



PROJECT PIPELINE

CU01: Town of Warrenton
US 211 - Lee Highway
Final Report

From Broadview Avenue to Blackwell Road



US 211 (Lee Highway) from Broadview Avenue to Blackwell Road

Final Report
October 2022



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Chapter 1:

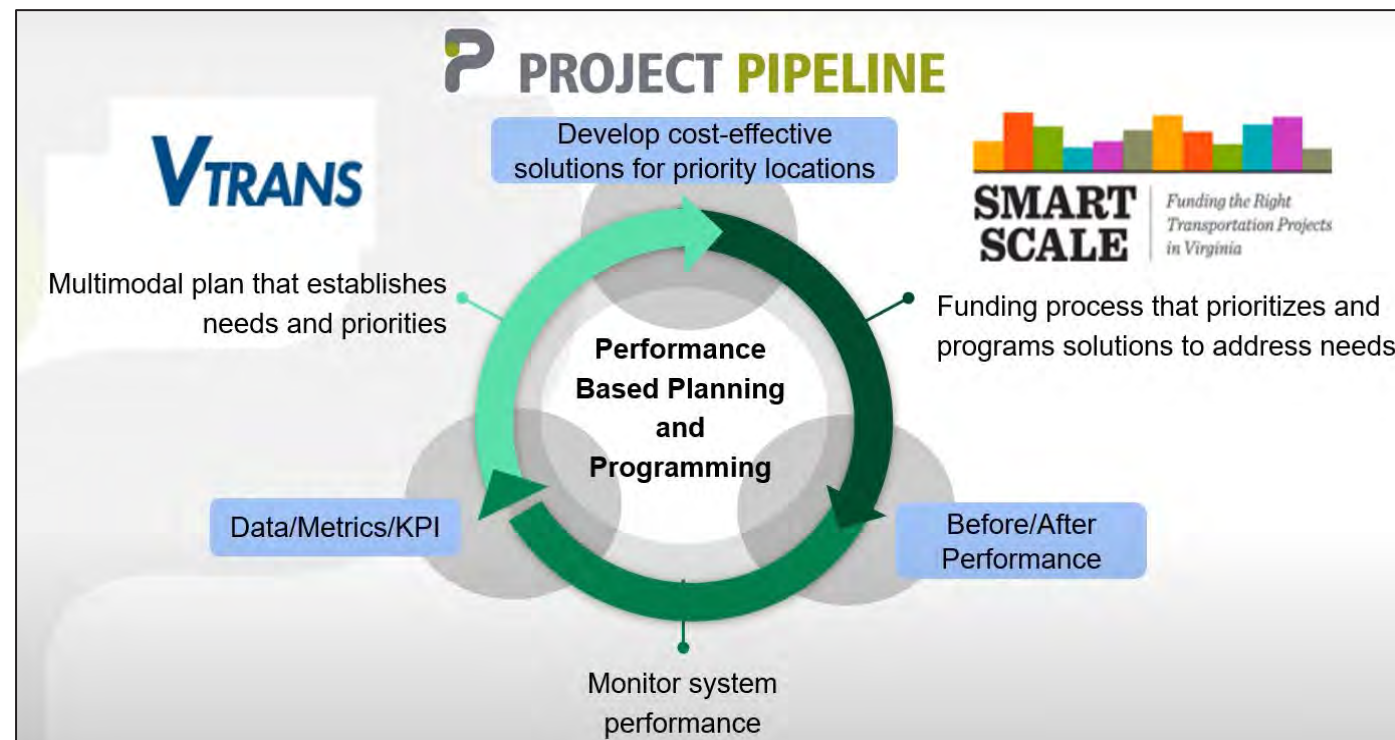
Needs Evaluation and Diagnosis

Methodology

Project Pipeline is a performance-based planning program to identify cost-effective solutions to multimodal transportation needs in Virginia. Through this planning process, projects and solutions may be considered for funding through programs including SMART SCALE, revenue sharing, interstate funding, and others. Visit the Project Pipeline webpage for additional information vapipeline.org.

This study focuses on concepts targeting identified needs including congestion mitigation, safety improvement, pedestrian and bicycle infrastructure along the corridor, and transit access. The objectives of Project Pipeline are shown below in Figure 1.

Figure 1. Project Pipeline Objectives



Background

The Office of Intermodal Planning and Investment (OIPI) prepared the VTrans Virginia's statewide transportation plan for the Commonwealth Transportation Board (CTB) in which mid-term needs (0 - 10 years) were identified for different categories listed in Table 1. This study focuses on addressing needs identified in VTrans, and those previously identified by the localities.

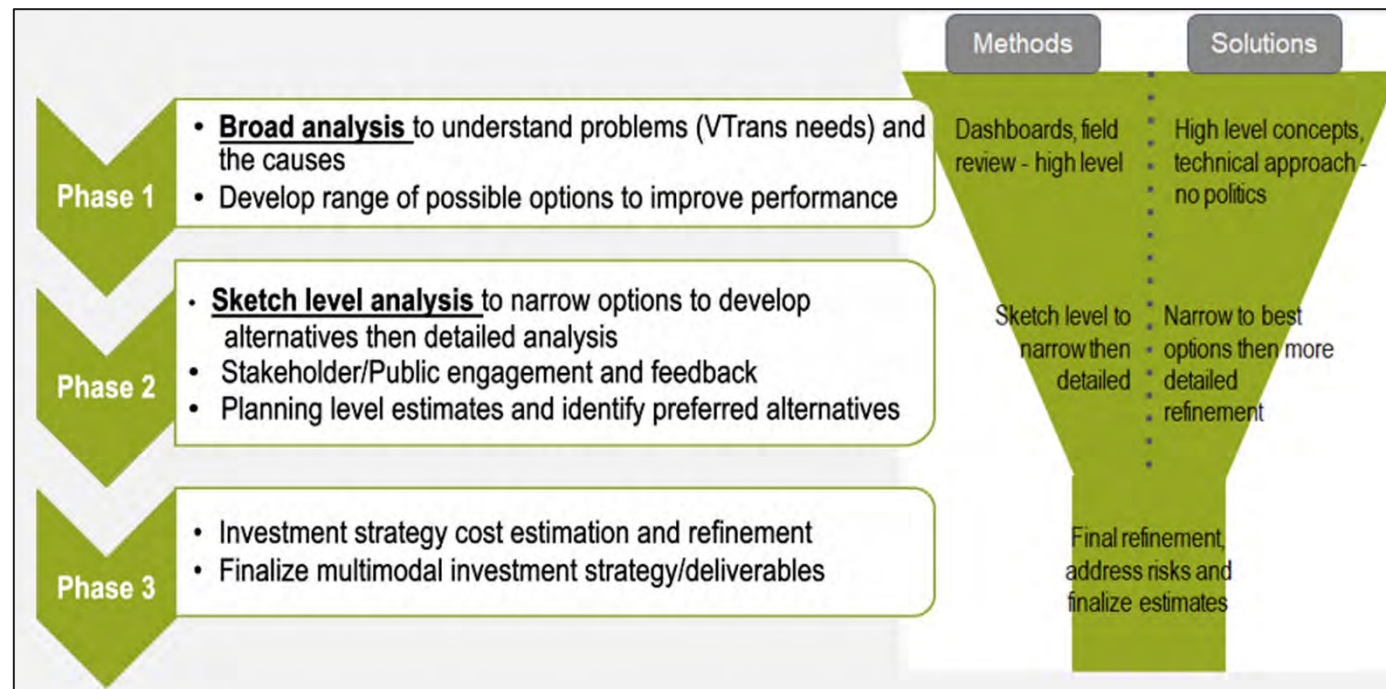
Table 1: List of VTrans Needs

VTrans Needs			
	Transportation Demand Management		Capacity Preservation
	Congestion Mitigation		Bicycle Access
	Safety Improvement		Pedestrian Safety Improvement
	Transit Access		

Methodology

The study is broken down into three phases. Phase I consists of the problem diagnosis and brainstorming of alternatives, Phase II includes the alternative evaluation and sketch level analysis, and Phase III is the investment strategy and cost estimates. Details on methods and solutions for each study phase are outlined below in Figure 2.

Figure 2. Study Phase Methods and Solutions



The study team is also broken down into three teams, with each team simultaneously working on different areas of the study. Team 1 focuses on Traffic Operations, Capacity, and Access, Team 2 focuses on Road Reliability and Safety, while Team 3 focuses on Rail, Transit, and Transportation Demand Management (TDM). As shown in Figure 3, Team 1 and Team 2 are led by ATCS, with support from KLS on the effort with respect to pedestrian and bicycle needs. Team 3 is led by Mead & Hunt, with support from Michael Baker under the Department of Rail and Public Transportation (DRPT) Program. The following details the focus areas of study for each team:

- Team 1 – Identify operation and access needs by conducting future traffic demand volume forecasts and performing operational analysis of future conditions using Synchro/SimTraffic. Evaluate operational mitigations such as geometric modifications, access management improvements, and installation of facilities for pedestrians and bicycles.
- Team 2 – Identify safety needs with respect to vehicles, pedestrians, and cyclists by evaluating existing roadway conditions as well as crash patterns and crash hot spot locations based on the most recent five-year crash history obtained from the VDOT Crash Database Tableau Tool. Recommend safety improvement options through geometric modifications, access management improvements, and installation of facilities for pedestrians and bicycles.
- Team 3 – Identify needs with respect to rail, transit, and TDM by reviewing existing rail and transit routes and future traffic demand volume forecasts. Consider improvements recommended through public transit route extensions and the addition of Park and Ride lots.

Study Area

The Lee Highway (including US 211, US Business 29, and US Business 15) study corridor between the western US 17 ramps and Winchester St (US Business 17) is located in the Town of Warrenton, Virginia. This segment runs approximately eight tenths of a mile.

The corridor is classified as Other Principal Arterial within the study area and has a posted speed of 40 miles per hour. The corridor provides access to numerous businesses and residential areas in Warrenton. Lee Highway connects to US 15, US 17, and US 29 directly to the East. Lee Highway is a four-lane divided roadway with a grass median. All unsignalized intersections are limited right-in/right-out movements. Left and right turn lanes are present at all signalized intersections. The area immediately surrounding the study corridor is primarily commercial business including grocery stores, a car dealership, numerous restaurants, banks, and various other businesses. The study area includes five intersections along Lee Highway, including one unsignalized intersection, and four signalized intersections. A map detailing the extents of the study corridor and surrounding area is shown below in Figure 3.

Figure 3. Study Area



VTrans and Related Project Background Information

VTrans is Virginia's statewide transportation plan. It identifies and prioritizes locations with transportation needs using data-informed transparent processes. The policy for identifying VTrans mid-term needs establishes multimodal need categories that correspond to the Commonwealth Transportation Board-adopted VTrans visions, goals, and objectives. Each need category has one or more performance measures and thresholds to identify one or more needs. Visit the Vtrans policy guide for additional information: https://vtrans.org/resources/VTrans_Policy_Guide_v6.pdf.

The mid-term needs, as identified in VTrans for the study corridor, were identified as 'Very High' for Transportation Demand Management, 'High' for Bicycle Access, Capacity Preservation, Congestion Mitigation, and Safety Improvement, 'Medium' for Pedestrian Safety Improvement, and 'Low' for Transit Access needs, as presented in Table 2.

Table 2: VTrans Needs in Study Area

VTRANS IDENTIFIED NEEDS	PRIORITIES
Bicycle Access	HIGH
Capacity Preservation	NONE
Congestion Mitigation	VERY HIGH
IEDA (UDA) Access	NONE
Pedestrian Access	HIGH
Safety Improvement	HIGH
Pedestrian Safety Improvement	NONE
Reliability	NONE
Rail On-Time Performance	NONE
Transit Access	VERY HIGH
Transit Access for Equity Emphasis Areas	NONE
Transportation Demand Management	VERY HIGH

At the VDOT Construction District level, each identified need location is assigned a tier from 1 to 4, with Tier 1 representing the most critical needs and Tier 4 representing the least critical. The segments ranked as “Priority 1” represent those with multiple categories identified as high in need. Figure 4 presents a map of the study area with 2019 VTrans mid-term need locations by priority tier.

Figure 4. VTrans 2019 Mid-Term Needs



Traffic Operation and Accessibility

Traffic operational analysis was performed using Synchro 10 software for all study intersections along the Lee Highway corridor. Inputs and analysis methodologies are consistent with the VDOT Traffic Operations and Safety Analysis Manual (TOSAM) guidelines. Both AM and PM peak hour analyses were performed for both the existing and future no-build conditions.

Traffic Data

Intersection turning movement counts were collected at each study intersection in August 2021. The AM peak hour was determined to be between 8:00 and 9:00 AM, the PM peak hour was determined to be between 4:00 and 5:00 PM. The raw turning movement counts are provided in Appendix A.

Future traffic volumes were forecasted by evaluating the trend in growth of VDOT’s historical average daily traffic (ADT) volumes for all roadway segments within the project area between 2010 and 2019. The weighted average linear growth rate across the entire project area was approximately 0.50%.

In the volume settings in Synchro, an overall Peak Hour Factor (PHF) was used per intersection as recommended by the Highway Capacity Manual. If PHFs for each individual approach or movement are used, they are likely to create demand volumes from one 15-minute period that are in apparent conflict with demand volumes from another 15-minute period, but in reality, these peak volumes do not occur at the same time.

Truck percentages for each movement were calculated and used in the models. Synchro roadway speeds were assumed to be the posted speed limit.

Measures of Effectiveness

There are many measures of effectiveness (MOE) in traffic operations analysis to quantify operational and safety objectives and provide a basis for evaluating the performance of a transportation network. Several MOEs for intersection analyses can be reported from Synchro/SimTraffic, VJuST, and SIDRA.

For the purposes of this study, guidance for reporting MOEs for signalized and unsignalized intersections was obtained from Chapter 4 of the VDOT TOSAM. A summary of the MOEs evaluated for the study intersections is presented below:

- Control Delay (measured in seconds per vehicle – sec/veh)
- Level of service (LOS)
- 95th Percentile Queue Length via Synchro (measured in feet – ft)
- Volume-to-Capacity (v/c) Ratio

Traffic Operations Analysis and Results

In an effort to identify operational and accessibility needs along the study corridor, Synchro analysis was performed for both the existing year 2021 and the future year 2045. Analysis was completed for the AM and PM peak hours for both the existing and future no-build conditions.

The operational analysis shows that all study intersections operate at a Level of Service (LOS) D or better during both AM and PM peak hours in both 2021 and 2045. All mainline Lee Highway approaches operate at Level of Service C or better for all intersections other than the intersection of Lee Highway and Blackwell Road, where the westbound approach operates at LOS D during both peak periods in existing and no-build conditions. Overall, the side streets along Lee Highway operate at LOS E or better.

The analysis shows that, during both existing and no-build conditions, at the intersection of Lee Highway and Broadview Avenue / Winchester Street, the side-street approaches experience congestion and queueing during both peak periods. The left-turn movements along Lee Highway experience excessive delays during both peak periods, with the westbound left turn lane operating at LOS E and F during the AM and PM peak periods respectively. The queue lengths for the westbound left turn lane spillback into the through lanes.

For the intersections of Lee Highway and Branch Drive and Lee Highway and Fletcher Drive, the analysis results show excessive delays for the eastbound and westbound left-turn lanes, as well as both side-street (Branch Drive) approaches, in both the existing and no-build conditions for both peak hours.

At the unsignalized Village Center intersection, the southbound approach operates at LOS D during the PM peak period in both the existing and no-build conditions.

As mentioned previously, the intersection of Lee Highway and Blackwell Road operates at LOS D during both peak periods. The westbound left-turn movement experienced delays in excess of 77 seconds during the PM

peak period of the no-build scenario. The side-street (Blackwell Road) approaches operated at LOS E during both the existing and no-build conditions for both peak hours.

Table 3 presents the AM and PM peak hour Synchro analysis results summary for 2021 and 2045 No-Build conditions. The Synchro reports are included in Appendix B. The traffic operations and accessibility needs are summarized in Figure 7 to Figure 9.

Table 3: Synchro Analysis for Existing and No Build Conditions

Intersection		Scenario	Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)											
					Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
1	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Broadview Avenue / Winchester Street	AM Peak Hour														
		Existing Conditons	Signal	C (27.1)	C (27.7)			B (18.4)			D (46.9)			D (35.5)		
					E (64.0)	B (16.8)	B (16.8)	E (79.0)	B (13.9)	C (28.0)	E (70.0)	E (64.5)	A (0.0)	E (66.9)	E (65.0)	A (0.2)
		2045 No Build	Signal	C (29.1)	C (31.0)			C (20.5)			D (44.7)			D (36.0)		
					E (64.0)	C (20.8)	C (20.8)	E (78.3)	B (16.0)	C (27.0)	E (65.7)	E (62.4)	A (0.0)	E (67.8)	E (65.5)	A (0.2)
		PM Peak Hour														
		Existing Conditons	Signal	C (29.4)	C (33.4)			C (20.3)			D (54.0)			C (29.7)		
					E (70.0)	C (21.0)	C (21.0)	F (95.4)	B (16.3)	B (19.2)	E (73.9)	E (68.8)	A (0.1)	E (72.9)	E (72.4)	A (0.3)
2045 No Build	Signal	C (30.7)	D (36.9)			C (20.6)			E (55.1)			C (29.9)				
			E (71.9)	C (25.0)	C (25.0)	F (92.8)	B (16.4)	B (15.9)	E (76.2)	E (69.4)	A (0.1)	E (74.2)	E (72.6)	A (0.4)		

Intersection		Scenario	Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)											
					Eastbound			Westbound			Northbound			Southbound		
					LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
2	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Branch Drive	AM Peak Hour														
		Existing Conditons	Signal	B (12.5)	A (9.2)			A (7.1)			E (65.0)			E (66.1)		
					E (76.8)	A (5.7)	A (8.9)	F (82.8)	A (2.2)	A (8.8)	E (66.7)	E (66.7)	E (64.4)	E (68.2)	E (68.2)	E (61.7)
		2045 No Build	Signal	B (12.8)	A (9.2)			A (7.5)			E (64.9)			E (67.3)		
					E (76.7)	A (5.7)	A (9.4)	F (85.0)	A (2.5)	A (9.2)	E (66.6)	E (66.6)	E (64.2)	E (70.1)	E (70.1)	E (61.2)
		PM Peak Hour														
		Existing Conditons	Signal	C (21.7)	B (16.8)			B (13.5)			E (69.9)			E (67.8)		
					E (78.2)	A (9.2)	B (12.2)	F (90.5)	A (8.9)	B (14.6)	E (72.1)	E (68.7)	E (68.7)	E (74.0)	E (74.0)	E (59.0)
2045 No Build	Signal	C (22.5)	A (0.0)			A (0.0)			A (0.0)			A (0.0)				
			E (79.9)	B (10.4)	B (13.5)	F (84.4)	B (10.1)	B (15.9)	E (72.0)	E (72.0)	E (68.5)	E (74.0)	E (74.0)	E (57.9)		

Table 3: Synchro Analysis for Existing and No Build Conditions

Intersection	Scenario	Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)											
				Eastbound			Westbound			Northbound			Southbound		
				LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
3	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & BP Gas Station / Village Center Entrance	Stop	A (0.6)	AM Peak Hour											
				A (0.3)			A (0.0)			A (9.5)			B (11.2)		
				A (9.4)	A (0.0)	A (0.0)	A (9.5)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (9.5)	C (19.8)	A (0.0)	A (9.8)
				A (0.3)			A (0.0)			A (9.5)			B (11.6)		
				A (9.9)	A (0.0)	A (0.0)	A (9.9)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (9.5)	C (21.7)	A (0.0)	A (10.0)
				PM Peak Hour											
				A (0.4)			A (0.0)			A (9.8)			B (12.7)		
				B (11.0)	A (0.0)	A (0.0)	A (9.8)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (9.8)	D (26.4)	A (0.0)	A (9.7)
4	US Route 15 / 29 BusinessUS Route 211 (Lee Highway) & Fletcher Drive	Signal	B (10.4)	AM Peak Hour											
				A (8.4)			A (3.8)			E (63.7)			E (66.4)		
				E (75.9)	A (5.9)	A (0.0)	F (100.1)	A (1.0)	A (6.1)	E (66.2)	E (66.6)	E (59.8)	E (68.5)	E (68.5)	E (61.5)
				B (10.2)			A (3.9)			E (63.2)			E (67.5)		
				E (73.1)	A (7.2)	B (11.9)	F (95.0)	A (1.3)	A (6.3)	E (66.3)	E (66.6)	E (58.4)	E (70.2)	E (70.2)	E (61.1)
				PM Peak Hour											
				B (17.4)			B (14.9)			E (64.1)			E (67.8)		
				E (72.1)	B (15.1)	A (2.8)	E (75.0)	B (10.6)	A (7.2)	E (70.8)	E (70.4)	D (53.3)	E (72.3)	E (72.3)	E (60.8)
5	US Route 15/17/29 Bus/ US Route 211(Lee Highway) & Blackwell Road	Signal	C (34.2)	AM Peak Hour											
				B (17.1)			D (36.8)			E (60.6)			E (64.7)		
				C (33.0)	B (18.4)	A (0.1)	E (67.9)	C (29.5)	C (23.5)	E (66.4)	E (58.8)	E (57.5)	E (65.9)	E (64.7)	E (59.1)
				C (21.2)			D (38.1)			E (60.6)			E (65.3)		
				D (38.0)	C (23.0)	A (0.1)	E (68.2)	C (31.4)	C (24.1)	E (67.8)	E (58.3)	E (56.9)	E (66.5)	E (65.6)	E (58.4)
				PM Peak Hour											
				C (24.3)			D (38.3)			E (66.0)			E (72.4)		
				D (48.5)	C (25.6)	A (0.1)	E (75.1)	C (33.8)	C (24.8)	F (81.6)	E (58.3)	E (55.2)	E (74.3)	E (74.1)	E (58.5)
5	US Route 15/17/29 Bus/ US Route 211(Lee Highway) & Blackwell Road	Signal	D (45.2)	AM Peak Hour											
				C (27.7)			D (40.9)			E (68.5)			E (74.2)		
				D (52.1)	C (29.5)	A (0.1)	E (77.4)	D (36.8)	C (25.5)	F (89.2)	E (57.8)	D (54.4)	E (76.5)	E (76.1)	E (57.5)
				PM Peak Hour											
				C (24.3)			D (38.3)			E (66.0)			E (72.4)		
				D (48.5)	C (25.6)	A (0.1)	E (75.1)	C (33.8)	C (24.8)	F (81.6)	E (58.3)	E (55.2)	E (74.3)	E (74.1)	E (58.5)
				C (27.7)			D (40.9)			E (68.5)			E (74.2)		
				D (52.1)	C (29.5)	A (0.1)	E (77.4)	D (36.8)	C (25.5)	F (89.2)	E (57.8)	D (54.4)	E (76.5)	E (76.1)	E (57.5)

