0.56	0.54

Intersection Summary

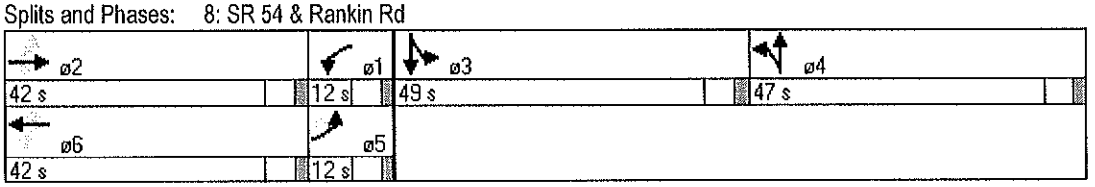
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 5 (3%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 3.19
Intersection Signal Delay: 202.4 — Intersection LOS: F
Intersection Capacity Utilization 107.6% — ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: SR 54 & Rankin Rd



Lane Group	SBR
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1302	329	0	2228	14	0	0	377	9	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	210		160	185		90	0		0	0		0
Storage Lanes	1		1	0		1	0		1	0		0
Taper Length (ft)	130		45	150		45	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	0	3406	1583	0	0	1611	0	1637	0
Flt Permitted	0.950										0.993	
Satd. Flow (perm)	1770	3406	1583	0	3406	1583	0	0	1611	0	1637	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		453			816			298			227	
Travel Time (s)		10.3			18.5			6.8			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91	0.91	0.92	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1415	362	0	2422	15	0	0	414	0	68	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1138	25	71	1858	255	34	1	74	171	1	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		150	225		175	0		0	0		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	115		25	130		155	25		25	25		25
Satd. Flow (prot)	1770	3406	1615	1805	3406	1583	0	1813	1615	1770	1587	0
Flt Permitted	0.036			0.203				0.590		0.493		
Satd. Flow (perm)	67	3406	1615	386	3406	1583	0	1121	1615	918	1587	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			28			171			122		83	
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		415			307			336			348	
Travel Time (s)		6.3			7.0			7.6			7.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.25	0.25	0.25	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	0%	0%	6%	2%	0%	0%	0%	2%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	1293	28	84	2186	300	0	140	296	214	93	0
Turn Type	pm+pt		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases	1	6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Detector Phase	1	6	6	2	2	2	4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	11.0	121.0	121.0	110.0	110.0	110.0	29.0	29.0	29.0	29.0	29.0	0.0
Total Split (%)	7.3%	80.7%	80.7%	73.3%	73.3%	73.3%	19.3%	19.3%	19.3%	19.3%	19.3%	0.0%
Maximum Green (s)	7.0	117.0	117.0	106.0	106.0	106.0	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		6.0	6.0	6.0	6.0	6.0	11.0	11.0	11.0	11.0	11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0	0	0	0	
Act Effct Green (s)	117.0	117.0	117.0	106.1	106.1	106.1		25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.78	0.78	0.78	0.71	0.71	0.71		0.17	0.17	0.17	0.17	
v/c Ratio	0.68	0.49	0.02	0.31	0.91	0.26		0.75	0.80	1.40	0.28	
Control Delay	50.4	6.6	1.2	2.5	13.4	0.1		83.8	51.4	257.9	15.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	50.4	6.6	1.2	2.5	13.4	0.1		83.8	51.4	257.9	15.5	
LOS	D	A	A	A	B	A		F	D	F	B	
Approach Delay		9.2			11.5			61.8			184.5	
Approach LOS		A			B			E			F	
Queue Length 50th (ft)	34	205	0	9	161	3		132	170	~279	8	
Queue Length 95th (ft)	#108	233	7	m5	m87	m0		52	0	#384	46	
Internal Link Dist (ft)		335			227			256			268	
Turn Bay Length (ft)	230		150	225		175						
Base Capacity (vph)	132	2657	1266	273	2410	1170		187	371	153	334	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.67	0.49	0.02	0.31	0.91	0.26		0.75	0.80	1.40	0.28	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 139 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 26.7 — Intersection LOS: C
Intersection Capacity Utilization 81.8% — ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR 54 & McDuff Pkwy