Table 4: Queue Lengths for Existing and No Build Conditions

Intersection		Scenario	Synchro 95th Percentile Queue Length (LF)											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
1	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Broadview Avenue / Winchester Street	AM Peak Hour												
		Existing	148	328	61	177	46	106	83	0	163	167	0	
		Future No Build	168	392	83	164	39	119	92	0	176	178	0	
		PM Peak Hour												
		Existing	183	371	107	211	27	186	170	0	189	193	0	
		Future No Build	196	411	128	235	36	191	174	0	203	203	0	

Intersection		Scenario	Synchro 95th Percentile Queue Length (LF)											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
2	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Branch Drive	AM Peak Hour												
		Existing	87	119	0	98	52	0	47	0	95	0		
		Future No Build	96	129	0	108	50	0	53	0	106	0		
		PM Peak Hour												
		Existing	193	180	0	125	195	0	64	D (53.3)	215	7		
		Future No Build	202	183	0	128	216	0	67	D (52.1)	231	18		

Intersection		Scenario	Synchro 95th Percentile Queue Length (LF)											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
3	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & BP Gas Station / Village Center Entrance	AM Peak Hour												
		Existing	3	0	0	0	0	0	N/A	N/A	2	3	6	
		Future No Build	4	0	0	0	0	0	N/A	N/A	1	4	5	
		PM Peak Hour												
		Existing	6	0	0	0	0	0	N/A	N/A	3	5	0	
		Future No Build	7	0	0	0	0	0	N/A	N/A	1	5	0	

Table 4: Queue Lengths for Existing and No Build Conditions

Intersection		Scenario	Synchro 95th Percentile Queue Length (LF)											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
4	US Route 15 / 29 BusinessUS Route 211 (Lee Highway) & Fletcher Drive	AM Peak Hour												
		Existing	80	95	0	46	59	1	35	36	0	96	0	
		Future No Build	86	131	7	42	69	1	41	43	0	109	0	
		PM Peak Hour												
		Existing	127	276	7	151	193	9	129	130	28	189	17	
		Future No Build	130	308	6	151	187	1	133	134	31	202	23	

Intersection		Scenario	Synchro 95th Percentile Queue Length (LF)											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
5	US Route 15/17/29 Bus/ US Route 211(Lee Highway) & Blackwell Road	AM Peak Hour												
		Existing	60	303	0	277	353	26	157	82	65	118	120	0
		Future No Build	79	541	0	300	396	38	171	88	74	128	132	0
		PM Peak Hour												
		Existing	123	475	0	265	519	48	358	179	82	233	241	0
		Future No Build	132	596	0	275	547	49	416	196	86	240	247	0

Safety and Reliability

For the analysis of existing safety conditions, the VDOT Crash Database Tableau Tool was utilized to determine the crash history at the study intersections and along the study corridor on Lee Highway. Crash data was collected and analyzed for a five-year period spanning from January 2015 to December 2019. The study team reviewed the FR-300 crash reports provided by VDOT to determine specific trends and “hot spot” areas for consideration in developing alternative improvement concepts. For the purposes of this analysis, “injury crashes” is defined as the sum of type A (severe injury), B (visible injury), and C (non-visible injury) crashes.

Safety Analysis Results

The crash severities of crashes within the study area are summarized by year and by crash type in Table 5 and Table 6, respectively.

Table 5: Crashes by Year

Crash Year and Severity	A. Severe Injury	B. Visible Injury	C. Nonvisible Injury	O. Property Damage Only	Total
2015	2	1	10	34	47
2016	0	7	11	20	38
2017	2	4	9	23	38
2018	1	0	10	17	28
2019	1	4	7	21	33
Total	6	16	47	115	184

Table 6: Crashes by Type

Crash Type and Severity	A. Severe Injury	B. Visible Injury	C. Nonvisible Injury	O. Property Damage Only	Total
Rear End	2	7	31	67	107
Angle	2	7	11	28	48
Sideswipe - Same Direction	0	0	0	14	14
Fixed Object - Off Road	0	1	4	2	7
Other	1	1	0	1	3
Backed Into	0	0	0	2	2
Head On	1	0	1	0	2
Fixed Object in Road	0	0	0	1	1
Total	6	16	47	115	184

A total of 184 crashes were reported along Lee Highway within the study area during the five-year study period. Key takeaways from the crash data are as follows:

1. Six crashes were reported as severe (A) injury crashes, including 2 rear-end crashes, two angle crashes, one head-on crash, and one incident classified under “other”.
2. The majority of reported crashes within the corridor are rear-end and angle crashes. Combined, these constitute approximately 84% of the total crashes.
3. A total of 69 crashes resulted in injuries, which account for approximately 38% of the total reported crashes within the corridor. There were no crashes that led to a fatality.
4. A significant concentration of crashes was reported at the intersections, with few crashes occurring on the segments between intersections.
5. Throughout the corridor, most of the rear-end crashes occurred along the eastbound approach of Lee Highway. At Fletcher Drive in particular, it appears that queues extending from Blackwell Road contributed to the number of rear-ends at this location.

The safety and reliability needs and diagnosis identified during the analysis are summarized in Figure 7 and Figure 8. Detailed collision diagrams at the study intersections are provided in Figure 10 through Figure 14.

Pedestrian and Bicycle Access

In an effort to identify the needs with respect to accessibility, the study team reviewed existing conditions for pedestrian and bicycle accommodations. There is sidewalk along much of the corridor. There is no sidewalk East of Blackwell Road. Gaps exist in the sidewalk network to the East of Branch Drive and to the East of Blackwell Park Ln, both on the eastbound side of Lee Highway. Crosswalks and pedestrian signals exist at all major intersections along the study corridor on Lee Highway at Broadview Avenue, Branch Drive, Fletcher Drive, and Blackwell Road. There are no accommodations specific to cyclists along the study corridor. Figure 5 summarizes these findings.

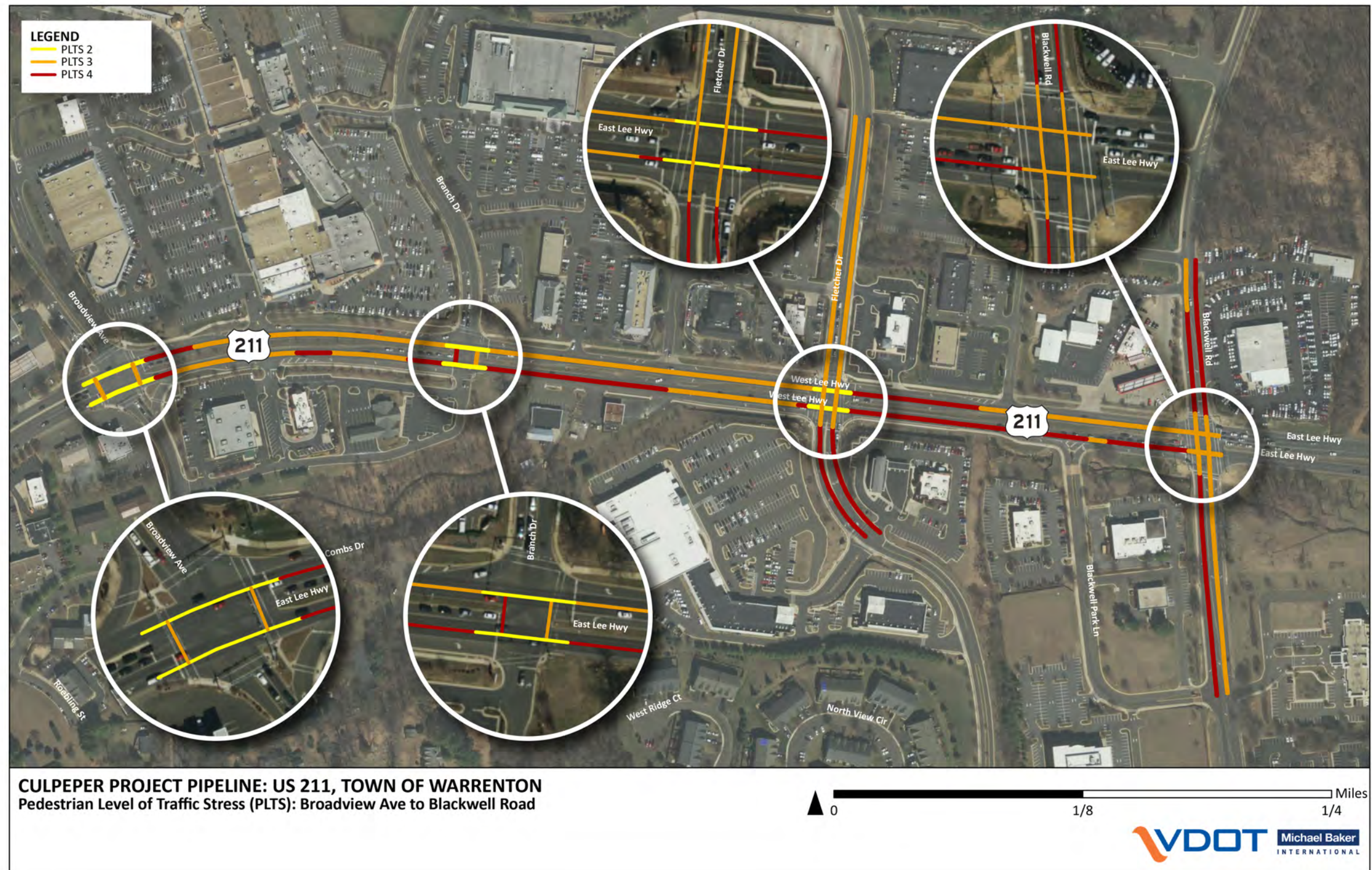
Figure 5. Pedestrian Facilities



The project team completed a Pedestrian Level of Traffic Stress Analysis (PLTS) in the study corridor, presented as Figure 6. The purpose of PLTS is to create a high-level inventory and a walkability/connectivity performance rating of pedestrian facilities in a community without needing a significant amount of data. The Pedestrian Level of Traffic Stress methodology classifies roadway segments according to the level of pressure or strain experienced by pedestrians and other sidewalk users. All definitions of PLTS in this section are sourced from Oregon DOT.

- PLTS 1: Represents little to no traffic stress and requires little attention to the traffic situation. This is suitable for all users including children 10 years or younger, groups of people and people using a wheeled mobility device
- PLTS 2: Represents little traffic stress but requires more attention to the traffic situation than of which young children may be capable. This would be suitable for children over 10, teens and adults.
- PLTS 3: Represents moderate stress and is suitable for adults. An able-bodied adult would feel uncomfortable but safe using this facility. This includes higher speed roadways with smaller buffers.
- PLTS 4: Represents high traffic stress. Only able-bodied adults with limited route choices would use this facility.

Figure 6. Pedestrian Level of Traffic Stress



Corridor Operation and Safety Needs and Diagnosis Summary

Figure 7. Level of Service Summary

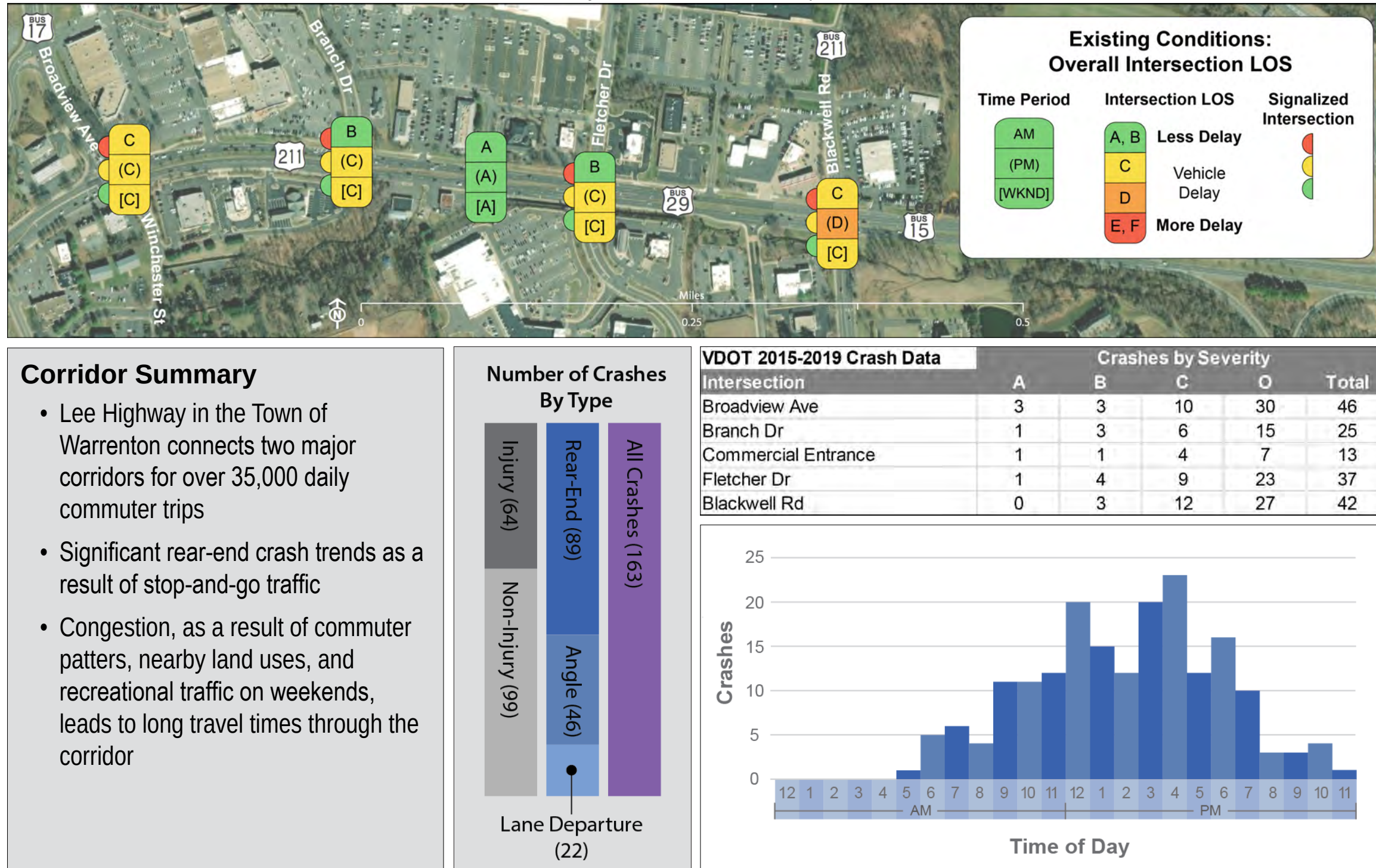
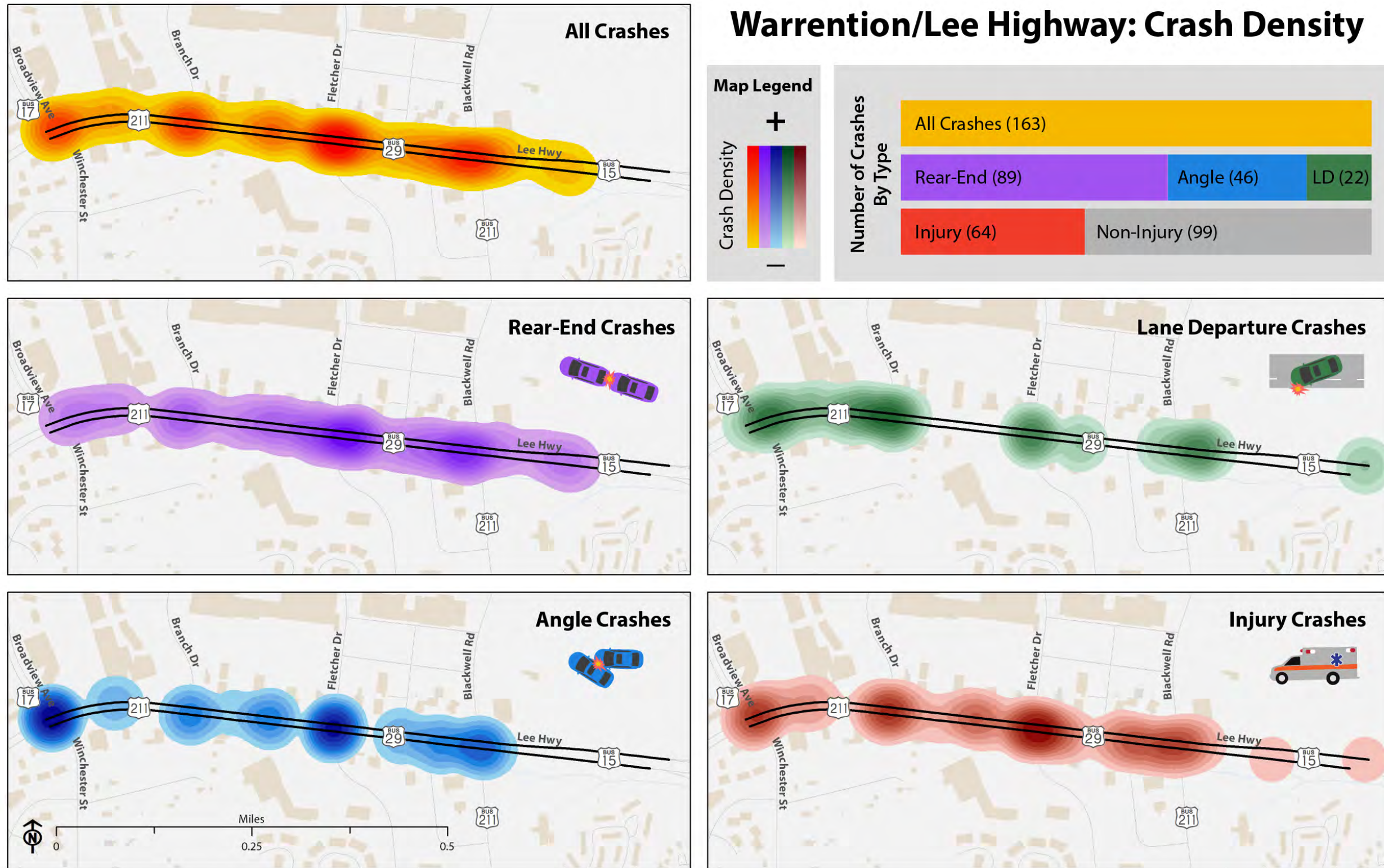


Figure 8. Crash Density by Crash Type



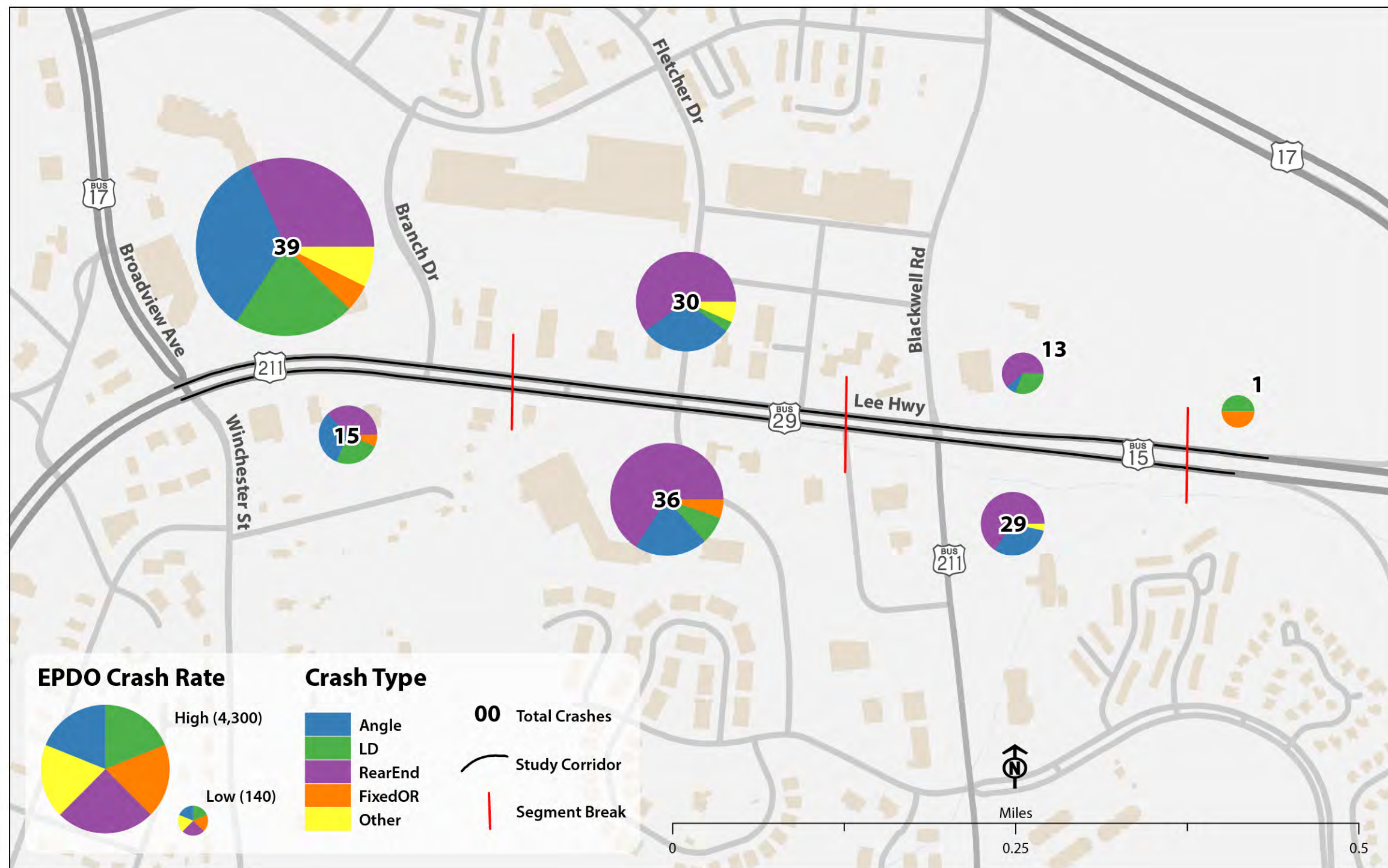
Top 100 PSI segment between Branch Avenue and Blackwell Road

High concentration of angle collisions at Broadview Avenue and Fletcher Drive

Throughout the corridor there were a significant number of rear-end crashes related to congestion

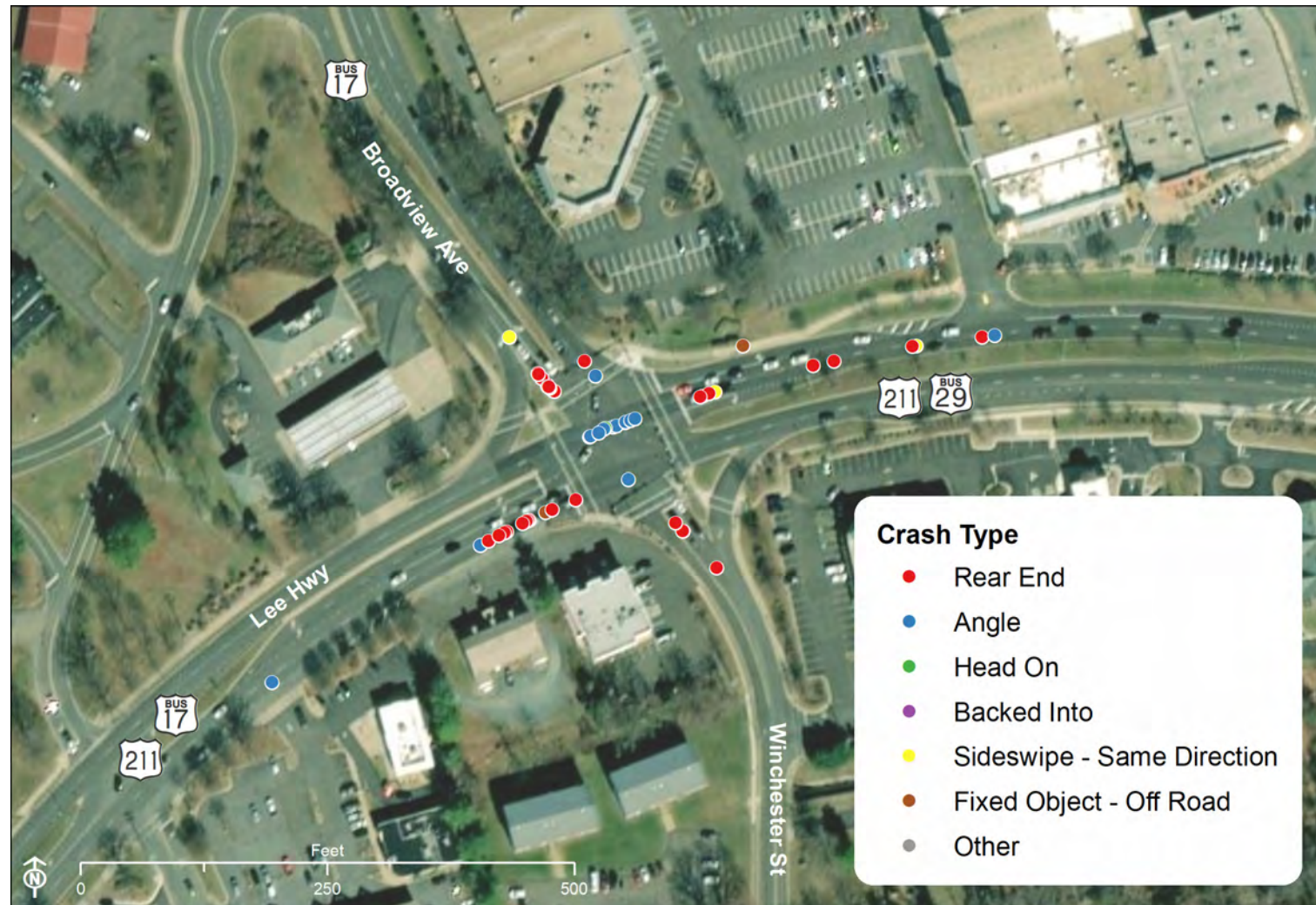
Concentration of rear-ends along eastbound Lee Highway between Fletcher Drive and Blackwell Road indicate queuing extends to upstream intersection

Figure 9. Intersection Crash EPDO and Crash Type



Broadview Ave Operation and Safety Needs and Diagnosis

Figure 10. Lee Highway and Broadview Avenue Crashes



Congestion for all approaches and all peak hours in the no-build conditions

Excessive delays and queues for the mainline left turns, with queues spilling back into the through lane along the westbound approach

All approaches operate at LOS D or better in the existing condition and LOS E or better in the no-build condition



Numerous rear-end crashes along the eastbound and westbound approaches

History of angle crashes at this location, particularly involving the westbound through movement

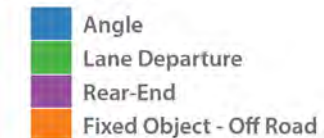


Marked crosswalks and accessible pedestrian signal (APS) infrastructure present at this location

46 Crashes



Crash Type



Branch Drive Operation and Safety Needs and Diagnosis

Figure 11. Lee Highway and Branch Drive Crashes



Excessive delay for the northbound and southbound approaches during both peak hours in both existing and no-build conditions

LOS E or worse for the mainline left turns during both peak hours in both existing and no-build conditions



Most predominate crash type is rear-ends, particularly along the eastbound approach

Segment between Branch Drive and Blackwell Road is a Top 100 Potential for Safety Improvement (PSI) Segment in the District

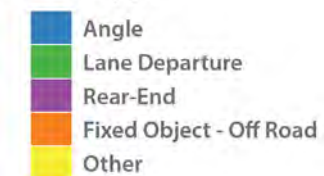


Marked crosswalks and APS infrastructure present at this location

25 Crashes



Crash Type



Commercial Drive Operation and Safety Needs and Diagnosis

Figure 12. Lee Highway and Commercial Drive Crashes



Overall intersection LOS is A

Southbound approach is LOS D during the PM peak hour in both existing and no-build conditions



Severe (A) angle collision involving eastbound left-turn and opposing westbound through movement

Segment between Branch Drive and Blackwell Road is a Top 100 Potential for Safety Improvement (PSI) Segment in the District



No marked crosswalks, sidewalk exists along the north and south leg of intersection

13 Crashes



Crash Type



Fletcher Drive Operation and Safety Needs and Diagnosis

Figure 13. Lee Highway and Fletcher Drive Crashes



Excessive delay for the northbound and southbound approaches during both peak hours in both existing and no-build conditions

LOS E or worse for the mainline left turns during both peak hours in both existing and no-build conditions



Most predominate crash type is rear-ends, particularly along the eastbound approach

Segment between Branch Drive and Blackwell Road is a Top 100 Potential for Safety Improvement (PSI) Segment in the District



Marked crosswalks and APS infrastructure present at this location

37 Crashes

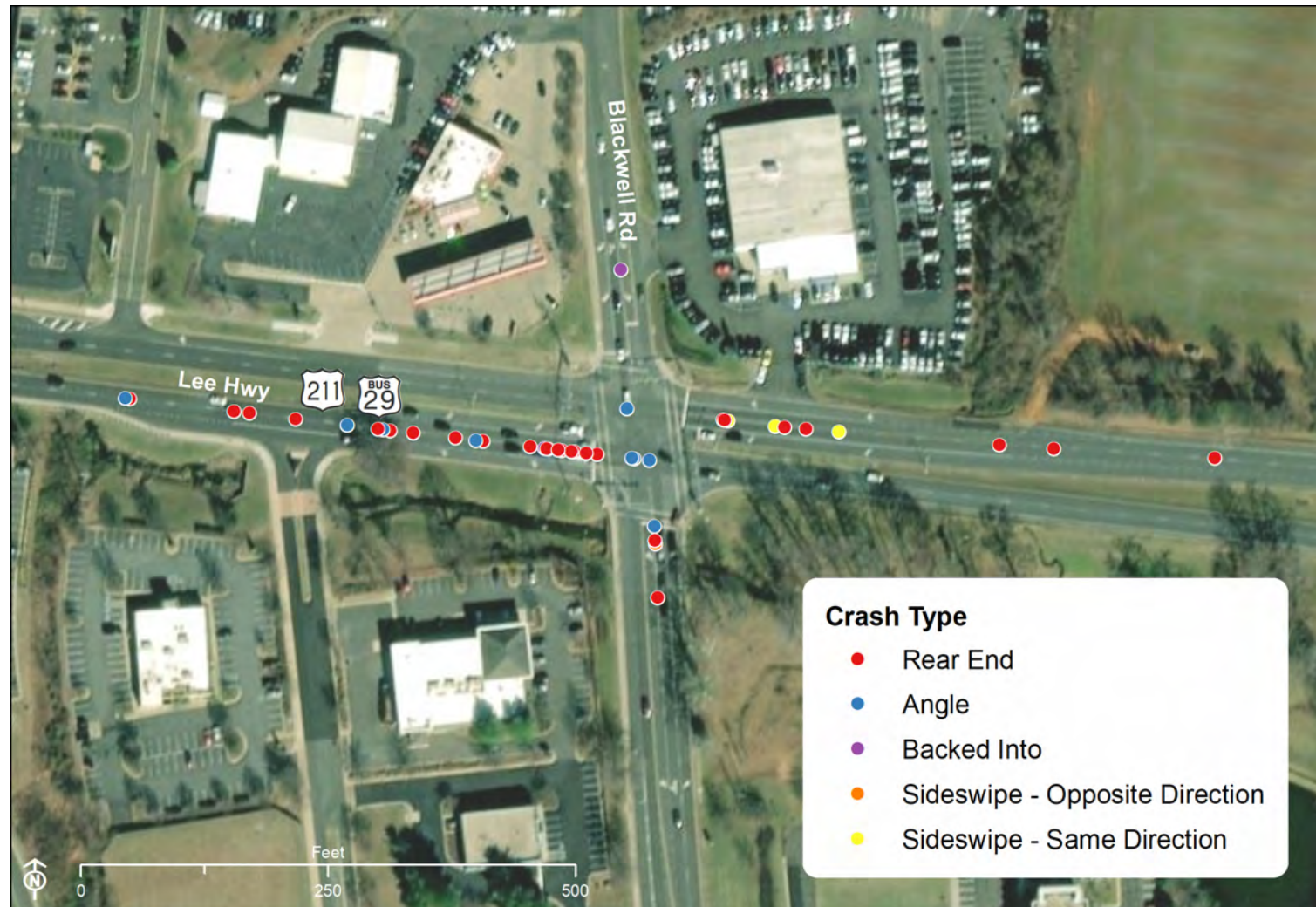


Crash Type

- Angle
- Lane Departure
- Rear-End
- Fixed Object - Off Road

Blackwell Road Operation and Safety Needs and Diagnosis

Figure 14. Lee Highway and Blackwell Road Crashes



Congestion for all approaches and all peak hours in the no-build conditions

Excessive delays and queues along both mainline approaches

Queues along eastbound approach extend back to the upstream intersection (Fletcher Drive)

All approaches operate at LOS E or better in the existing condition and LOS F or better in the no-build condition

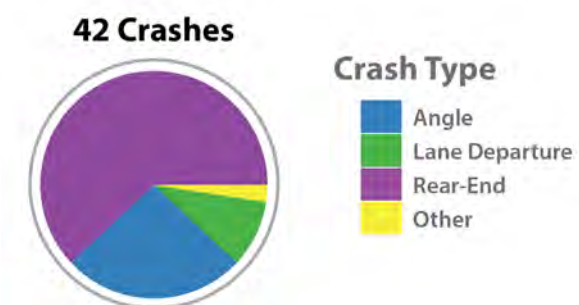


Large concentration of rear-end crashes along the eastbound approach

Segment between Branch Drive and Blackwell Road is a Top 100 Potential for Safety Improvement (PSI) Segment in the District



Marked crosswalks and APS infrastructure present at this location



Rail, Transit, and TDM

With support from DRPT, the study team reviewed the existing rail infrastructure, Park and Ride locations, and public transit routes in the study area.

Transit service in the study area is provided by Virginia Regional Transit's (VRT) Circuit Rider on its Blue Route and Green Route. The Blue Route runs Monday through Friday between 7:30 AM and 7:30 PM at 45-minute intervals while the Green Route runs on Saturday between 9:30 AM and 5:30 PM hourly. No bus stops are located on Lee Highway (US 211) but there are stops located along some of the side roads and in commercial parking lots (i.e., Rite Aid and North Rock Shopping Center). Ridership is low but typical for this type of rural system.

The Warrenton park-and-ride lot is located approximately one mile east of the study area on US 211 at the intersection of Dumfries Road. In 2019 the lot was expanded from 212 spaces to 360 spaces and the lot was improved with new lighting, bike racks, and sidewalks long Dumfries Road. A map of the park and ride lot location is presented in Figure 15. The rail, transit, and TDM needs identified by the study team are presented in Figure 16.

Figure 15. Existing Park and Ride Locations in the Study Area

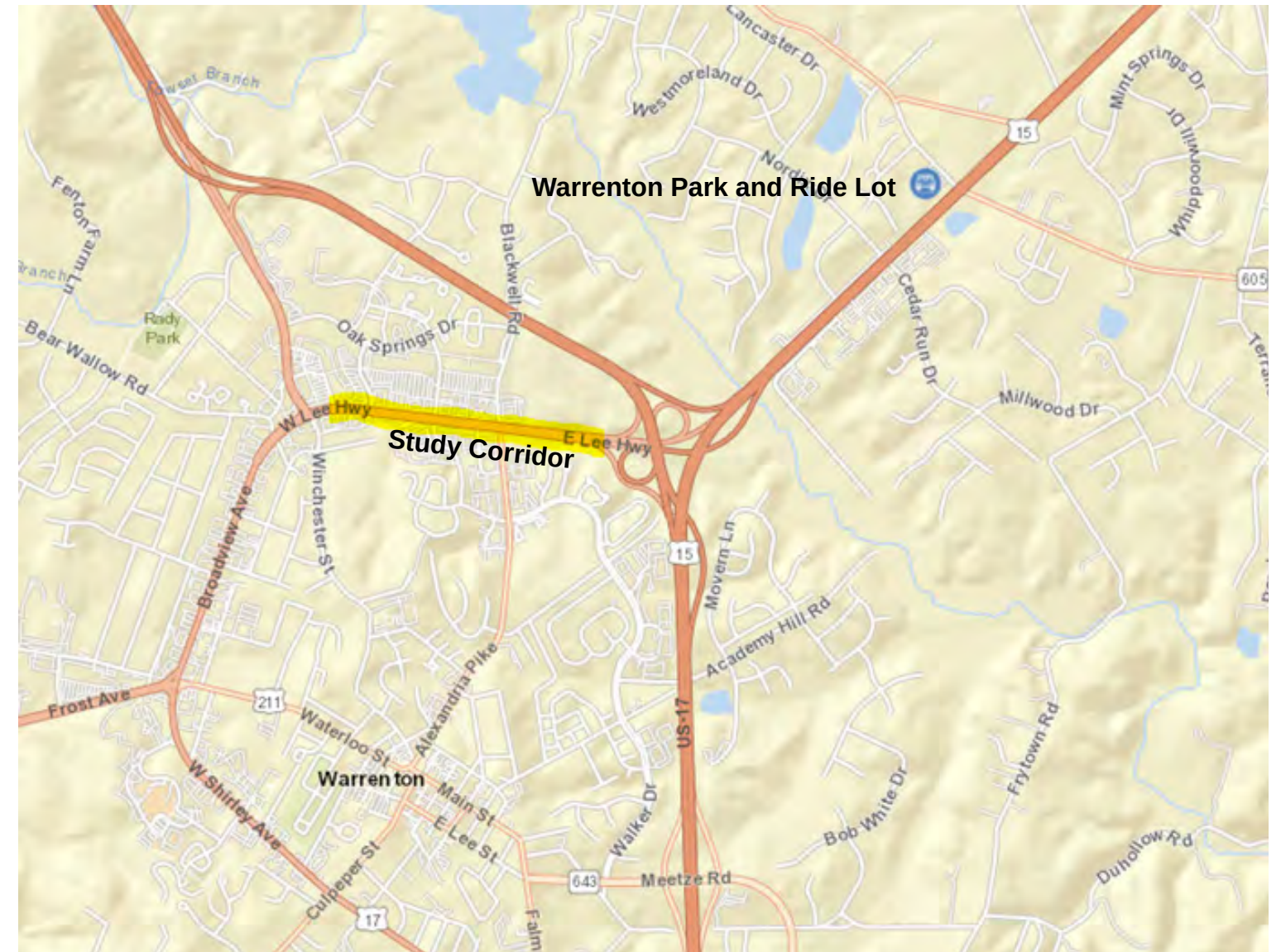


Figure 16. Rail, Transit, and TDM Needs and Diagnosis



Existing Conditions



No rail infrastructure



Commuter Services is the primary commuter assistance program in the region



Warrenton PNR lot is east of the corridor (360 spaces, 7 ADA spaces)



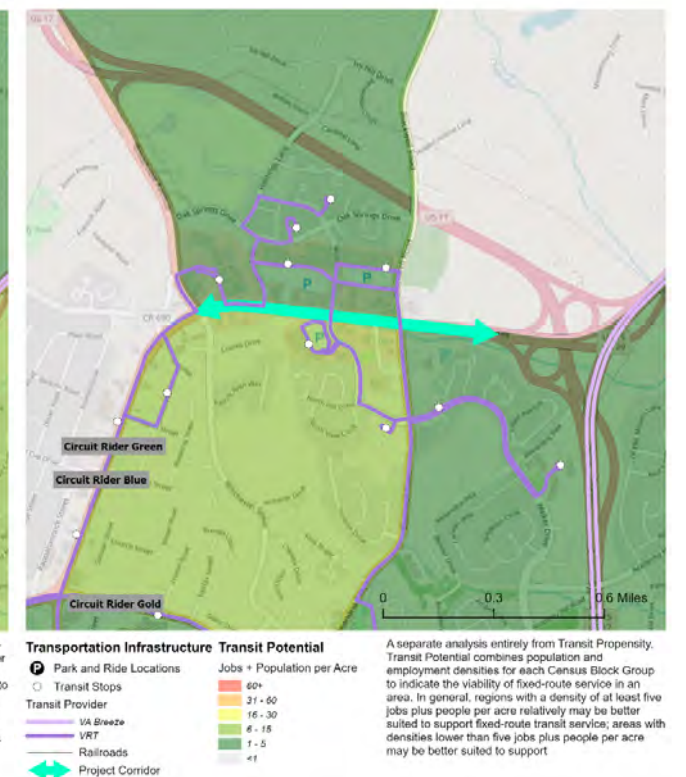
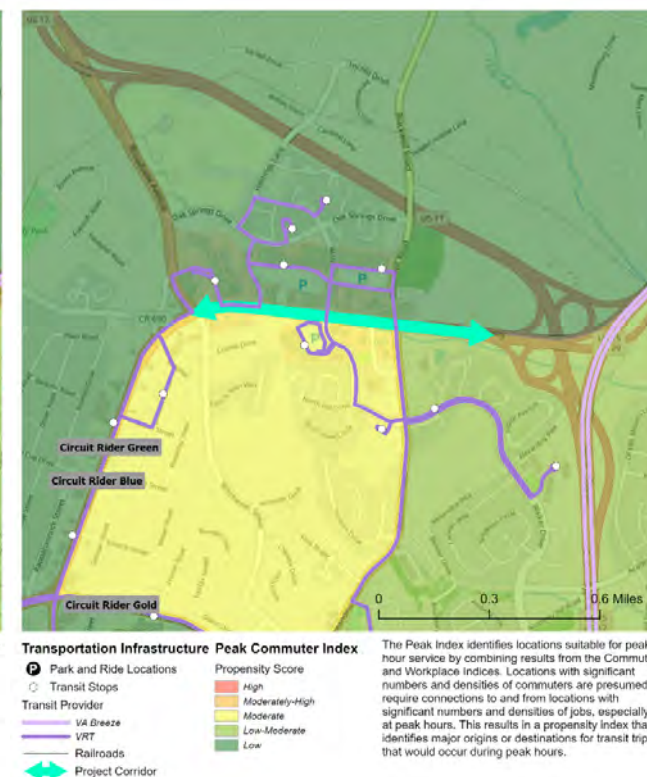
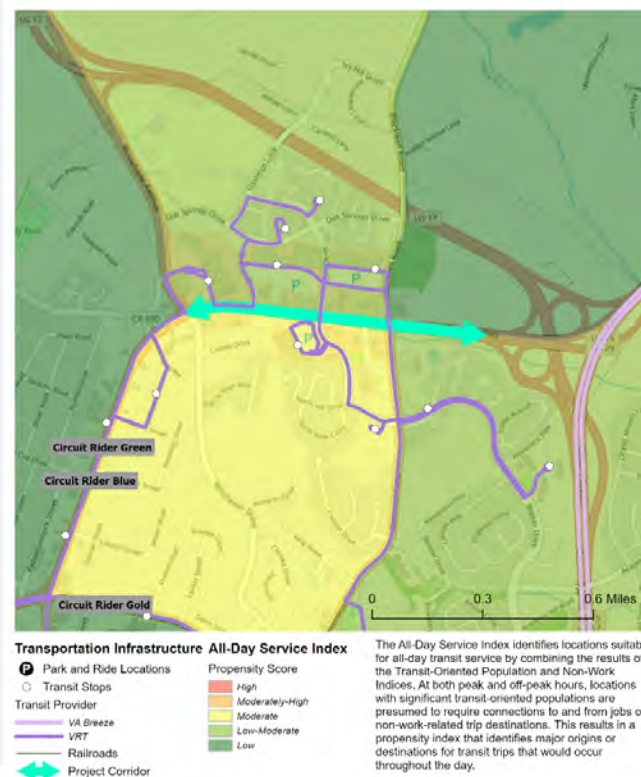
No bikeshare or scooter programs in area



VRT's Circuit Rider Blue Route (M-F, 7:30a-7:30p, 45 min) and Circuit Rider Green Route (Sat, 9:30a – 5:30p, 60 min) both operate in the corridor



No bus stops on Lee Hwy but stops are found in the commercial parking lots (at entrances to businesses)



Chapter 2:

Alternative Development and Refinement

Alternative Development and Screening

In order to develop alternative concepts to address the needs identified in Chapter 1, a thorough review of the existing conditions data was conducted and alternatives for addressing the needs at each intersection were identified.