ø1	ø2	ø4
11 s	110 s	29 s
ø6		ø8
121 s		29 s

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1380	33	0	2251	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)		25	25		25	25
Satd. Flow (prot)	3539	1583	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1583	0	3539	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	307			453	208	
Travel Time (s)	7.0			10.3	4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1516	36	0	2474	0	16
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1212	43	87	2017	286	125	26	30	280	36	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		225	160		300	0		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	130		100	130		95	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	1770	1714	0	1681	1627	0
Flt Permitted	0.058			0.058			0.950			0.950	0.980	
Satd. Flow (perm)	108	3406	1583	108	3406	1583	1770	1714	0	1681	1627	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			21			111		38			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		816			379			355			361	
Travel Time (s)		18.5			8.6			8.1			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.67	0.67	0.67	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										28%		
Lane Group Flow (vph)	190	1393	49	99	2292	325	187	84	0	269	259	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	4	4		3	3	
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	7.0	42.0	42.0	7.0	23.0	23.0	46.0	46.0		48.0	48.0	
Total Split (s)	12.0	42.0	42.0	12.0	42.0	42.0	47.0	47.0	0.0	49.0	49.0	0.0
Total Split (%)	8.0%	28.0%	28.0%	8.0%	28.0%	28.0%	31.3%	31.3%	0.0%	32.7%	32.7%	0.0%
Maximum Green (s)	6.0	36.0	36.0	6.0	36.0	36.0	41.0	41.0		43.0	43.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	6.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Flash Dont Walk (s)		31.0	31.0		13.0	13.0	36.0	36.0		38.0	38.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	75.0	69.0	69.0	75.0	69.0	69.0	21.3	21.3		29.7	29.7	
Actuated g/C Ratio	0.50	0.46	0.46	0.50	0.46	0.46	0.14	0.14		0.20	0.20	
v/c Ratio	1.57	0.89	0.07	0.82	1.46	0.41	0.75	0.30		0.81	0.76	
Control Delay	322.4	37.8	13.9	94.3	243.3	21.3	79.0	34.2		75.2	65.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	322.4	37.8	13.9	94.3	243.3	21.3	79.0	34.2		75.2	65.0	
LOS	F	D	B	F	F	C	E	C		E	E	
Approach Delay		70.2			211.3			65.2			70.2	
Approach LOS		E			F			E			E	
Queue Length 50th (ft)	~214	540	10	46	~1608	134	178	40		268	232	
Queue Length 95th (ft)	m#356	m#882	m30	#173	#1882	255	180	57		281	249	
Internal Link Dist (ft)		736			299			275			281	
Turn Bay Length (ft)	180		225	160		300						
Base Capacity (vph)	121	1567	740	121	1567	788	484	496		482	484	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.57	0.89	0.07	0.82	1.46	0.41	0.39	0.17		0.56	0.54	