A VJuST screening analysis was completed for each intersection prior to the Synchro build condition analyses to identify candidate alternative intersection designs and compare their potential operational and safety benefits to each intersection's existing configuration. VJuST is a screening tool that helps in the decision-making process of identifying innovative intersection and interchange configurations that are most appropriate in reducing congestion and improving safety to advance to further study, analysis, and design. The inputs and analysis methodologies are consistent with the VDOT TOSAM guidelines.

Where VJuST suggested one or more alternative intersection configurations may provide significant benefit over the existing configuration, Synchro or Sidra analysis was completed. For the purposes of alternative testing and screening, the afternoon (PM) peak hour analyses were performed for the future year 2045. The afternoon peak hour was determined to be the controlling peak hour for this corridor based on review of the no-build Synchro analysis results.

VJuST Analysis

In order to address operational and capacity needs, a VJuST analysis was completed for each subject intersection to consider alternative intersection designs and evaluate their potential benefits. VJuST analysis does not consider the influence of adjacent intersections on traffic patterns. Therefore, it was conducted for screening purposes only, with detailed analyses performed using Synchro. VJuST analysis was performed for all five intersections within the study area for the afternoon peak hour (4:00 PM to 5:00 PM). Some alternative design options in VJuST were not feasible for the roadway type at the subject intersections; hence, only the ones deemed most feasible were considered. VJuST worksheets for the afternoon peak hours are provided in Appendix C.

Lee Highway at Broadview Avenue/Winchester Street VJuST Analysis

Table 7 presents the alternative design considered at the Lee Highway and Broadview Ave/Winchester St intersection and its results compared to the conventional intersection as it will exist in the no-build. The VJuST analysis results show that during the PM peak hour, which is more critical than the AM peak hour for this intersection. A multi-lane hybrid roundabout would not provide significant operational benefits in terms of volume-to-capacity (V/C) ratio. However, the hybrid roundabout would greatly reduce the conflict points in the intersection, and thus the greatest benefit would be in terms of safety.

Table 7: VJuST Analysis for Lee Highway at Broadview Avenue/Winchester Street

Intersection Results					
		Congestion		Pedestrian	Safety
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points	Notes
Conventional	-	0.68		48	Existing Configuration
Roundabout	-	0.69		8	Hybrid Roundabout
*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.					

Lee Highway at Branch Drive VJuST Analysis

Table 8 presents the alternative designs considered at the Lee Highway and Branch Drive intersection and its results compared to the conventional intersection as it will exist in the no-build. The VJuST analysis results show that the alternative designs may have modest operational benefit relative to the planned conventional intersection. Both alternative intersections feature less conflict points than the conventional intersection, which leads to greater safety benefits.

Table 8: VJuST Analysis for Lee Highway at Branch Drive

Intersection Results					
		Congestion		Pedestrian	Safety
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points	Notes
Conventional	-	0.55		48	
Restricted Crossing U-Turn	-	0.51		20	
Thru-Cut	-	0.51		28	
*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.					

Lee Highway at Village Center Entrance VJuST Analysis

Table 9 presents the alternative designs considered at the Lee Highway and Village Center intersection and its results compared to the conventional intersection as it will exist in the no-build. The VJuST analysis results show that the alternative designs may have modest operational benefit relative to the planned conventional intersection. The alternative intersections feature less conflict points than the conventional intersection, which leads to greater safety benefits.

Table 9: VJuST Analysis for Lee Highway at Village Center Entrance

Intersection Results					
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points	Notes
Median U-Turn	-	0.42	+	20	on has to be signalized, although it is anticipated t
Restricted Crossing U-Turn	-	0.39		20	1 Lane; NB & SB 1 Lane approaches; EB & WB sam
Thru-Cut	-	0.42		28	& SB 2 LTs and 1 RT Lane; EB & WB same as existi
Two-Way Stop Control	-	0.33		48	Existing Configuration
*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.					

Lee Highway at Fletcher Drive VJuST Analysis

Table 10 presents the alternative designs considered at the Lee Highway and Fletcher Drive intersection. It should be noted that the conventional intersection represents the V/C ratio if the split-phase operation that currently exists is removed to allow a single phase dedicated to serving the side-streets. The VJuST analysis results show that the alternative designs may have modest operational benefit relative to the planned conventional intersection. The alternative intersections feature less conflict points than the conventional intersection, which leads to greater safety benefits.

Lee Highway at Blackwell Road VJuST Analysis

Table 11 presents the alternative designs considered at the Lee Highway and Blackwell Road intersection and its results compared to the conventional intersection as it will exist in the no-build. The VJuST analysis results show that the alternative designs may have modest operational benefit relative to the planned conventional intersection. The alternative intersections feature less conflict points than the conventional intersection, which leads to greater safety benefits.

Table 10: VJuST Analysis for Lee Highway at Fletcher Drive

Intersection Results					
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points	Notes
Conventional	-	0.46		48	Split Phase Removal
Thru-Cut	-	0.47		28	s for NBL; remaining approaches same as Existing,
Roundabout	-	0.53		8	Hybrid Roundabout
*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.					

Table 11: VJuST Analysis for Lee Highway at Blackwell Road

Intersection Results					
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points	Notes
Conventional	-	0.63		48	Remove Split Phase by making SB L-T-R
Median U-Turn	-	0.65	+	20	Lanes; EB U-Turn 1 Lane; NB & SB both 1 Thru Lan
Partial Median U-Turn	-	0.74	+	28	SB existing configurations maintained; EB & WB sa
Quadrant Roadway	N-W	0.59		40	
	S-W	0.56		40	
Restricted Crossing U-Turn	-	0.57		20	1 Lane; NB & SB 2 Lane approaches; EB & WB sam
Thru-Cut	-	0.67		28	& SB 2 LTs and 1 RT Lane; EB & WB same as existi
Roundabout	-	0.79		8	Full Two-Lane Roundabout
*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.					

Synchro/SIDRA Results

Following the preliminary VJuST analysis and alternative screening, alternatives that were deemed viable were carried forward for more detailed analysis. Using the PM peak period and 2045 traffic volumes, screening-level Synchro and SIDRA analysis was performed at the study intersections. These results are discussed in the following sections.

Lee Highway and Broadview Avenue/Winchester Street SIDRA Analysis

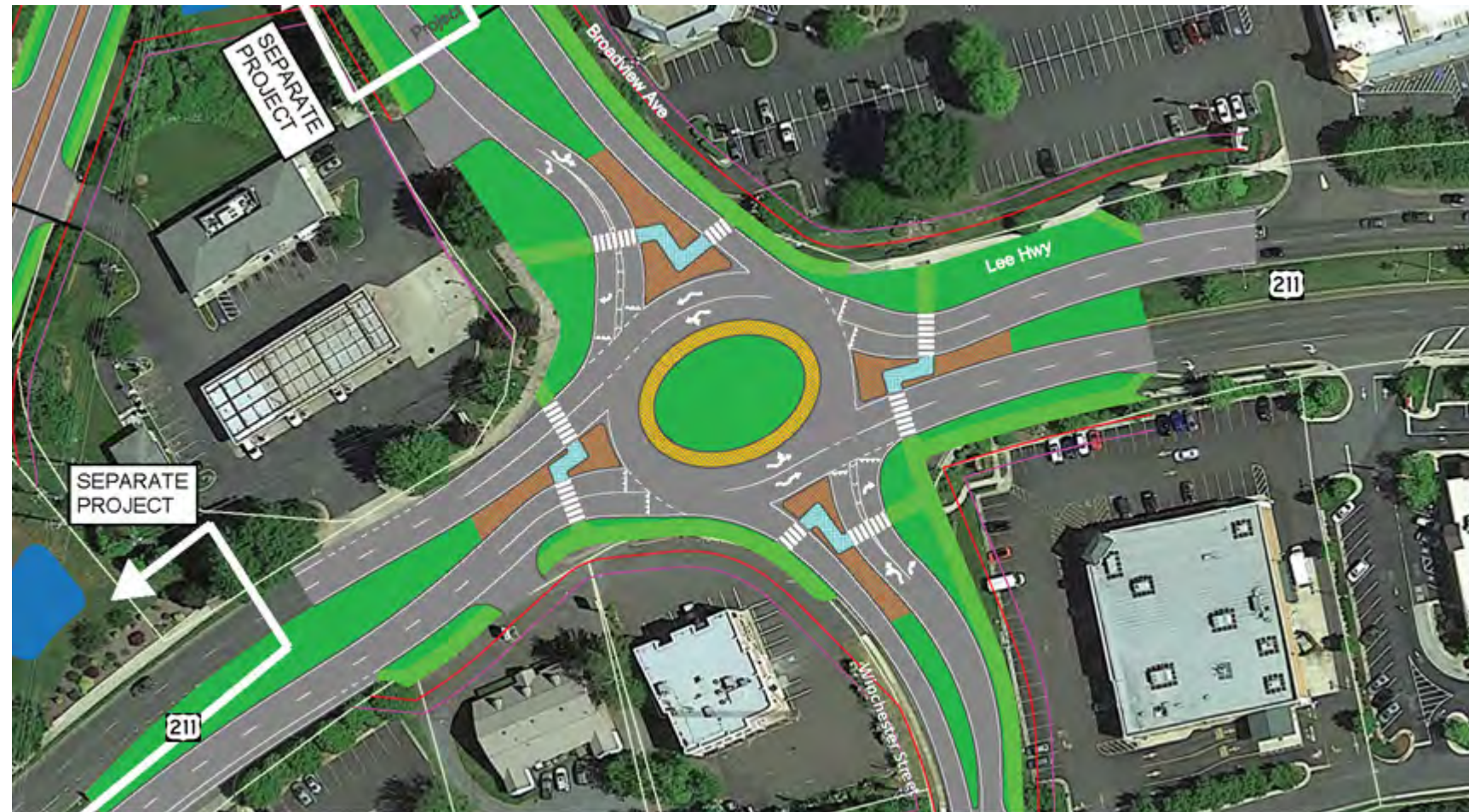
A multi-lane hybrid roundabout design was considered at this location. Using SIDRA analysis software, the roundabout was determined to reduce delays in the afternoon peak period by up to approximately 60 percent compared to the 2045 no-build. All approaches operated at LOS C or better, and the left-turn movements along Lee Highway improved from LOS E & F to LOS C. Table 12 shows the SIDRA results in comparison with the existing and no-build conditions.

Based on the results of this analysis, the study group decided to advance only the roundabout configuration for public comment. This configuration is shown in Figure 17.

Table 12: Synchro Analysis for Lee Highway at Blackwell Road

Intersection		Scenario		Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)												
						Eastbound			Westbound			Northbound			Southbound			
						LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
1	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Broadview Avenue / Winchester Street		PM Peak Hour															
			Existing Conditons		Signal	C (29.4)	E (70.0)	C (21.0)	C (21.0)	F (95.4)	B (16.3)	B (19.2)	E (73.9)	E (68.8)	A (0.1)	E (72.9)	E (72.4)	A (0.3)
							C (33.4)			C (20.3)			D (54.0)			C (29.7)		
			2045 No Build		Signal	C (30.7)	E (71.9)	C (25.0)	C (25.0)	F (92.8)	B (16.4)	B (15.9)	E (76.2)	E (69.4)	A (0.1)	E (74.2)	E (72.6)	A (0.4)
							D (36.9)			C (20.6)			E (55.1)			C (29.9)		
			2045 Build	Quadrant Roadway	Signal	C (28.3)	A (0.0)	B (16.2)	B (16.2)	A (0.0)	C (24.6)	D (45.3)	E (73.2)	E (67.9)	A (0.1)	E (71.7)	E (70.4)	A (0.4)
							B (16.2)			C (27.2)			D (53.3)			C (33.5)		
				Roundabout	Stop	B (12.1)	C (15.1)	A (6.0)	A (6.0)	C (21.9)	B (12.2)	B (11.3)	C (19.0)	B (13.8)	B (14.8)	C (20.3)	B (14.1)	C (15.2)
							A (7.7)			B (12.5)			C (16.1)			C (16.7)		

Figure 17. Broadview Avenue Roundabout Concept



Lee Highway and Branch Drive Synchro Analysis

Three scenarios were analyzed in Synchro: Split-phase removal, thru-cut, and converting the northbound Branch Drive approach to right-in/right-out only. Each of the scenarios offered improved operations when compared to the future no-build; however, the delays experienced by the mainline left-turn movements were greater than 59 seconds for all scenarios. Table 13 shows the Synchro results in comparison with the existing and no-build conditions.

Based on the results of this analysis, the study group decided to advance the Thru-Cut configuration and the partial access management concept for public comment. These concepts are shown in Figure 18 and Figure 19, respectively.

Table 13: Synchro Analysis for Lee Highway at Branch Drive

Intersection		Scenario		Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)												
						Eastbound			Westbound			Northbound			Southbound			
						LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
2	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Branch Drive		PM Peak Hour															
			Existing Conditons		Signal	C (21.7)	E (78.2)	A (9.2)	B (12.2)	F (90.5)	A (8.9)	B (14.6)	E (72.1)	E (68.7)	E (68.7)	E (74.0)	E (74.0)	E (59.0)
							B (16.8)			B (13.5)			E (69.9)			E (67.8)		
			2045 No Build		Signal	C (22.5)	E (79.9)	B (10.4)	B (13.5)	F (84.4)	B (10.1)	B (15.9)	E (72.0)	E (72.0)	E (68.5)	E (74.0)	E (74.0)	E (57.9)
							B (18.1)			B (14.3)			E (69.7)			E (67.3)		
			2045 Build	Conventional Improvements	Signal	C (21.0)	F (84.0)	A (8.9)	B (12.7)	F (84.2)	B (10.2)	B (14.9)	E (68.2)	E (69.6)	E (69.6)	E (57.4)	D (52.6)	D (52.6)
							B (17.2)			B (14.3)			E (69.4)			D (55.0)		
				Thru-Cut	Signal	B (19.9)	E (59.9)	B (11.6)	A (7.9)	E (62.4)	B (15.9)	A (10.0)	D (48.5)	---	D (48.5)	E (60.7)	---	A (8.5)
							B (17.4)			B (15.9)			C (34.3)			D (43.0)		
				Northbound RIRO	Signal	B (13.7)	E (80.0)	A (1.5)	A (3.1)	A (0.0)	A (6.1)	A (2.2)	---	---	---	E (74.0)	---	E (59.4)
	B (11.4)						A (5.8)			---			E (66.9)					

Figure 18. Branch Drive Thru-Cut Concept



Figure 19. Branch Drive Access Management Concept



Lee Highway and Village Center Synchro Analysis

Two alternatives were considered at this location: converting the side-street approaches to right-in/right-out only and implementing a thru-cut configuration. The right-in/right-out configuration featured the greatest operational improvement when compared to the no-build. Because the thru-cut configuration requires signalization, the overall intersection delay is greater than in the no-build. Table 14 shows the Synchro results in comparison with the existing and no-build conditions.

Based on the results of this analysis, the study group decided to advance only the partial access management concept for public comment. This concept is shown in Figure 20.

Table 14: Synchro Analysis for Lee Highway at Village Center

Intersection		Scenario		Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)												
						Eastbound			Westbound			Northbound			Southbound			
						LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
3	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Village Center		PM Peak Hour															
			Existing Conditons		Stop	A (0.5)	B (11.0)	A (0.0)	A (0.0)	A (9.8)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (9.8)	D (26.4)	A (0.0)	A (9.7)
							A (0.4)			A (0.0)			A (9.8)			B (12.7)		
			2045 No Build		Stop	A (0.5)	B (11.0)	A (0.0)	A (0.0)	B (10.2)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (9.7)	D (32.3)	A (0.0)	A (9.6)
							A (0.5)			A (0.0)			A (9.8)			B (13.1)		
			2045 Build	Conventional Improvements	Stop	A (0.2)	A (0.0)	A (0.0)	A (0.0)	B (10.7)	A (0.0)	A (0.0)	---	---	A (9.3)	---	---	A (9.9)
							A (0.0)			A (0.0)			A (9.3)			A (9.9)		
				Thru-Cut	Stop	A (0.8)	B (12.9)	A (0.0)	A (0.0)	B (10.4)	A (0.0)	A (0.0)	D (26.5)	---	A (9.3)	D (32.8)	---	B (10.4)
							A (0.5)			A (0.0)			B (13.3)			B (13.9)		

Figure 20. Village Center Access Management Concept



Lee Highway and Fletcher Drive SIDRA & Synchro Analysis

The alternatives considered at this intersection include a roundabout, thru-cut, and removing the split-phase for the side-street approaches. Of these alternatives, the roundabout had the greatest improvement in terms of operations, with an expected overall intersection delay 73 percent lower than the no-build. The SIDRA and Synchro results are shown below in Table 15.

Based on the results of this analysis, the study group decided to advance the Thru-Cut and Roundabout configurations for public comment. These concepts are shown in Figure 21 and Figure 22, respectively.

Table 15: Synchro and SIDRA Analysis for Lee Highway at Village Center

Intersection		Scenario		Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)												
						Eastbound			Westbound			Northbound			Southbound			
						LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
4	US Route 15/17/29 Bus/ US Route 211 (Lee Highway) & Fletcher Drive		PM Peak Hour															
			Existing Conditons		Signal	C (23.8)	E (72.1)	B (15.1)	A (2.8)	E (75.0)	B (10.6)	A (7.2)	E (70.8)	E (70.4)	D (53.3)	E (72.3)	E (72.3)	E (60.8)
							B (17.4)			B (14.9)			E (64.1)			E (67.8)		
			2045 No Build		Signal	C (24.3)	E (75.0)	B (16.3)	A (2.3)	F (81.5)	B (10.8)	A (1.5)	E (71.2)	E (70.6)	D (52.1)	E (72.7)	E (72.7)	E (59.4)
							B (18.6)			B (15.1)			E (63.8)			E (67.7)		
			2045 Build	Conventional Improvements	Signal	C (22.3)	E (74.9)	B (11.6)	A (1.1)	F (86.9)	A (8.1)	A (1.4)	E (68.8)	E (71.1)	E (71.1)	E (69.2)	E (64.0)	E (64.0)
							B (14.6)			B (13.1)			E (70.0)			E (66.5)		
				Roundabout	Stop	A (6.7)	B (14.4)	A (5.5)	A (5.2)	B (14.5)	A (5.6)	A (5.5)	B (12.2)	A (7.0)	A (8.1)	B (14.0)	A (8.7)	A (9.7)
							A (5.9)			A (6.1)			A (9.8)			B (11.7)		
				Thru-Cut	Signal	C (21.1)	E (71.0)	B (12.8)	A (3.9)	E (74.1)	A (5.3)	A (3.0)	E (72.2)	---	E (57.8)	E (73.6)	---	E (59.4)
B (15.7)							A (9.9)			E (66.8)			E (68.2)					

Figure 21. Fletcher Drive Thru-Cut Concept



Figure 22. Fletcher Drive Roundabout Concept



Lee Highway and Blackwell Road SIDRA & Synchro Analysis

A Quadrant Roadway along with a roundabout and removing the split-phase for the side-street approaches were considered at the intersection with Blackwell Road. Of these alternatives, the roundabout had the greatest improvement in terms of operations, with an expected overall intersection delay 71 percent lower than the no-build. The SIDRA and Synchro results are shown below in Table 16.

Based on the results of these analyses, the study group decided to advance the Partial Quadrant and Roundabout configurations for public comment. These concepts are shown in Figure 23 and Figure 24, respectively.

Table 16: Synchro and SIDRA Analysis for Lee Highway at Village Center

Intersection		Scenario		Control	Overall Delay (LOS)	Delay per Lane Group by Approach (sec/veh) (Level of Service)												
						Eastbound			Westbound			Northbound			Southbound			
						LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
5	US Route 15/17/29 Bus/ US Route 211(Lee Highway) & Blackwell Road		PM Peak Hour															
			Existing Conditons		Signal	D (42.4)	D (48.5)	C (25.6)	A (0.1)	E (75.1)	C (33.8)	C (24.8)	F (81.6)	E (58.3)	E (55.2)	E (74.3)	E (74.1)	E (58.5)
							C (24.3)			D (38.3)			E (66.0)			E (72.4)		
			2045 No Build		Signal	D (45.2)	D (52.1)	C (29.5)	A (0.1)	E (77.4)	D (36.8)	C (25.5)	F (89.2)	E (57.8)	D (54.4)	E (76.5)	E (76.1)	E (57.5)
							C (27.7)			D (40.9)			E (68.5)			E (74.2)		
			2045 Build	Conventional Improvements	Signal	D (36.8)	D (50.3)	B (19.7)	B (13.0)	D (36.0)	C (30.1)	B (12.1)	E (78.3)	E (73.2)	D (51.9)	D (53.1)	E (78.3)	E (78.3)
							C (20.8)			C (28.6)			E (66.4)			E (64.6)		
				Quadrant	Signal	C (33.1)	F (118.5)	C (26.0)	A (6.8)	F (80.1)	B (16.8)	B (12.3)	D (54.7)	D (43.1)	D (40.1)	F (159.7)	E (73.3)	E (58.8)
							C (24.2)			C (24.8)			D (46.0)			E (71.6)		
			Roundabout	Stop	B (13.1)	C (19.3)	A (9.9)	A (9.2)	C (22.4)	B (12.6)	B (11.8)	C (17.3)	B (11.6)	B (12.3)	C (21.1)	C (15.9)	B (10.5)	
B (10.3)						B (13.5)			B (14.1)			C (18.1)						

Figure 23. Blackwell Road Partial Quadrant Concept



Figure 24. Blackwell Road Roundabout Concept



Bike/Ped Plan

Several bicycle and pedestrian recommendations were developed in the Warrenton study corridor. To supplement the existing sidewalk infrastructure, the following improvements were recommended:

- Close the gap in sidewalk along northbound Lee Hwy between Branch Drive and Blalock Cycle Co
- Provide a bicycle and pedestrian facility along the southbound side of Lee Highway from Broadview Avenue to Blackwell Road; alternatively, construct a bicycle and pedestrian facility along Oak Springs Drive, Broadview Avenue between Oak Springs Drive and Branch Drive, and Branch Drive from Broadview Avenue to Oak Springs Drive
- Safety improvements to the existing crosswalks at the four signalized intersections in the corridor

The bicycle and pedestrian recommendations are shown in Figure 25.

Figure 25. Bicycle and Pedestrian Recommendations



Chapter 3:

Public and Stakeholder Outreach and Feedback

Public Involvement

Following the development and analysis of the alternative designs for the study intersections, a public involvement survey was developed to determine the public's response to the recommended improvements and what they perceived as the relevant issues within the study area. This survey was available online for 18 days spanning from February 1 to February 18, 2022.

Survey Design

Public involvement for this study took place in the form of an online survey developed in MetroQuest, which is an online engagement platform that is designed to educate the public while gathering informed output. The goals of this public outreach effort were to present relevant issues, educate the public on the recommended improvement concepts outlined in Chapter 2, and to receive the public's feedback on the proposed improvements.

Overall, the survey is divided into five sections, which include the following:

1. Welcome/introduction with overview of the project and study area
2. Bike & Transit Survey questions
3. Intersection Recommendations – Broadview Ave, Branch Dr, & Village Center
4. Intersection Recommendations – Fletcher Dr, Blackwell Dr
5. Wrap up with demographic questions

The first section provides an overview of the study area and the project initiative. In the second section, participants were asked if they were in favor of increased access for bicyclists and pedestrians on and along Lee Highway, as well as whether transit bus stops should be relocated along Lee Highway. In the third & fourth sections, a summary of the recommended improvements and benefits at each study intersection was presented to the participants, as shown in Figure 26. For these recommended improvement concepts, participants were asked to rate them based on their opinion from one to five, one being very unfavorable, three being neutral, and five being strongly in favor. They were also provided with an option to input comments or concerns. At the end of the survey, the participants were asked a few demographic questions including: "How do you normally travel in this area?" and "What other modes of travel would you prefer?". A total of 457 people participated in the survey, 79 percent of which live in Warrenton. No relevant comments were submitted to the MetroQuest survey.

Survey Questions and Results:

The survey results on the participants' trip purpose, current and preferred modes of travel are presented in Figure 27 and Figure 28. Overall, the majority of participants live and drive their personal vehicle within the study area. One-third of participants responded that they preferred active transportation (walking/biking/transit).

Figure 26. MetroQuest Survey Welcome Screen

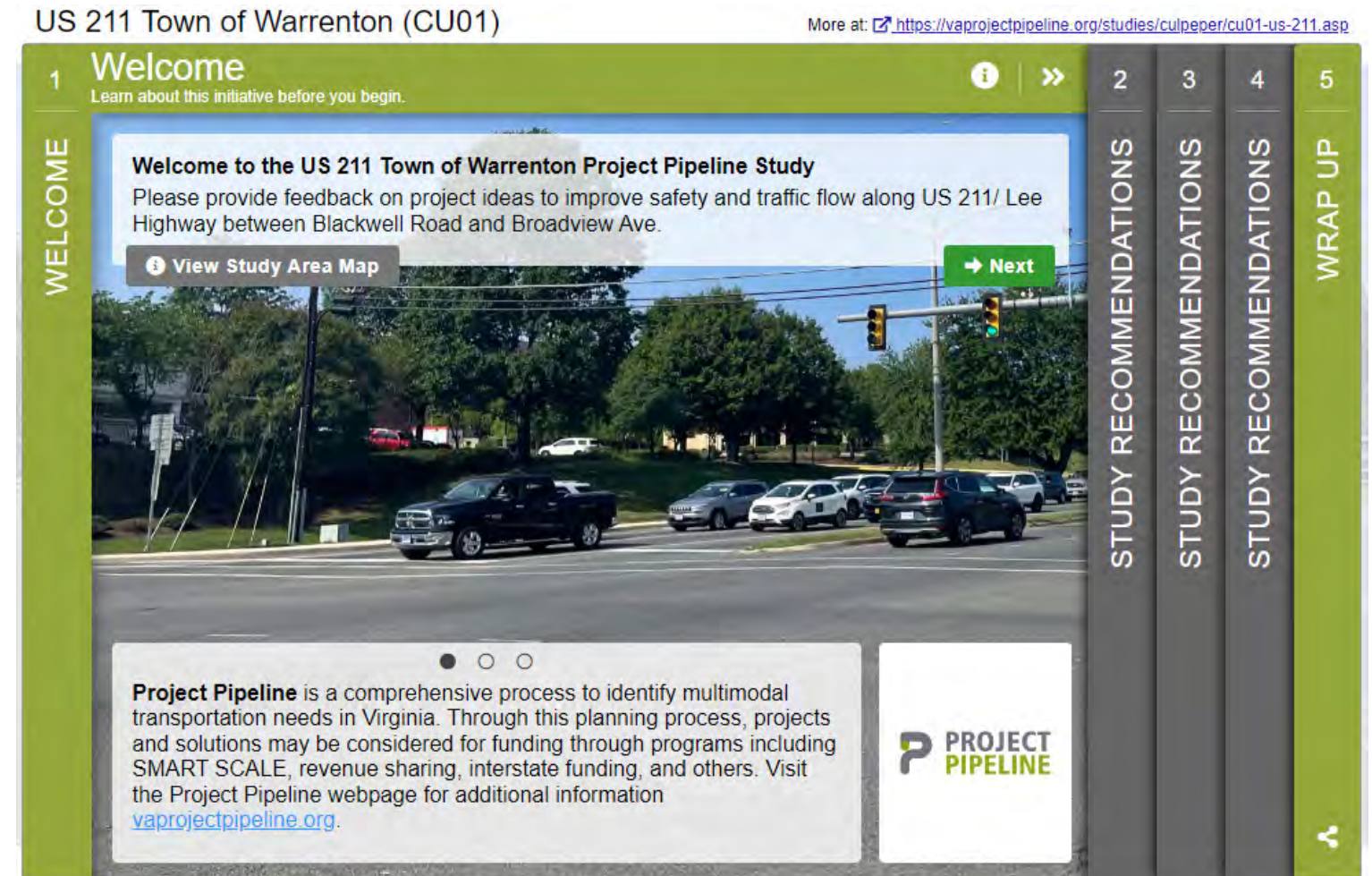


Figure 27. Current Travel Mode Results from the MetroQuest Survey

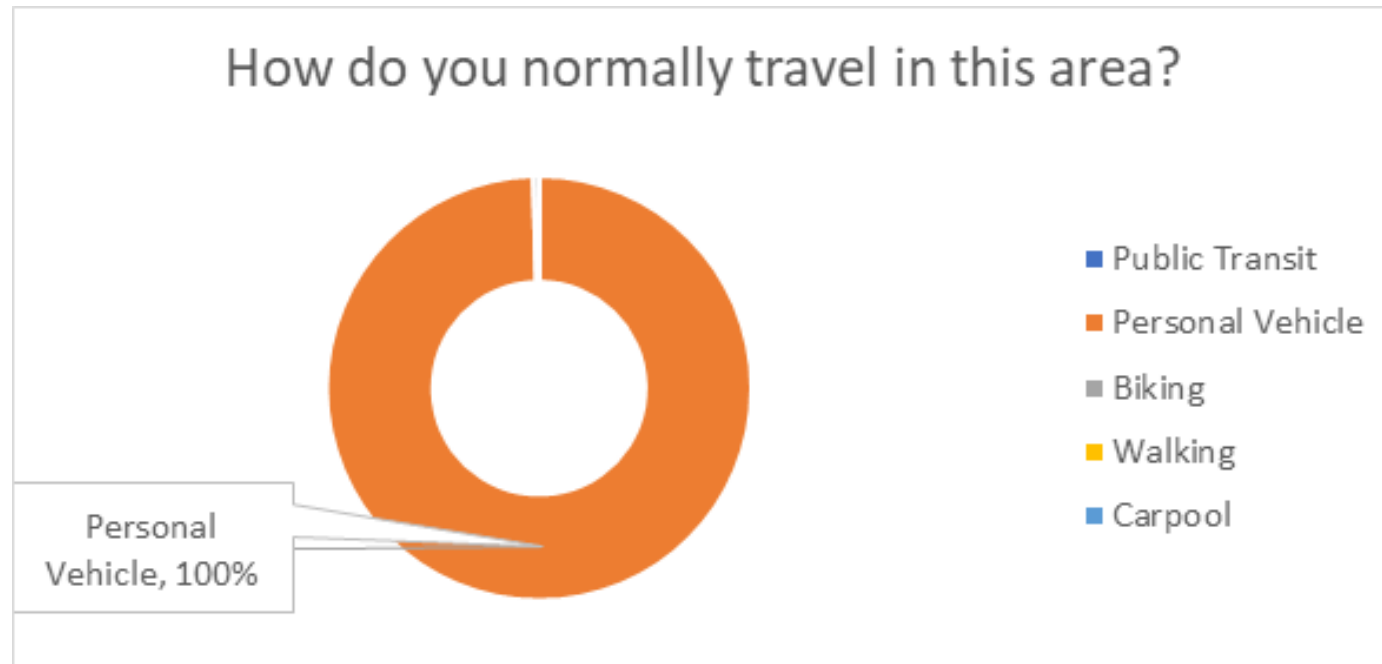
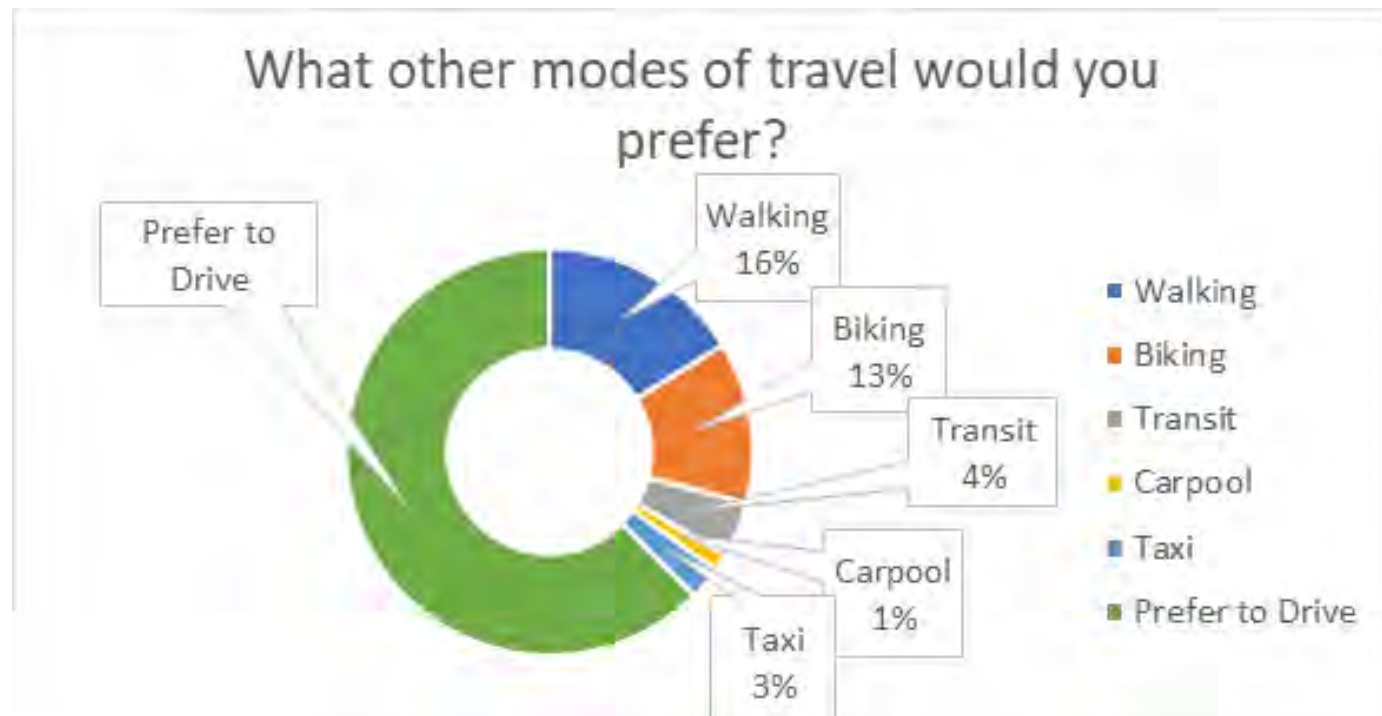


Figure 28. Desired Travel Mode Results from the MetroQuest Survey

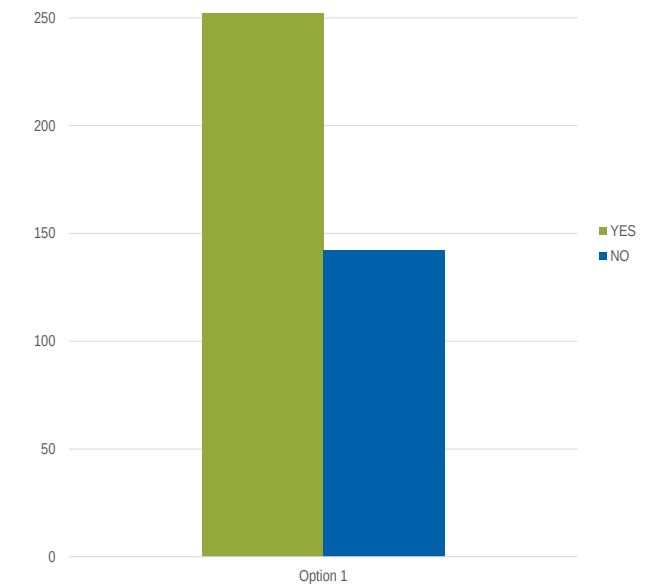


Bike and Pedestrian Plan

The bike & pedestrian plan serves as a foundation for future improvements to provide more access & safer crossings within Warrenton. This plan can be found in the previous chapter as Figure 25.

- 69% in support of the plan

Figure 29. Support for the Bicycle and Pedestrian Plan on the MetroQuest Survey

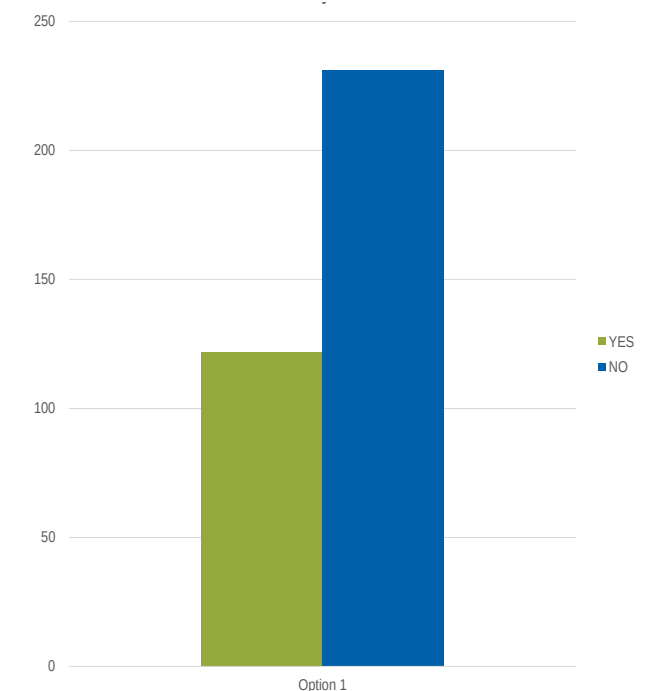


Transit Stops

Three Circuit Rider stops are in the area at Safeway, Rite Aid, & Harris Teeter. These stops are on business's private parking lots. Should stops be moved to the Lee Highway public right of way to improve transit access & establish more permanent bus stops?

- 69% do not support the option to relocate the stops

Figure 30. Support for moving transit stops on the MetroQuest Survey



US 211 & Broadview Ave

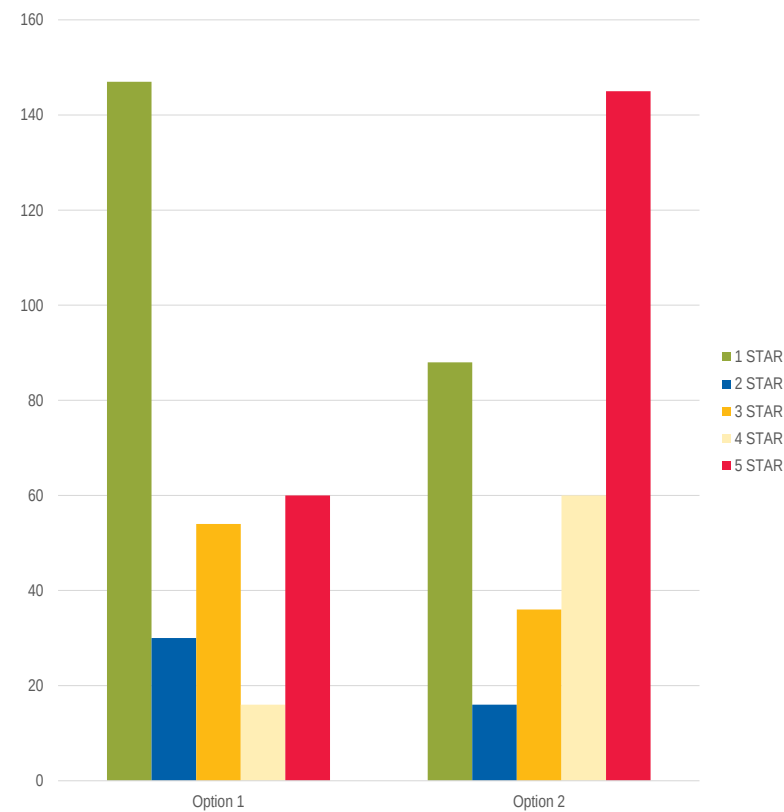
No Improvement: Leave the existing conditions as is; no improvements. The anticipated delay through the intersection is expected to increase by more than 10% over the next 20 years.

- Average score: 2.39

Roundabout: reconfigures the intersection to a multi-lane hybrid roundabout. The roundabout can improve operations by 60%, reduce crashes up to 60%, and improve the safety of pedestrian crossings.

- Average score: 3.46

Figure 31. Results for Broadview Road Intersection Improvements from the MetroQuest Survey



PROJECT PIPELINE

Figure 32. Options for Broadview Road Intersection Improvements from the MetroQuest Survey



US 211 & Branch Drive

No Improvement: Leave the existing condition as is; no improvements. The anticipated delay through the intersection is expected to increase by more than 15% over the next 20 years

- Average score: 2.45

Thru-Cut: Relocates the Branch Drive through-movements through other intersections and can reduce delay by up to 25% and reduce crashes by up to 10%.

- Average score: 3.00

Partial Access Management: Reconfigures the northbound approach of Branch Drive to right-in/right-out only. The relocated movements can use the Broadview Ave intersection. This improvement requires the recommended roundabout at Broadview Ave to be completed. Operations would be improved by 40%, and a projected crash reduction of up to 60% through-movements through other intersections and can reduce delay by up to 25% and reduce crashes by up to 10%.

- Average score: 3.15

Figure 33. Results for Branch Drive Intersection Improvements from the MetroQuest Survey

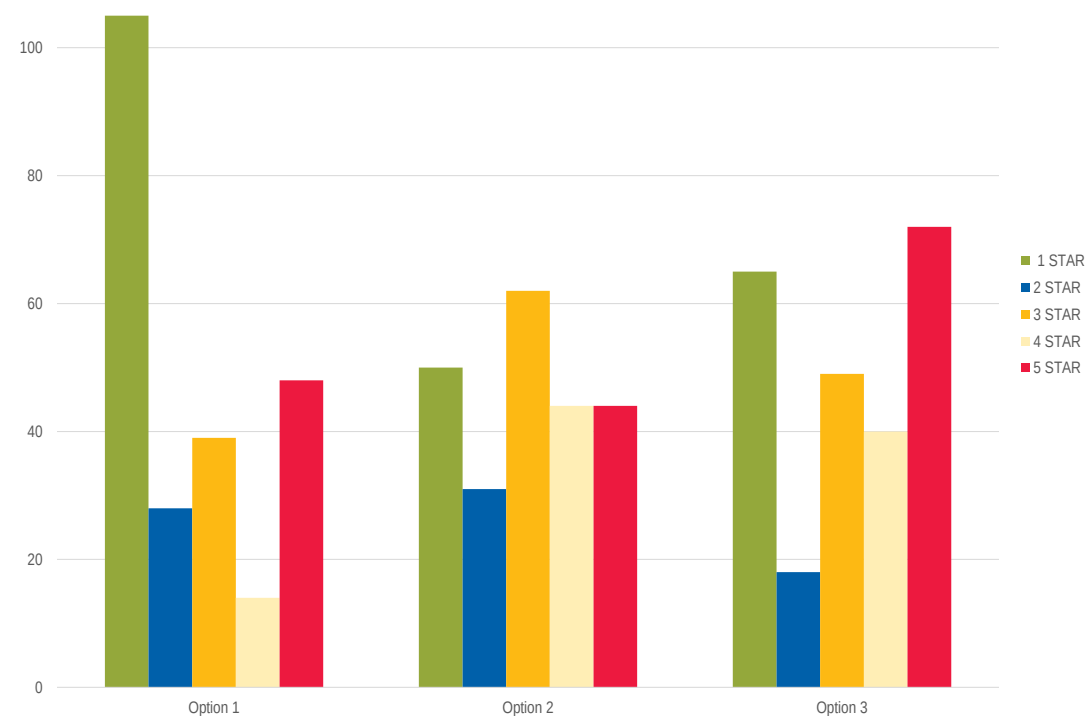
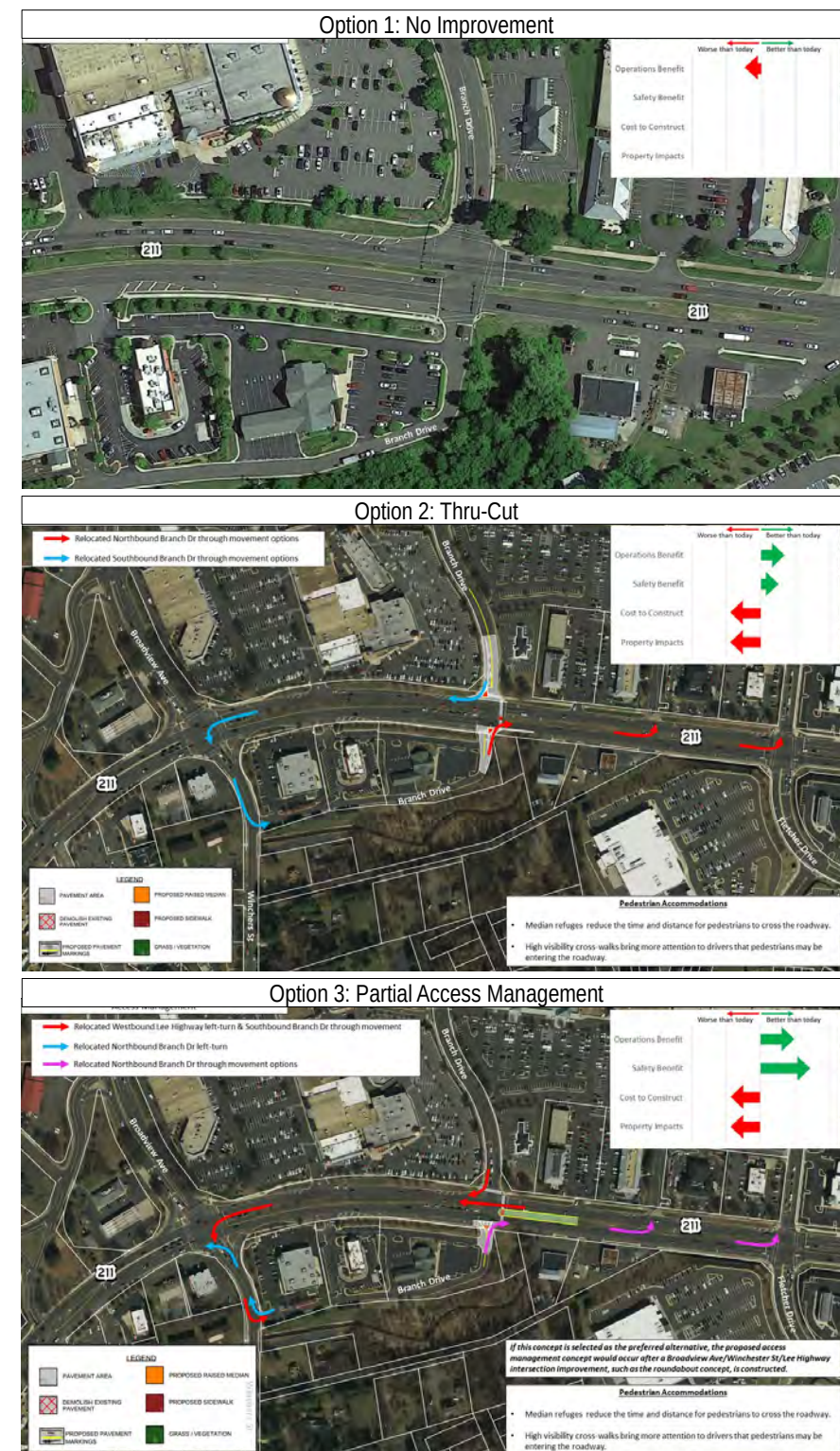


Figure 34. Options for Branch Drive Intersection Improvements from the MetroQuest Survey



US 211 & VILLAGE CENTER

Access Management: Median opening to be reconfigured to restrict through- and left-turn movements from the driveways. Additionally, the Village Center driveway would be reconstructed to improve ingress & egress.