Intersection Summary

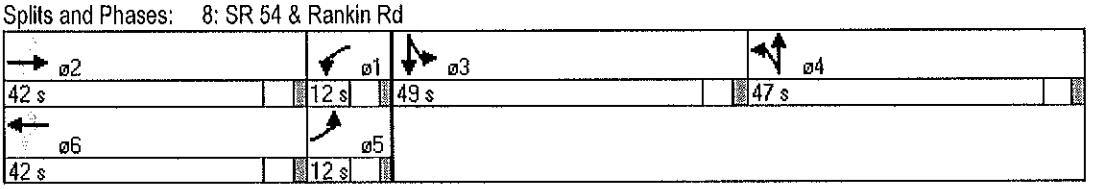
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.57
Intersection Signal Delay: 144.4 — Intersection LOS: F
Intersection Capacity Utilization 97.7% — ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: SR 54 & Rankin Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1302	106	223	2050	14	178	0	199	9	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	210		160	185		90	0		0	0		0
Storage Lanes	1		1	1		1	0		1	0		1
Taper Length (ft)	130		45	150		45	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	0	1770	1583	0	1770	1583
Flt Permitted	0.950			0.950				0.950			0.950	
Satd. Flow (perm)	1770	3406	1583	1770	3406	1583	0	1770	1583	0	1770	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		453			816			298			227	
Travel Time (s)		10.3			18.5			6.8			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91	0.91	0.92	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1415	116	245	2228	15	0	196	219	0	10	58
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 86.5% ICU Level of Service E
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1138	25	71	1858	255	34	1	74	171	1	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		150	225		175	0		0	0		0
Storage Lanes	1		1	1		1	0		1	1		0
Taper Length (ft)	115		25	130		155	25		25	25		25
Satd. Flow (prot)	1770	3406	1615	1805	3406	1583	0	1813	1615	1770	1587	0
Flt Permitted	0.036			0.203				0.590		0.493		
Satd. Flow (perm)	67	3406	1615	386	3406	1583	0	1121	1615	918	1587	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			28			171			122		83	
Link Speed (mph)		45			30			30			30	
Link Distance (ft)		415			307			336			348	
Travel Time (s)		6.3			7.0			7.6			7.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.25	0.25	0.25	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	0%	0%	6%	2%	0%	0%	0%	2%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	1293	28	84	2186	300	0	140	296	214	93	0
Turn Type	pm+pt		Perm	Perm		Perm	Perm		Perm	Perm		
Protected Phases	1	6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		
Detector Phase	1	6	6	2	2	2	4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	11.0	121.0	121.0	110.0	110.0	110.0	29.0	29.0	29.0	29.0	29.0	0.0
Total Split (%)	7.3%	80.7%	80.7%	73.3%	73.3%	73.3%	19.3%	19.3%	19.3%	19.3%	19.3%	0.0%
Maximum Green (s)	7.0	117.0	117.0	106.0	106.0	106.0	25.0	25.0	25.0	25.0	25.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		6.0	6.0	6.0	6.0	6.0	11.0	11.0	11.0	11.0	11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0	0	0	0	
Act Effct Green (s)	117.0	117.0	117.0	106.1	106.1	106.1		25.0	25.0	25.0	25.0	
Actuated g/C Ratio	0.78	0.78	0.78	0.71	0.71	0.71		0.17	0.17	0.17	0.17	
v/c Ratio	0.68	0.49	0.02	0.31	0.91	0.26		0.75	0.80	1.40	0.28	
Control Delay	50.4	6.6	1.2	6.6	12.4	1.7		83.8	51.4	257.9	15.5	
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0		0.0	0.0	0.0	0.0	
Total Delay	50.4	6.6	1.2	6.6	12.5	1.7		83.8	51.4	257.9	15.5	
LOS	D	A	A	A	B	A		F	D	F	B	
Approach Delay		9.2			11.0			61.8			184.5	
Approach LOS		A			B			E			F	
Queue Length 50th (ft)	34	205	0	10	162	3		132	170	~279	8	
Queue Length 95th (ft)	#108	233	7	m36	387	55		52	0	#384	46	
Internal Link Dist (ft)		335			227			256			268	
Turn Bay Length (ft)	230		150	225		175						
Base Capacity (vph)	132	2657	1266	273	2410	1170		187	371	153	334	
Starvation Cap Reductn	0	0	0	0	8	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.67	0.49	0.02	0.31	0.91	0.26		0.75	0.80	1.40	0.28	