- Average score: 3.33

Figure 35. Results for Village Center Intersection Improvements from the MetroQuest Survey

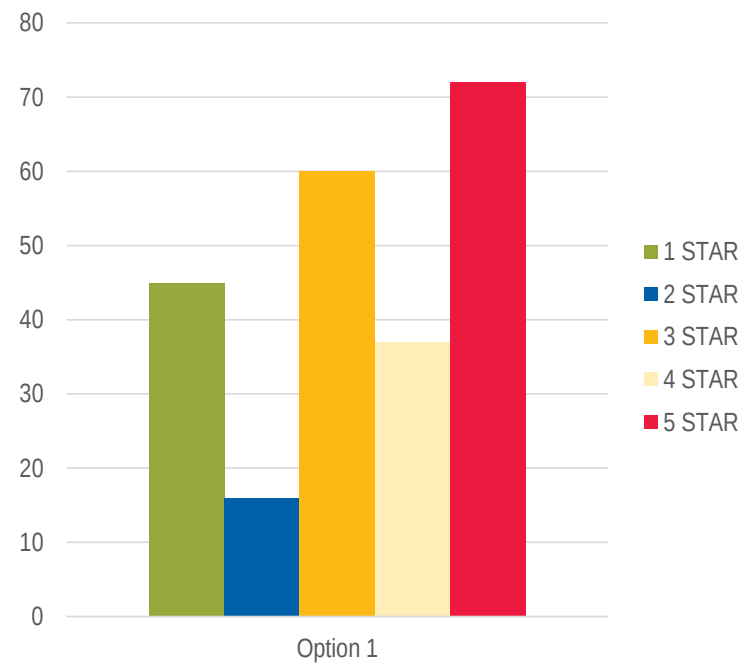


Figure 36. Option for Village Center Intersection Improvements from the MetroQuest Survey



US 211 & Fletcher Drive

No Improvement: Leave the existing condition as is; no improvements. The anticipated delay through the intersection is expected to increase by more than 10% over the next 20 years

- Average score: 2.59

Thru-Cut: Relocates the Branch Drive through-movements through other intersections and can reduce delay by up to 25% and reduce crashes by up to 10%.

- Average score: 2.67

Roundabout: reconfigures the intersection to a multi-lane hybrid roundabout. The roundabout can improve operations by 70%, reduce crashes up to 60%, and improve the safety of pedestrian crossings.

- Average score: 3.18

Figure 37. Results for Fletcher Drive Intersection Improvements from the MetroQuest Survey

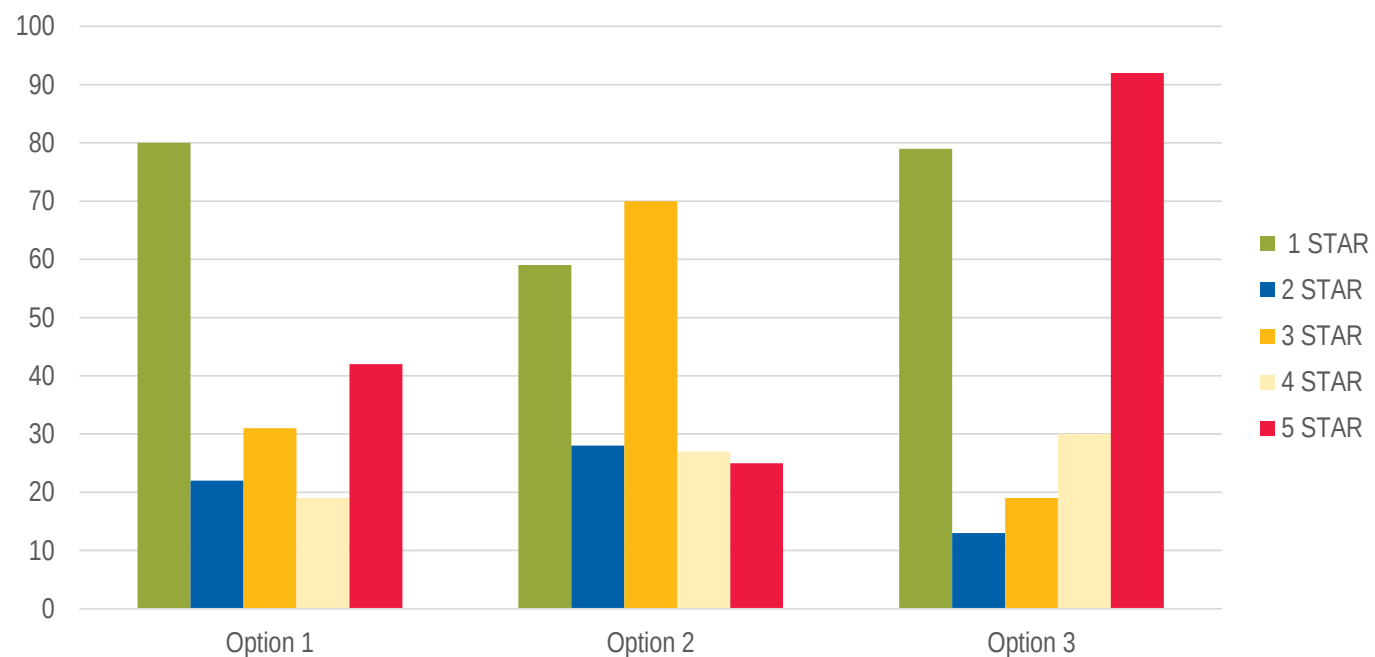
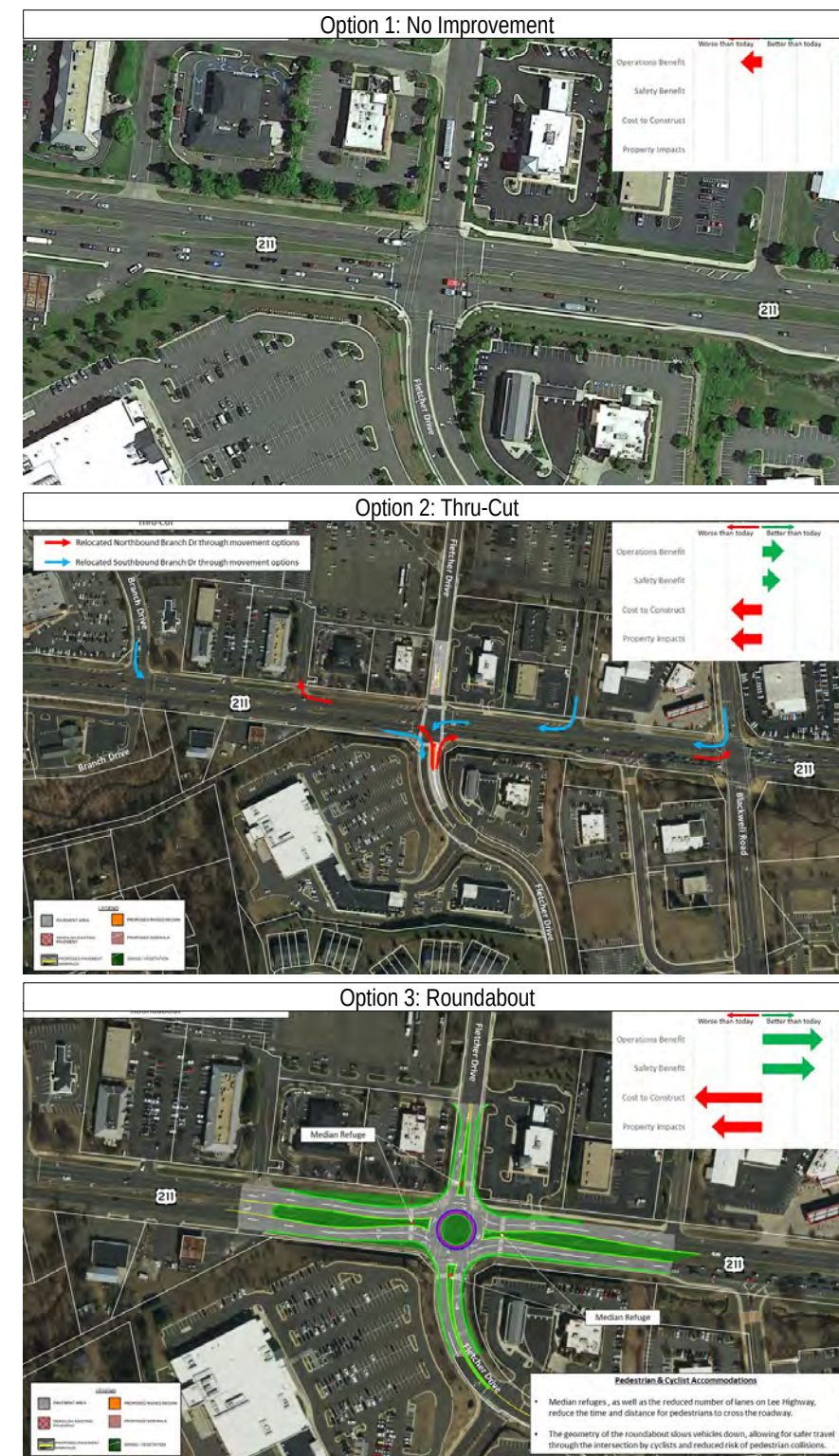


Figure 38. Option for Fletcher Drive Intersection Improvements from the MetroQuest Survey



US 211 & Blackwell Road

No Improvement: Leave the existing condition as is; no improvements. The anticipated delay through the intersection is expected to increase by more than 10% over the next 20 years.

- Average score: 3.33

Partial Quadrant Roadway: This alternative relocates the southbound Blackwell Road and eastbound US 211 left-turn movements through Blackwell Park Lane. Delay is expected to be reduced by up to 25% and reduce crossing conflicts.

- Average score: 2.59

Roundabout: reconfigures the intersection to a multi-lane hybrid roundabout. The roundabout can improve operations by 70%, reduce crashes up to 60%, and improve the safety of pedestrian crossings.

- Average score: 3.33

Figure 39. Results for Blackwell Road Intersection Improvements from the MetroQuest Survey

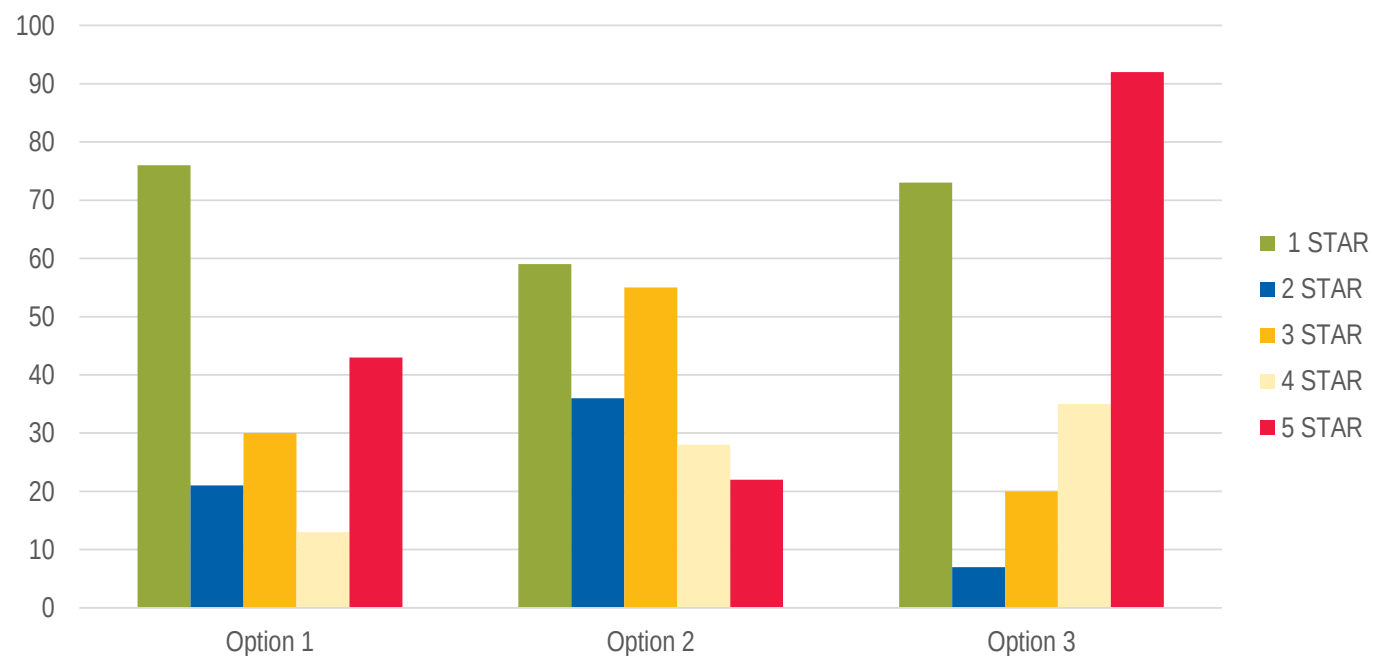
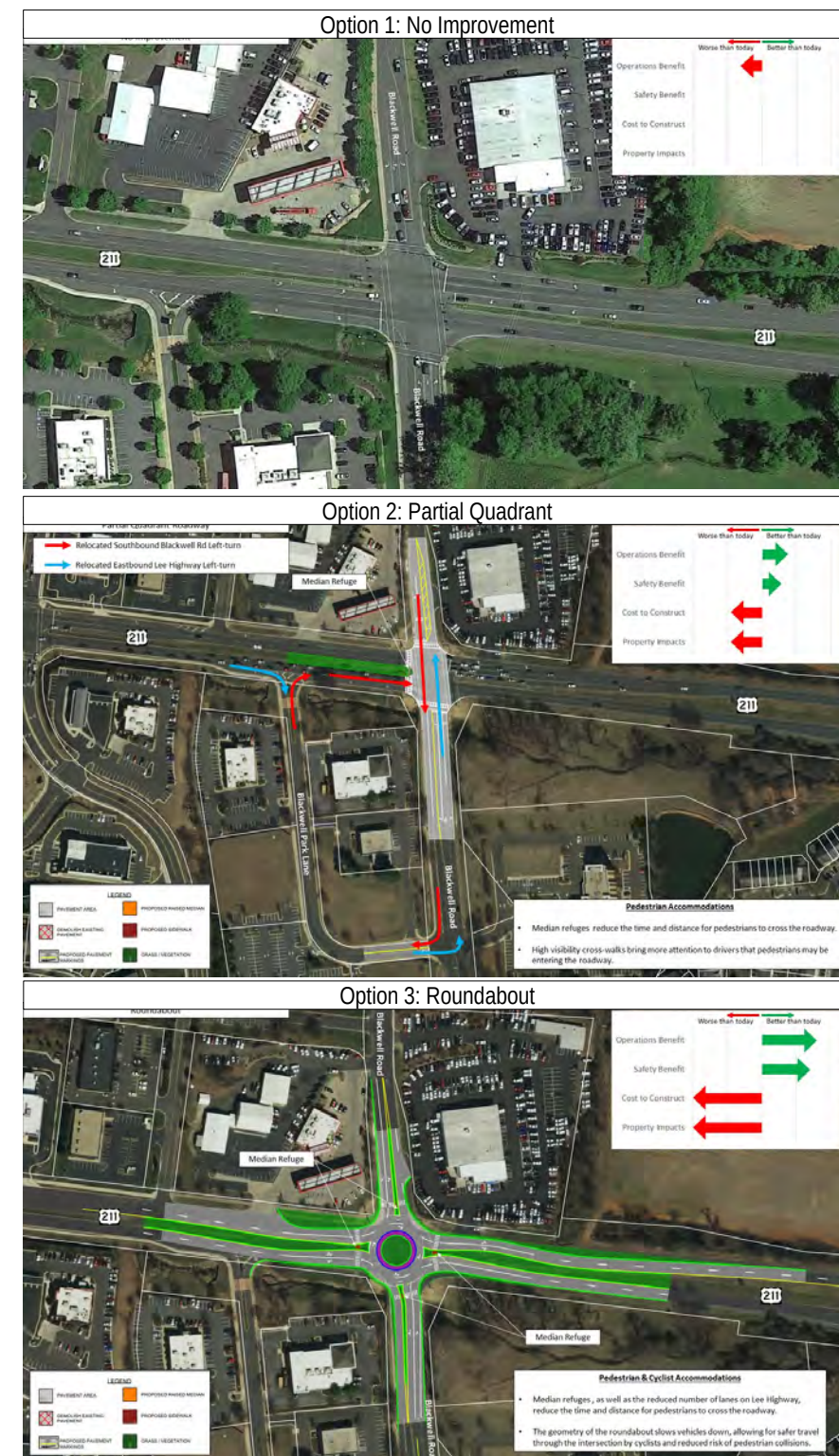


Figure 40. Option for Blackwell Road Intersection Improvements from the MetroQuest Survey



Chapter 4:

Preferred Alternative Design Refinement & Investment Strategy

Preferred Alternatives

The Preferred Alternative options were developed for the study area based on the results of the analysis as discussed in the previous Alternative Development and Screening section (Chapter 2), and Public and Stakeholders Feedback (Chapter 3). A summary of the proposed alternatives is provided in Table 17 and shown in Figure 41. The recommended considerations developed by Team 3 with respect to rail, transit, and TDM are shown in Figure 42.

SMART SCALE, Fiscal Year 2024

Based on public comments, preliminary Synchro analysis of each alternative for the controlling peak hour, and planning level cost estimates of each alternative, the study team decided to advance only the proposed roundabout at Lee Highway and Blackwell Road for fiscal year 2024 SMART SCALE funding consideration. Because this is a targeted improvement with both safety and congestion benefits, the SMART SCALE Program is a logical first option. A SMART SCALE application was prepared for this project and submitted by the Town of Warrenton on August 1st, 2022, for the fiscal year 2024 SMART SCALE cohort. If selected, this project would receive full funding by Virginia fiscal year 2026.

As a result of a separate study along Broadview Avenue, the Town of Warrenton also submitted a SMART SCALE application for a hybrid roundabout at the intersection of Broadview Avenue and Lee Highway.

Table 17: List of Preferred Alternative Improvements

Improvement	Description	Planning-Level Cost Estimate
Blackwell Road Hybrid Roundabout and Pedestrian Improvements	Convert the intersection of Lee Highway and Blackwell Road to a hybrid roundabout, construct pedestrian facilities on each leg, and provide pedestrian crossings with median refuges and HAWK signals	\$11,200,000
Branch Avenue Thru-Cut	Relocate the Branch Drive through movements through other intersections	\$6,700,000
Branch Avenue Access Management Improvements	Convert northbound approach of Branch Ave to right-in/right-out only	\$3,000,000
Fletcher Drive Roundabout	Multi-lane hybrid roundabout	\$7,200,000

Figure 41. Preferred Alternatives



PROJECT NEEDS

These proposed improvements help address VTrans needs associated with safety, capacity preservation, and congestion mitigation. The preferred alternatives reduce delay, improve safety for both vehicle and other modes such as bikes and pedestrians.

Need	Priority
Congestion Mitigation	Very High
Transit Access	Very High
Transportation Demand Management	Very High
Safety Improvement	High
Bicycle and Pedestrian Access	High

Survey Summary

- The MetroQuest survey ran between February 1 and February 18, 2022
- Survey included 457 participants
- 79% of respondents were residents, 13% visitors, and 8% employees of the study area

PROJECT DESCRIPTION

The following alternatives were advanced that can be submitted for future funding applications. These improvements will incorporate measures such as improved pedestrian crossing distances, crosswalks, and updated parallel facilities, such as shared use paths:

- Multi-lane Hybrid Roundabouts:** A multi-lane roundabout will help improve operations and reduce crashes by up to 60%. Roundabouts are also particularly beneficial for other roadway users like pedestrians and cyclists because of the slower speeds through a roundabout.
- Thru-cuts:** An alternative that reduces traffic signal phases on the minor approaches by relocating the through movement within the network. This improvement enhances timings and reduces delay.
- Access Management and Intersection Improvement:** A safety improvement that reduces the number of movements permitted at an intersection.
 - Branch Drive: Movements onto and into Branch Drive northbound approach would be reduced so that those turns would use a future roundabout at Broadview Avenue.
 - Village Center Driveway: Movements across and out of the driveway are reduced to enhance safety. The driveway would also be reconstructed to allow quicker ingress/egress.

What other modes of travel would you prefer?

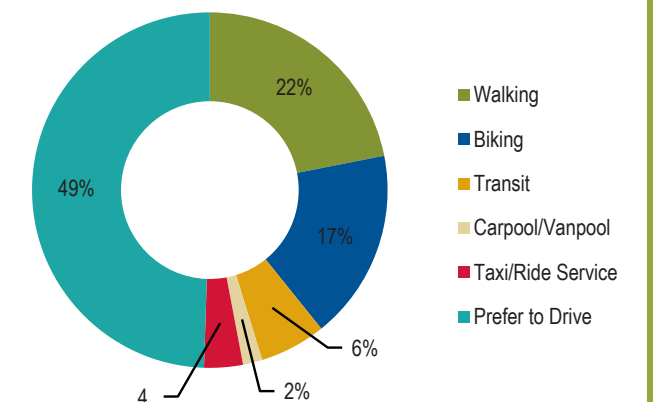


Figure 42. Transit and TDM Recommendations



Complete the pedestrian network on Lee Hwy where gaps exist (two blocks on southside of road east of Branch Dr and east of Blackwell Park Ln)



Add striping and pedestrian median refuges to the crosswalks at the intersections of Lee Hwy with Broadview Ave/Winchester St, Branch Dr, Fletcher Dr, and Blackwell Rd



Consider relocating bus stops to public rights-of-way (such as Fletcher Dr and Branch Dr) and installing more permanent infrastructure, including bus stop signs; consider instituting bi-directional service instead of loops



Leverage the existing RRRC's Commuter Services commuter assistance programs to promote the use of transit, carpool and vanpool, and to provide ridematching and commute options information to residents, employers, and employees.

Appendix A:

Existing Turning Movement Counts

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	8	67	0	0	75	5	66	3	2	76	2	4	3	0	9	11	1	18	0	30	190
07:15 AM	13	74	0	0	87	0	78	6	2	86	2	3	5	0	10	11	9	21	0	41	224
07:30 AM	22	104	2	0	128	4	88	3	1	96	7	5	4	0	16	12	1	21	0	34	274
07:45 AM	24	97	3	5	129	8	105	17	1	131	7	8	9	0	24	21	3	25	0	49	333
Total	67	342	5	5	419	17	337	29	6	389	18	20	21	0	59	55	14	85	0	154	1021
08:00 AM	21	106	6	2	135	2	124	16	0	142	5	6	4	0	15	10	10	29	0	49	341
08:15 AM	27	116	6	1	150	12	107	14	0	133	12	4	9	0	25	17	13	27	0	57	365
08:30 AM	36	129	3	2	170	5	139	18	2	164	16	3	7	0	26	24	8	33	0	65	425
08:45 AM	37	141	5	2	185	5	151	17	3	176	10	15	7	0	32	23	10	33	0	66	459
Total	121	492	20	7	640	24	521	65	5	615	43	28	27	0	98	74	41	122	0	237	1590
09:00 AM	29	133	5	2	169	9	130	14	3	156	19	16	13	0	48	16	13	49	0	78	451
09:15 AM	45	153	9	0	207	8	161	15	2	186	26	23	17	0	66	32	6	34	0	72	531
09:30 AM	36	193	9	1	239	8	181	21	7	217	15	17	15	0	47	26	11	43	0	80	583
09:45 AM	46	163	8	1	218	7	160	11	4	182	18	23	17	0	58	28	17	50	0	95	553
Total	156	642	31	4	833	32	632	61	16	741	78	79	62	0	219	102	47	176	0	325	2118
10:00 AM	61	195	8	0	264	11	206	24	3	244	22	13	19	0	54	34	16	56	0	106	668
10:15 AM	55	190	9	3	257	10	180	29	2	221	24	26	21	0	71	35	17	56	0	108	657
10:30 AM	61	217	3	3	284	8	226	19	3	256	21	21	13	0	55	30	18	62	0	110	705
10:45 AM	34	189	15	1	239	4	245	15	4	268	21	19	10	0	50	35	15	75	1	126	683
Total	211	791	35	7	1044	33	857	87	12	989	88	79	63	0	230	134	66	249	1	450	2713
11:00 AM	59	195	10	1	265	12	194	19	3	228	15	21	27	0	63	49	25	53	0	127	683
11:15 AM	69	189	8	2	268	12	210	23	6	251	15	26	21	0	62	26	15	61	0	102	683
11:30 AM	74	195	7	0	276	14	217	18	5	254	22	20	13	0	55	31	14	50	0	95	680
11:45 AM	60	180	7	2	249	18	203	26	3	250	12	29	13	0	54	43	9	66	0	118	671
Total	262	759	32	5	1058	56	824	86	17	983	64	96	74	0	234	149	63	230	0	442	2717
12:00 PM	70	178	8	1	257	10	209	29	3	251	22	33	23	0	78	31	21	50	0	102	688
12:15 PM	90	207	7	1	305	10	234	26	4	274	31	22	19	0	72	36	19	67	0	122	773
12:30 PM	64	192	10	5	271	18	182	22	8	230	24	25	28	0	77	43	18	76	0	137	715
12:45 PM	65	184	14	3	266	12	206	26	8	252	22	39	22	0	83	35	14	67	0	116	717
Total	289	761	39	10	1099	50	831	103	23	1007	99	119	92	0	310	145	72	260	0	477	2893
01:00 PM	69	220	13	1	303	13	159	32	8	212	16	24	24	0	64	34	8	55	0	97	676
01:15 PM	51	182	4	1	238	16	194	27	5	242	21	20	18	0	59	37	11	64	0	112	651
01:30 PM	76	196	7	2	281	14	214	24	5	257	18	27	15	0	60	32	14	52	0	98	696
01:45 PM	55	164	4	2	225	13	192	28	5	238	24	31	19	0	74	30	15	48	0	93	630
Total	251	762	28	6	1047	56	759	111	23	949	79	102	76	0	257	133	48	219	0	400	2653
02:00 PM	53	178	9	1	241	18	184	22	2	226	25	22	14	0	61	26	19	51	0	96	624
02:15 PM	58	156	9	1	224	11	189	28	4	232	16	12	14	0	42	28	18	51	0	97	595
02:30 PM	63	163	13	2	241	12	214	15	5	246	13	20	12	0	45	38	18	67	0	123	655
02:45 PM	61	156	8	3	228	12	185	22	10	229	14	15	9	0	38	35	16	58	0	109	604
Total	235	653	39	7	934	53	772	87	21	933	68	69	49	0	186	127	71	227	0	425	2478
03:00 PM	44	190	11	1	246	13	191	23	0	227	21	25	16	0	62	19	15	52	0	86	621
03:15 PM	55	173	4	4	236	15	174	26	3	218	21	14	16	0	51	45	8	52	0	105	610
03:30 PM	46	184	6	2	238	7	196	21	4	228	12	16	16	0	44	19	15	50	0	84	594
03:45 PM	55	148	2	3	208	14	180	22	6	222	15	16	10	0	41	34	14	49	0	97	568
Total	200	695	23	10	928	49	741	92	13	895	69	71	58	0	198	117	52	203	0	372	2393
04:00 PM	54	186	8	1	249	8	142	21	2	173	15	27	11	0	53	34	14	54	0	102	577
04:15 PM	52	184	9	2	247	13	170	18	2	203	14	17	16	0	47	36	13	41	0	90	587
04:30 PM	36	165	9	2	212	20	187	14	6	227	11	14	16	0	41	23	15	48	0	86	566
04:45 PM	42	157	6	0	205	11	146	13	6	176	20	16	9	0	45	33	14	48	0	95	521
Total	184	692	32	5	913	52	645	66	16	779	60	74	52	0	186	126	56	191	0	373	2251
05:00 PM	48	164	3	1	216	16	167	27	5	215	22	7	5	0	34	11	9	42	0	62	527
05:15 PM	54	157	4	0	215	16	127	19	2	164	12	17	0	0	29	34	8	36	0	78	486
05:30 PM	57	180	12	1	250	14	136	19	1	170	13	14	5	0	32	21	11	37	0	69	521
05:45 PM	39	151	7	1	198	11	172	22	1	206	14	15	19	0	48	30	11	29	0	70	522
Total	198	652	26	3	879	57	602	87	9	755	61	53	29	0	143	96	39	144	0	279	2056
06:00 PM	35	136	5	2	178	6	162	19	6	193	26	21	20	0	67	20	10	34	0	64	502
06:15 PM	36	122	5	0	163	13	134	18	5	170	12	15	11	0	38	24	8	33	0	65	436
06:30 PM	43	120	4	0	167	14	157	24	2	197	10	6	9	0	25	23	11	30	0	64	453
06:45 PM	40	100	7	0	147	12	143	17	5	177	16	12	13	0	41	9	23	30	0	62	427
Total	154	478	21	2	655	45	596	78	18	737	64	54	53	0	171	76	52	127	0	255	1818

Peggy Malone & Associates

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File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	2328	7719	331	71	10449	524	8117	952	179	9772	791	844	656	0	2291	1334	621	2233	1	4189	26701
Apprch %	22.3	73.9	3.2	0.7		5.4	83.1	9.7	1.8		34.5	36.8	28.6	0		31.8	14.8	53.3	0		
Total %	8.7	28.9	1.2	0.3	39.1	2	30.4	3.6	0.7	36.6	3	3.2	2.5	0	8.6	5	2.3	8.4	0	15.7	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:30 AM																	
10:30 AM	61	217	3	281	8	226	19	253	21	21	13	55	30	18	62	110	699
10:45 AM	34	189	15	238	4	245	15	264	21	19	10	50	35	15	75	125	677
11:00 AM	59	195	10	264	12	194	19	225	15	21	27	63	49	25	53	127	679
11:15 AM	69	189	8	266	12	210	23	245	15	26	21	62	26	15	61	102	675
Total Volume	223	790	36	1049	36	875	76	987	72	87	71	230	140	73	251	464	2730
% App. Total	21.3	75.3	3.4		3.6	88.7	7.7		31.3	37.8	30.9		30.2	15.7	54.1		
PHF	.808	.910	.600	.933	.750	.893	.826	.935	.857	.837	.657	.913	.714	.730	.837	.913	.976

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	70	178	8	256		10	209	29	248		22	33	23	78		31	21	50	102	684
12:15 PM	90	207	7	304		10	234	26	270		31	22	19	72		36	19	67	122	768
12:30 PM	64	192	10	266		18	182	22	222		24	25	28	77		43	18	76	137	702
12:45 PM	65	184	14	263		12	206	26	244		22	39	22	83		35	14	67	116	706
Total Volume	289	761	39	1089		50	831	103	984		99	119	92	310		145	72	260	477	2860
% App. Total	26.5	69.9	3.6			5.1	84.5	10.5			31.9	38.4	29.7			30.4	15.1	54.5		
PHF	.803	.919	.696	.896		.694	.888	.888	.911		.798	.763	.821	.934		.843	.857	.855	.870	.931

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File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	4
07:15 AM	0	3	1	0	4	0	3	1	0	4	1	0	0	0	1	0	0	0	0	0	9
07:30 AM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
07:45 AM	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4
Total	2	7	1	0	10	0	8	2	0	10	1	0	0	0	1	0	1	0	0	1	22
08:00 AM	0	4	0	0	4	0	6	0	0	6	0	0	0	0	0	0	0	1	0	1	11
08:15 AM	1	2	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	7
08:30 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	8
08:45 AM	0	3	0	0	3	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	9
Total	1	13	0	0	14	0	17	1	0	18	0	0	0	0	0	1	0	2	0	3	35
09:00 AM	0	6	0	0	6	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	11
09:15 AM	0	5	0	0	5	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	7
09:30 AM	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	9
09:45 AM	0	5	0	0	5	1	2	0	0	3	1	0	0	0	1	0	0	0	0	0	9
Total	0	21	0	0	21	1	8	2	0	11	1	0	0	0	1	3	0	0	0	3	36
10:00 AM	0	3	0	0	3	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	6
10:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	5
10:30 AM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	4
10:45 AM	0	2	0	0	2	0	5	1	0	6	1	0	2	0	3	0	0	1	0	1	12
Total	0	9	0	0	9	0	9	2	0	11	2	0	2	0	4	0	1	2	0	3	27
11:00 AM	0	3	1	0	4	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	7
11:15 AM	1	1	0	0	2	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1	6
11:30 AM	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	1	1	0	0	2	9
11:45 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	8
Total	1	10	1	0	12	0	12	1	0	13	0	0	0	0	0	2	2	1	0	5	30
12:00 PM	0	5	0	0	5	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	8
12:15 PM	0	3	0	0	3	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	5
12:30 PM	1	2	0	0	3	0	1	1	0	2	0	0	0	0	0	0	0	3	0	3	8
12:45 PM	1	1	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5
Total	2	11	0	0	13	1	3	3	0	7	2	1	0	0	3	0	0	3	0	3	26
01:00 PM	0	1	0	1	2	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	6
01:15 PM	0	1	0	0	1	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	5
01:30 PM	1	1	0	0	2	1	3	1	0	5	0	0	0	0	0	0	0	3	0	3	10
01:45 PM	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
Total	2	7	0	1	10	1	9	1	0	11	0	0	1	0	1	0	0	5	0	5	27
02:00 PM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	0	1	0	2	6
02:15 PM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	5
02:30 PM	1	1	0	0	2	0	7	1	0	8	0	0	0	0	0	0	0	2	0	2	12
02:45 PM	2	0	0	0	2	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	6
Total	4	2	0	0	6	0	13	3	0	16	0	1	0	0	1	1	0	5	0	6	29
03:00 PM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	7
03:15 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	9
03:30 PM	1	2	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
03:45 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	5
Total	1	11	0	0	12	0	12	0	0	12	0	0	0	0	0	1	0	2	0	3	27
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
04:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
04:45 PM	1	1	0	0	2	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	7
Total	1	7	0	0	8	0	5	1	0	6	0	0	0	0	0	0	0	1	0	1	15
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	5
05:30 PM	0	1	0	0	1	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	1	0	1	5
Total	0	7	0	0	7	2	4	0	0	6	2	0	0	0	2	0	0	2	0	2	17
06:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	5
06:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
06:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	3
06:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	2	0	2	0	4	13

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	14	109	2	1	126	5	105	16	0	126	8	2	3	0	13	10	4	25	0	39	304
Apprch %	11.1	86.5	1.6	0.8		4	83.3	12.7	0		61.5	15.4	23.1	0		25.6	10.3	64.1	0		
Total %	4.6	35.9	0.7	0.3	41.4	1.6	34.5	5.3	0	41.4	2.6	0.7	1	0	4.3	3.3	1.3	8.2	0	12.8	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:45 AM																	
08:45 AM	0	3	0	3	0	5	1	6	0	0	0	0	0	0	0	0	9
09:00 AM	0	6	0	6	0	3	2	5	0	0	0	0	0	0	0	0	11
09:15 AM	0	5	0	5	0	1	0	1	0	0	0	0	1	0	0	1	7
09:30 AM	0	5	0	5	0	2	0	2	0	0	0	0	2	0	0	2	9
Total Volume	0	19	0	19	0	11	3	14	0	0	0	0	3	0	0	3	36
% App. Total	0	100	0		0	78.6	21.4		0	0	0		100	0	0		
PHF	.000	.792	.000	.792	.000	.550	.375	.583	.000	.000	.000	.000	.375	.000	.000	.375	.818

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:30 PM

02:30 PM	1	1	0	2	0	7	1	8	0	0	0	0	0	0	2	2	12
02:45 PM	2	0	0	2	0	2	2	4	0	0	0	0	0	0	0	0	6
03:00 PM	0	4	0	4	0	2	0	2	0	0	0	0	1	0	0	1	7
03:15 PM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	1	1	9
Total Volume	3	9	0	12	0	15	3	18	0	0	0	0	1	0	3	4	34
% App. Total	25	75	0		0	83.3	16.7		0	0	0		25	0	75		
PHF	.375	.563	.000	.750	.000	.536	.375	.563	.000	.000	.000	.000	.250	.000	.375	.500	.708

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	8	68	0	0	76	5	68	4	2	79	2	4	3	0	9	11	1	18	0	30	194
07:15 AM	13	77	1	0	91	0	81	7	2	90	3	3	5	0	11	11	9	21	0	41	233
07:30 AM	22	107	2	0	131	4	90	3	1	98	7	5	4	0	16	12	1	21	0	34	279
07:45 AM	26	97	3	5	131	8	106	17	1	132	7	8	9	0	24	21	4	25	0	50	337
Total	69	349	6	5	429	17	345	31	6	399	19	20	21	0	60	55	15	85	0	155	1043
08:00 AM	21	110	6	2	139	2	130	16	0	148	5	6	4	0	15	10	10	30	0	50	352
08:15 AM	28	118	6	1	153	12	110	14	0	136	12	4	9	0	25	17	13	28	0	58	372
08:30 AM	36	133	3	2	174	5	142	18	2	167	16	3	7	0	26	25	8	33	0	66	433
08:45 AM	37	144	5	2	188	5	156	18	3	182	10	15	7	0	32	23	10	33	0	66	468
Total	122	505	20	7	654	24	538	66	5	633	43	28	27	0	98	75	41	124	0	240	1625
09:00 AM	29	139	5	2	175	9	133	16	3	161	19	16	13	0	48	16	13	49	0	78	462
09:15 AM	45	158	9	0	212	8	162	15	2	187	26	23	17	0	66	33	6	34	0	73	538
09:30 AM	36	198	9	1	244	8	183	21	7	219	15	17	15	0	47	28	11	43	0	82	592
09:45 AM	46	168	8	1	223	8	162	11	4	185	19	23	17	0	59	28	17	50	0	95	562
Total	156	663	31	4	854	33	640	63	16	752	79	79	62	0	220	105	47	176	0	328	2154
10:00 AM	61	198	8	0	267	11	207	25	3	246	23	13	19	0	55	34	16	56	0	106	674
10:15 AM	55	192	9	3	259	10	182	29	2	223	24	26	21	0	71	35	18	56	0	109	662
10:30 AM	61	219	3	3	286	8	227	19	3	257	21	21	13	0	55	30	18	63	0	111	709
10:45 AM	34	191	15	1	241	4	250	16	4	274	22	19	12	0	53	35	15	76	1	127	695
Total	211	800	35	7	1053	33	866	89	12	1000	90	79	65	0	234	134	67	251	1	453	2740
11:00 AM	59	198	11	1	269	12	196	19	3	230	15	21	27	0	63	49	26	53	0	128	690
11:15 AM	70	190	8	2	270	12	212	24	6	254	15	26	21	0	62	27	15	61	0	103	689
11:30 AM	74	197	7	0	278	14	222	18	5	259	22	20	13	0	55	32	15	50	0	97	689
11:45 AM	60	184	7	2	253	18	206	26	3	253	12	29	13	0	54	43	9	67	0	119	679
Total	263	769	33	5	1070	56	836	87	17	996	64	96	74	0	234	151	65	231	0	447	2747
12:00 PM	70	183	8	1	262	10	211	30	3	254	22	33	23	0	78	31	21	50	0	102	696
12:15 PM	90	210	7	1	308	10	234	27	4	275	32	22	19	0	73	36	19	67	0	122	778
12:30 PM	65	194	10	5	274	18	183	23	8	232	24	25	28	0	77	43	18	79	0	140	723
12:45 PM	66	185	14	3	268	13	206	26	8	253	23	40	22	0	85	35	14	67	0	116	722
Total	291	772	39	10	1112	51	834	106	23	1014	101	120	92	0	313	145	72	263	0	480	2919
01:00 PM	69	221	13	2	305	13	162	32	8	215	16	24	24	0	64	34	8	56	0	98	682
01:15 PM	51	183	4	1	239	16	197	27	5	245	21	20	19	0	60	37	11	64	0	112	656
01:30 PM	77	197	7	2	283	15	217	25	5	262	18	27	15	0	60	32	14	55	0	101	706
01:45 PM	56	168	4	2	230	13	192	28	5	238	24	31	19	0	74	30	15	49	0	94	636
Total	253	769	28	7	1057	57	768	112	23	960	79	102	77	0	258	133	48	224	0	405	2680
02:00 PM	53	178	9	1	241	18	187	22	2	229	25	23	14	0	62	27	19	52	0	98	630
02:15 PM	59	157	9	1	226	11	190	28	4	233	16	12	14	0	42	28	18	53	0	99	600
02:30 PM	64	164	13	2	243	12	221	16	5	254	13	20	12	0	45	38	18	69	0	125	667
02:45 PM	63	156	8	3	230	12	187	24	10	233	14	15	9	0	38	35	16	58	0	109	610
Total	239	655	39	7	940	53	785	90	21	949	68	70	49	0	187	128	71	232	0	431	2507
03:00 PM	44	194	11	1	250	13	193	23	0	229	21	25	16	0	62	20	15	52	0	87	628
03:15 PM	55	177	4	4	240	15	178	26	3	222	21	14	16	0	51	45	8	53	0	106	619
03:30 PM	47	186	6	2	241	7	199	21	4	231	12	16	16	0	44	19	15	50	0	84	600
03:45 PM	55	149	2	3	209	14	183	22	6	225	15	16	10	0	41	34	14	50	0	98	573
Total	201	706	23	10	940	49	753	92	13	907	69	71	58	0	198	118	52	205	0	375	2420
04:00 PM	54	186	8	1	249	8	142	21	2	173	15	27	11	0	53	34	14	54	0	102	577
04:15 PM	52	187	9	2	250	13	171	18	2	204	14	17	16	0	47	36	13	41	0	90	591
04:30 PM	36	168	9	2	215	20	187	14	6	227	11	14	16	0	41	23	15	49	0	87	570
04:45 PM	43	158	6	0	207	11	150	14	6	181	20	16	9	0	45	33	14	48	0	95	528
Total	185	699	32	5	921	52	650	67	16	785	60	74	52	0	186	126	56	192	0	374	2266
05:00 PM	48	167	3	1	219	16	167	27	5	215	22	7	5	0	34	11	9	42	0	62	530
05:15 PM	54	160	4	0	218	17	127	19	2	165	12	17	0	0	29	34	8	37	0	79	491
05:30 PM	57	181	12	1	251	14	137	19	1	171	15	14	5	0	34	21	11	37	0	69	525
05:45 PM	39	151	7	1	198	12	175	22	1	210	14	15	19	0	48	30	11	30	0	71	527
Total	198	659	26	3	886	59	606	87	9	761	63	53	29	0	145	96	39	146	0	281	2073
06:00 PM	35	139	5	2	181	6	162	19	6	193	26	21	20	0	67	21	10	35	0	66	507
06:15 PM	36	122	5	0	163	13	136	18	5	172	12	15	11	0	38	25	8	33	0	66	439
06:30 PM	43	121	4	0	168	14	158	24	2	198	10	6	9	0	25	23	11	31	0	65	456
06:45 PM	40	100	7	0	147	12	145	17	5	179	16	12	13	0	41	9	23	30	0	62	429
Total	154	482	21	2	659	45	601	78	18	742	64	54	53	0	171	78	52	129	0	259	1831