Intersection Summary

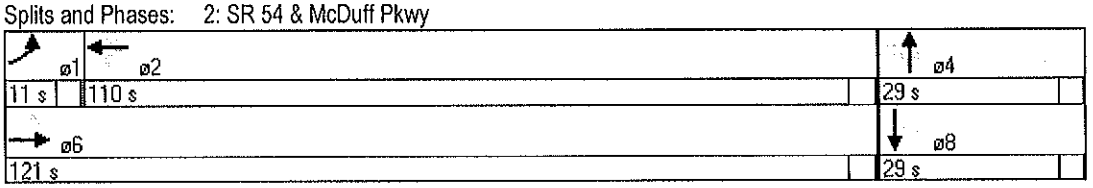
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 13 (9%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 26.4 — Intersection LOS: C
Intersection Capacity Utilization 81.8% — ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR 54 & McDuff Pkwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1380	33	0	2251	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		150	0		0	0
Storage Lanes		1	0		0	1
Taper Length (ft)		25	25		25	25
Satd. Flow (prot)	3539	1583	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1583	0	3539	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	307			453	208	
Travel Time (s)	7.0			10.3	4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1516	36	0	2474	0	16
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1212	43	87	2017	286	125	26	30	280	36	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		225	160		300	0		0	0		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	130		100	130		95	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	1770	1714	0	1681	1627	0
Flt Permitted	0.052			0.080			0.950			0.950	0.980	
Satd. Flow (perm)	97	3406	1583	149	3406	1583	1770	1714	0	1681	1627	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			22			116		39			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		816			379			355			361	
Travel Time (s)		18.5			8.6			8.1			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.87	0.87	0.87	0.88	0.88	0.88	0.67	0.67	0.67	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)										28%		
Lane Group Flow (vph)	190	1393	49	99	2292	325	187	84	0	269	259	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	4	4		3	3	
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0	1.0	4.0	4.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	7.0	42.0	42.0	7.0	23.0	23.0	46.0	46.0		48.0	48.0	
Total Split (s)	8.0	46.0	46.0	8.0	46.0	46.0	47.0	47.0	0.0	49.0	49.0	0.0
Total Split (%)	5.3%	30.7%	30.7%	5.3%	30.7%	30.7%	31.3%	31.3%	0.0%	32.7%	32.7%	0.0%
Maximum Green (s)	3.5	41.5	41.5	3.5	41.5	41.5	42.5	42.5		44.5	44.5	
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5		2.5	2.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	4.5	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Flash Dont Walk (s)		31.0	31.0		13.0	13.0	36.0	36.0		38.0	38.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	81.0	77.5	77.5	81.0	77.5	77.5	21.3	21.3		29.8	29.8	
Actuated g/C Ratio	0.54	0.52	0.52	0.54	0.52	0.52	0.14	0.14		0.20	0.20	
v/c Ratio	2.07	0.79	0.06	0.84	1.30	0.37	0.75	0.30		0.81	0.76	
Control Delay	541.4	28.4	10.3	89.2	172.2	16.9	79.0	33.7		75.1	64.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	541.4	28.4	10.3	89.2	172.2	16.9	79.0	33.7		75.1	64.8	
LOS	F	C	B	F	F	B	E	C		E	E	
Approach Delay		87.6			150.6			65.0			70.0	
Approach LOS		F			F			E			E	
Queue Length 50th (ft)	~202	454	8	43	~1505	115	178	39		268	232	
Queue Length 95th (ft)	#418	#836	31	#117	#1780	227	180	56		281	249	
Internal Link Dist (ft)		736			299			275			281	
Turn Bay Length (ft)	180		225	160		300						
Base Capacity (vph)	92	1759	828	118	1759	874	502	514		499	500	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	2.07	0.79	0.06	0.84	1.30	0.37	0.37	0.16		0.54	0.52	

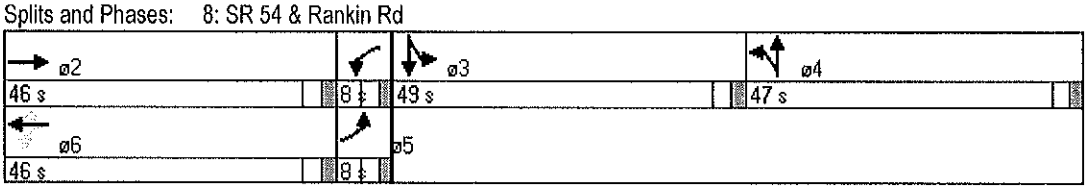
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 25 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.07
Intersection Signal Delay: 117.9 — Intersection LOS: F
Intersection Capacity Utilization 94.0% — ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

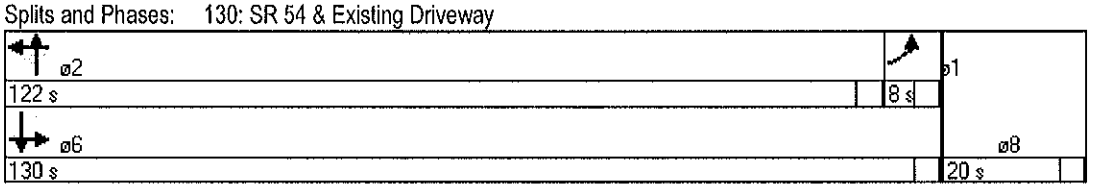
Splits and Phases: 8: SR 54 & Rankin Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1302	106	223	2050	14	178	0	199	9	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	210		160	185		90	0		0	0		0
Storage Lanes	1		1	1		1	0		1	0		1
Taper Length (ft)	130		45	150		45	25		25	25		25
Satd. Flow (prot)	1770	3406	1583	1770	3406	1583	0	1770	1583	0	1770	1583
Flt Permitted	0.073			0.189				0.751			0.624	
Satd. Flow (perm)	136	3406	1583	352	3406	1583	0	1399	1583	0	1162	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116			7			219			58
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		453			816			298			227	
Travel Time (s)		10.3			18.5			6.8			5.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.91	0.91	0.92	0.92	0.91	0.91	0.91	0.92	0.91	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1415	116	245	2228	15	0	196	219	0	10	58
Turn Type	pm+pt		Perm	Perm		Perm	Perm		Perm	custom		Perm
Protected Phases	1!	6!			2!			2!			6!	
Permitted Phases	6!		6	2!		2	2!		2	8		6
Detector Phase	1	6	6	2	2	2	2	2	2	8	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	8.0	130.0	130.0	122.0	122.0	122.0	122.0	122.0	122.0	20.0	130.0	130.0
Total Split (%)	5.3%	86.7%	86.7%	81.3%	81.3%	81.3%	81.3%	81.3%	81.3%	13.3%	86.7%	86.7%
Maximum Green (s)	4.0	126.0	126.0	118.0	118.0	118.0	118.0	118.0	118.0	16.0	126.0	126.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag			Lead	Lead	Lead	Lead	Lead	Lead			
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	146.0	150.0	150.0	142.8	142.8	142.8		142.8	142.8		150.0	150.0
Actuated g/C Ratio	0.97	1.00	1.00	0.95	0.95	0.95		0.95	0.95		1.00	1.00
v/c Ratio	0.15	0.42	0.07	0.73	0.69	0.01		0.15	0.14		0.01	0.04
Control Delay	1.5	0.3	0.1	17.3	7.8	0.0		0.7	0.3		0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0		0.0	0.0		0.0	0.0
Total Delay	1.5	0.3	0.1	17.3	8.4	0.0		0.7	0.3		0.0	0.0
LOS	A	A	A	B	A	A		A	A		A	A
Approach Delay		0.3			9.2			0.4			0.0	
Approach LOS		A			A			A			A	
Queue Length 50th (ft)	1	0	0	37	119	0		10	0		0	0
Queue Length 95th (ft)	m1	m0	m0	m41	m113	m0		15	4		0	0
Internal Link Dist (ft)		373			736			218			147	
Turn Bay Length (ft)	210		160	185		90						
Base Capacity (vph)	176	3406	1583	335	3243	1507		1332	1518		1162	1583
Starvation Cap Reductn	0	0	0	0	553	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0	46	0		19	0		0	21
Storage Cap Reductn	0	0	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.15	0.42	0.07	0.73	0.83	0.01		0.15	0.14		0.01	0.04

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 134 (89%), Referenced to phase 2:NBWB and 6:EBSB, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 5.2 — Intersection LOS: A
Intersection Capacity Utilization 86.5% — ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 130: SR 54 & Existing Driveway