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	2342	7828	333	72	10575	529	8222	968	179	9898	799	846	659	0	2304	1344	625	2258	1	4228	27005
Apprch %	22.1	74	3.1	0.7		5.3	83.1	9.8	1.8		34.7	36.7	28.6	0		31.8	14.8	53.4	0		
Total %	8.7	29	1.2	0.3	39.2	2	30.4	3.6	0.7	36.7	3	3.1	2.4	0	8.5	5	2.3	8.4	0	15.7	
Cars	2328	7719	331	71	10449	524	8117	952	179	9772	791	844	656	0	2291	1334	621	2233	1	4189	26701
% Cars	99.4	98.6	99.4	98.6	98.8	99.1	98.7	98.3	100	98.7	99	99.8	99.5	0	99.4	99.3	99.4	98.9	100	99.1	98.9
Trucks	14	109	2	1	126	5	105	16	0	126	8	2	3	0	13	10	4	25	0	39	304
% Trucks	0.6	1.4	0.6	1.4	1.2	0.9	1.3	1.7	0	1.3	1	0.2	0.5	0	0.6	0.7	0.6	1.1	0	0.9	1.1

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 10:30 AM																					
10:30 AM	61	219	3	283		8	227	19	254		21	21	13	55		30	18	63	111		703
10:45 AM	34	191	15	240		4	250	16	270		22	19	12	53		35	15	76	126		689
11:00 AM	59	198	11	268		12	196	19	227		15	21	27	63		49	26	53	128		686
11:15 AM	70	190	8	268		12	212	24	248		15	26	21	62		27	15	61	103		681
Total Volume	224	798	37	1059		36	885	78	999		73	87	73	233		141	74	253	468		2759
% App. Total	21.2	75.4	3.5			3.6	88.6	7.8			31.3	37.3	31.3			30.1	15.8	54.1			
PHF	.800	.911	.617	.936		.750	.885	.813	.925		.830	.837	.676	.925		.719	.712	.832	.914		.981

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	70	183	8	261		10	211	30	251		22	33	23	78		31	21	50	102		692
12:15 PM	90	210	7	307		10	234	27	271		32	22	19	73		36	19	67	122		773
12:30 PM	65	194	10	269		18	183	23	224		24	25	28	77		43	18	79	140		710
12:45 PM	66	185	14	265		13	206	26	245		23	40	22	85		35	14	67	116		711
Total Volume	291	772	39	1102		51	834	106	991		101	120	92	313		145	72	263	480		2886
% App. Total	26.4	70.1	3.5			5.1	84.2	10.7			32.3	38.3	29.4			30.2	15	54.8			
PHF	.808	.919	.696	.897		.708	.891	.883	.914		.789	.750	.821	.921		.843	.857	.832	.857		.933

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 1

Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					Int. Total
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
09:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
09:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	4
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	3
10:30 AM	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	4	4	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	6
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
11:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
11:45 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	4
Total	0	0	0	1	1	0	0	0	3	3	0	0	0	3	3	0	0	0	1	1	8
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
01:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
01:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	3
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	3	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	6
02:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	4
03:00 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	3	3	7
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	4	4	8
04:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	3
06:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	3
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0	1	1	4

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	15	15	0	0	0	19	19	0	0	0	10	10	0	0	0	9	9	53
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	28.3	28.3	0	0	0	35.8	35.8	0	0	0	18.9	18.9	0	0	0	17	17	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
Total Volume	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
% App. Total	0	0	0			0	0	0			0	0	0			0	0	0			
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	12	121	1	1	135	0	65	29	1	95	3	5	3	0	11	9	1	14	0	24	265
06:15 AM	14	151	3	0	168	0	63	18	0	81	3	5	8	0	16	21	4	17	0	42	307
06:30 AM	20	150	1	0	171	4	91	22	0	117	5	6	12	0	23	15	2	23	0	40	351
06:45 AM	18	158	4	0	180	5	87	27	0	119	12	6	12	0	30	26	3	38	0	67	396
Total	64	580	9	1	654	9	306	96	1	412	23	22	35	0	80	71	10	92	0	173	1319
07:00 AM	22	139	4	0	165	2	81	35	1	119	14	13	9	0	36	13	6	33	0	52	372
07:15 AM	39	155	4	0	198	2	98	22	0	122	12	6	9	0	27	36	7	49	0	92	439
07:30 AM	41	165	3	1	210	4	126	25	0	155	9	10	10	0	29	16	11	45	0	72	466
07:45 AM	41	175	4	0	220	10	152	38	1	201	14	19	5	0	38	34	11	64	0	109	568
Total	143	634	15	1	793	18	457	120	2	597	49	48	33	0	130	99	35	191	0	325	1845
08:00 AM	52	171	5	2	230	7	162	26	0	195	11	10	11	0	32	24	24	53	0	101	558
08:15 AM	62	168	4	1	235	3	137	30	2	172	18	10	12	0	40	36	19	34	0	89	536
08:30 AM	56	163	5	2	226	7	126	30	2	165	14	8	11	0	33	27	11	34	0	72	496
08:45 AM	41	178	4	0	223	8	146	41	5	200	19	18	14	0	51	38	19	49	0	106	580
Total	211	680	18	5	914	25	571	127	9	732	62	46	48	0	156	125	73	170	0	368	2170
Grand Total	418	1894	42	7	2361	52	1334	343	12	1741	134	116	116	0	366	295	118	453	0	866	5334
Apprch %	17.7	80.2	1.8	0.3		3	76.6	19.7	0.7		36.6	31.7	31.7	0		34.1	13.6	52.3	0		
Total %	7.8	35.5	0.8	0.1	44.3	1	25	6.4	0.2	32.6	2.5	2.2	2.2	0	6.9	5.5	2.2	8.5	0	16.2	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	52	171	5	228	7	162	26	195	11	10	11	32	24	24	53	101	556
08:15 AM	62	168	4	234	3	137	30	170	18	10	12	40	36	19	34	89	533
08:30 AM	56	163	5	224	7	126	30	163	14	8	11	33	27	11	34	72	492
08:45 AM	41	178	4	223	8	146	41	195	19	18	14	51	38	19	49	106	575
Total Volume	211	680	18	909	25	571	127	723	62	46	48	156	125	73	170	368	2156
% App. Total	23.2	74.8	2		3.5	79	17.6		39.7	29.5	30.8		34	19.8	46.2		
PHF	.851	.955	.900	.971	.781	.881	.774	.927	.816	.639	.857	.765	.822	.760	.802	.868	.937

Peggy Malone & Associates

(888) 247-8602

File Name : 7-Hwy 29 and Broadview Ave_Winchester St AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	0	2	0	0	2	0	2	1	0	3	0	0	0	0	0	0	0	1	0	1	6
06:30 AM	0	8	0	0	8	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	10
06:45 AM	2	4	0	0	6	1	5	1	0	7	0	0	0	0	0	0	0	0	0	0	13
Total	2	14	0	0	16	1	9	4	0	14	0	0	0	0	0	0	0	2	0	2	32
07:00 AM	0	1	0	0	1	0	10	1	0	11	0	0	0	0	0	0	0	0	0	0	12
07:15 AM	0	6	0	0	6	0	4	0	0	4	0	0	0	0	0	2	1	1	0	4	14
07:30 AM	2	7	0	0	9	1	7	3	0	11	0	0	0	0	0	1	0	1	0	2	22
07:45 AM	2	12	0	0	14	0	7	1	0	8	1	1	0	0	2	0	0	1	0	1	25
Total	4	26	0	0	30	1	28	5	0	34	1	1	0	0	2	3	1	3	0	7	73
08:00 AM	3	11	0	0	14	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	19
08:15 AM	2	9	1	0	12	0	9	1	0	10	0	0	0	0	0	3	0	0	0	3	25
08:30 AM	2	9	0	0	11	0	7	6	0	13	0	0	0	0	0	0	0	2	0	2	26
08:45 AM	3	9	0	0	12	0	10	1	0	11	0	0	0	0	0	2	0	2	0	4	27
Total	10	38	1	0	49	0	30	8	0	38	1	0	0	0	1	5	0	4	0	9	97
Grand Total	16	78	1	0	95	2	67	17	0	86	2	1	0	0	3	8	1	9	0	18	202
Apprch %	16.8	82.1	1.1	0		2.3	77.9	19.8	0		66.7	33.3	0	0		44.4	5.6	50	0		
Total %	7.9	38.6	0.5	0	47	1	33.2	8.4	0	42.6	1	0.5	0	0	1.5	4	0.5	4.5	0	8.9	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	11	0	14	0	4	0	4	1	0	0	1	0	0	0	0	19
08:15 AM	2	9	1	12	0	9	1	10	0	0	0	0	3	0	0	3	25
08:30 AM	2	9	0	11	0	7	6	13	0	0	0	0	0	0	2	2	26
08:45 AM	3	9	0	12	0	10	1	11	0	0	0	0	2	0	2	4	27
Total Volume	10	38	1	49	0	30	8	38	1	0	0	1	5	0	4	9	97
% App. Total	20.4	77.6	2		0	78.9	21.1		100	0	0		55.6	0	44.4		
PHF	.833	.864	.250	.875	.000	.750	.333	.731	.250	.000	.000	.250	.417	.000	.500	.563	.898

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	12	121	1	1	135	0	67	30	1	98	3	5	3	0	11	9	1	14	0	24	268
06:15 AM	14	153	3	0	170	0	65	19	0	84	3	5	8	0	16	21	4	18	0	43	313
06:30 AM	20	158	1	0	179	4	91	23	0	118	5	6	12	0	23	15	2	24	0	41	361
06:45 AM	20	162	4	0	186	6	92	28	0	126	12	6	12	0	30	26	3	38	0	67	409
Total	66	594	9	1	670	10	315	100	1	426	23	22	35	0	80	71	10	94	0	175	1351
07:00 AM	22	140	4	0	166	2	91	36	1	130	14	13	9	0	36	13	6	33	0	52	384
07:15 AM	39	161	4	0	204	2	102	22	0	126	12	6	9	0	27	38	8	50	0	96	453
07:30 AM	43	172	3	1	219	5	133	28	0	166	9	10	10	0	29	17	11	46	0	74	488
07:45 AM	43	187	4	0	234	10	159	39	1	209	15	20	5	0	40	34	11	65	0	110	593
Total	147	660	15	1	823	19	485	125	2	631	50	49	33	0	132	102	36	194	0	332	1918
08:00 AM	55	182	5	2	244	7	166	26	0	199	12	10	11	0	33	24	24	53	0	101	577
08:15 AM	64	177	5	1	247	3	146	31	2	182	18	10	12	0	40	39	19	34	0	92	561
08:30 AM	58	172	5	2	237	7	133	36	2	178	14	8	11	0	33	27	11	36	0	74	522
08:45 AM	44	187	4	0	235	8	156	42	5	211	19	18	14	0	51	40	19	51	0	110	607
Total	221	718	19	5	963	25	601	135	9	770	63	46	48	0	157	130	73	174	0	377	2267
Grand Total	434	1972	43	7	2456	54	1401	360	12	1827	136	117	116	0	369	303	119	462	0	884	5536
Apprch %	17.7	80.3	1.8	0.3		3	76.7	19.7	0.7		36.9	31.7	31.4	0		34.3	13.5	52.3	0		
Total %	7.8	35.6	0.8	0.1	44.4	1	25.3	6.5	0.2	33	2.5	2.1	2.1	0	6.7	5.5	2.1	8.3	0	16	
Cars	418	1894	42	7	2361	52	1334	343	12	1741	134	116	116	0	366	295	118	453	0	866	5334
% Cars	96.3	96	97.7	100	96.1	96.3	95.2	95.3	100	95.3	98.5	99.1	100	0	99.2	97.4	99.2	98.1	0	98	96.4
Trucks	16	78	1	0	95	2	67	17	0	86	2	1	0	0	3	8	1	9	0	18	202
% Trucks	3.7	4	2.3	0	3.9	3.7	4.8	4.7	0	4.7	1.5	0.9	0	0	0.8	2.6	0.8	1.9	0	2	3.6

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	55	182	5	242	7	166	26	199	12	10	11	33	24	24	53	101	575
08:15 AM	64	177	5	246	3	146	31	180	18	10	12	40	39	19	34	92	558
08:30 AM	58	172	5	235	7	133	36	176	14	8	11	33	27	11	36	74	518
08:45 AM	44	187	4	235	8	156	42	206	19	18	14	51	40	19	51	110	602
Total Volume	221	718	19	958	25	601	135	761	63	46	48	157	130	73	174	377	2253
% App. Total	23.1	74.9	2		3.3	79	17.7		40.1	29.3	30.6		34.5	19.4	46.2		
PHF	.863	.960	.950	.974	.781	.905	.804	.924	.829	.639	.857	.770	.813	.760	.821	.857	.936

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	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
07:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	4	4	0	0	0	2	2	7
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	5
Grand Total	0	0	0	5	5	0	0	0	2	2	0	0	0	4	4	0	0	0	4	4	15
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	33.3	33.3	0	0	0	13.3	13.3	0	0	0	26.7	26.7	0	0	0	26.7	26.7	

[illegible]

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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	51	186	8	0	245	14	221	22	4	261	19	17	13	0	49	40	13	63	0	116	671
02:15 PM	49	152	6	3	210	13	200	23	1	237	17	27	17	0	61	35	13	74	0	122	630
02:30 PM	74	181	7	1	263	16	176	19	4	215	14	17	22	0	53	47	13	65	0	125	656
02:45 PM	52	158	10	3	223	13	237	25	1	276	23	20	11	0	54	53	19	74	0	146	699
Total	226	677	31	7	941	56	834	89	10	989	73	81	63	0	217	175	58	276	0	509	2656
03:00 PM	69	188	15	2	274	14	211	24	1	250	31	25	17	0	73	59	19	52	0	130	727
03:15 PM	57	164	9	1	231	9	250	16	2	277	20	21	16	0	57	50	23	68	0	141	706
03:30 PM	62	171	14	4	251	12	228	20	0	260	24	26	23	0	73	60	15	63	0	138	722
03:45 PM	51	177	9	2	239	20	247	21	2	290	26	24	18	0	68	48	19	90	0	157	754
Total	239	700	47	9	995	55	936	81	5	1077	101	96	74	0	271	217	76	273	0	566	2909
04:00 PM	71	187	12	0	270	14	245	15	3	277	32	24	21	0	77	65	12	75	0	152	776
04:15 PM	60	197	10	4	271	11	246	21	6	284	28	22	20	0	70	38	16	94	0	148	773
04:30 PM	75	162	6	0	243	8	264	31	0	303	19	21	13	0	53	36	12	84	1	133	732
04:45 PM	44	172	8	1	225	13	270	23	4	310	32	34	15	0	81	41	13	90	0	144	760
Total	250	718	36	5	1009	46	1025	90	13	1174	111	101	69	0	281	180	53	343	1	577	3041
05:00 PM	63	192	8	2	265	9	202	41	7	259	21	32	22	0	75	45	13	106	0	164	763
05:15 PM	67	161	5	2	235	9	283	29	0	321	28	30	22	0	80	45	15	76	0	136	772
05:30 PM	63	128	4	0	195	8	240	22	2	272	26	21	18	0	65	59	26	105	0	190	722
05:45 PM	62	159	8	0	229	15	253	29	1	298	30	20	13	0	63	42	20	82	0	144	734
Total	255	640	25	4	924	41	978	121	10	1150	105	103	75	0	283	191	74	369	0	634	2991
06:00 PM	52	179	9	0	240	12	214	19	5	250	23	30	16	0	69	46	12	74	0	132	691
06:15 PM	50	161	11	1	223	16	237	22	4	279	23	15	12	0	50	33	17	51	0	101	653
06:30 PM	52	159	5	1	217	11	222	19	6	258	18	32	8	0	58	28	9	50	0	87	620
06:45 PM	37	157	10	0	204	14	191	25	8	238	20	10	20	0	50	22	12	33	0	67	559
Total	191	656	35	2	884	53	864	85	23	1025	84	87	56	0	227	129	50	208	0	387	2523
Grand Total	1161	3391	174	27	4753	251	4637	466	61	5415	474	468	337	0	1279	892	311	1469	1	2673	14120
Apprch %	24.4	71.3	3.7	0.6		4.6	85.6	8.6	1.1		37.1	36.6	26.3	0		33.4	11.6	55	0		
Total %	8.2	24	1.2	0.2	33.7	1.8	32.8	3.3	0.4	38.3	3.4	3.3	2.4	0	9.1	6.3	2.2	10.4	0	18.9	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	71	187	12	270	14	245	15	274	32	24	21	77	65	12	75	152	773
04:15 PM	60	197	10	267	11	246	21	278	28	22	20	70	38	16	94	148	763
04:30 PM	75	162	6	243	8	264	31	303	19	21	13	53	36	12	84	132	731
04:45 PM	44	172	8	224	13	270	23	306	32	34	15	81	41	13	90	144	755
Total Volume	250	718	36	1004	46	1025	90	1161	111	101	69	281	180	53	343	576	3022
% App. Total	24.9	71.5	3.6		4	88.3	7.8		39.5	35.9	24.6		31.2	9.2	59.5		
PHF	.833	.911	.750	.930	.821	.949	.726	.949	.867	.743	.821	.867	.692	.828	.912	.947	.977

Peggy Malone & Associates

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	1	4	0	0	5	0	7	0	0	7	0	0	1	0	1	1	0	1	0	2	15
02:15 PM	1	3	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	9
02:30 PM	1	4	0	0	5	0	6	0	0	6	0	0	0	0	0	1	0	1	0	2	13
02:45 PM	1	2	0	0	3	0	2	0	0	2	0	0	0	0	0	2	0	1	0	3	8
Total	4	13	0	0	17	0	19	0	0	19	0	0	1	0	1	4	0	4	0	8	45
03:00 PM	2	4	1	0	7	0	7	0	0	7	0	0	0	0	0	0	0	2	0	2	16
03:15 PM	1	3	0	0	4	0	9	0	0	9	0	0	0	0	0	0	0	2	0	2	15
03:30 PM	3	6	0	0	9	0	7	1	0	8	0	0	0	0	0	1	0	2	0	3	20
03:45 PM	0	5	0	0	5	0	2	1	0	3	0	0	0	0	0	0	0	3	0	3	11
Total	6	18	1	0	25	0	25	2	0	27	0	0	0	0	0	1	0	9	0	10	62
04:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	1	0	1	0	2	6
04:15 PM	2	2	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	4	0	4	10
04:30 PM	0	1	1	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
04:45 PM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	2	0	2	0	4	9
Total	2	5	1	0	8	0	13	0	0	13	0	0	0	0	0	3	0	7	0	10	31
05:00 PM	1	5	0	0	6	0	3	2	0	5	0	0	0	0	0	1	1	2	0	4	15
05:15 PM	2	4	0	0	6	0	4	0	0	4	0	0	0	0	0	1	0	2	0	3	13
05:30 PM	0	3	0	0	3	0	8	1	0	9	1	0	0	0	1	0	0	0	0	0	13
05:45 PM	1	1	1	0	3	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	7
Total	4	13	1	0	18	0	18	3	0	21	1	0	0	0	1	3	1	4	0	8	48
06:00 PM	0	2	0	0	2	1	9	1	0	11	0	0	0	0	0	0	0	1	0	1	14
06:15 PM	0	3	0	0	3	0	1	0	0	1	1	0	0	0	1	1	0	0	0	1	6
06:30 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	8
06:45 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Total	0	8	0	0	8	1	19	1	0	21	1	0	0	0	1	1	0	2	0	3	33
Grand Total	16	57	3	0	76	1	94	6	0	101	2	0	1	0	3	12	1	26	0	39	219
Apprch %	21.1	75	3.9	0		1	93.1	5.9	0		66.7	0	33.3	0		30.8	2.6	66.7	0		
Total %	7.3	26	1.4	0	34.7	0.5	42.9	2.7	0	46.1	0.9	0	0.5	0	1.4	5.5	0.5	11.9	0	17.8	

	Hwy 29 Eastbound				Hwy 29 Westbound				Winchester St Northbound				Broadview Ave Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	4	1	7	0	7	0	7	0	0	0	0	0	0	2	2	16
03:15 PM	1	3	0	4	0	9	0	9	0	0	0	0	0	0	2	2	15
03:30 PM	3	6	0	9	0	7	1	8	0	0	0	0	1	0	2	3	20
03:45 PM	0	5	0	5	0	2	1	3	0	0	0	0	0	0	3	3	11
Total Volume	6	18	1	25	0	25	2	27	0	0	0	0	1	0	9	10	62
% App. Total	24	72	4		0	92.6	7.4		0	0	0		10	0	90		
PHF	.500	.750	.250	.694	.000	.694	.500	.750	.000	.000	.000	.000	.250	.000	.750	.833	.775

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	52	190	8	0	250	14	228	22	4	268	19	17	14	0	50	41	13	64	0	118	686
02:15 PM	50	155	6	3	214	13	204	23	1	241	17	27	17	0	61	35	13	75	0	123	639
02:30 PM	75	185	7	1	268	16	182	19	4	221	14	17	22	0	53	48	13	66	0	127	669
02:45 PM	53	160	10	3	226	13	239	25	1	278	23	20	11	0	54	55	19	75	0	149	707
Total	230	690	31	7	958	56	853	89	10	1008	73	81	64	0	218	179	58	280	0	517	2701
03:00 PM	71	192	16	2	281	14	218	24	1	257	31	25	17	0	73	59	19	54	0	132	743
03:15 PM	58	167	9	1	235	9	259	16	2	286	20	21	16	0	57	50	23	70	0	143	721
03:30 PM	65	177	14	4	260	12	235	21	0	268	24	26	23	0	73	61	15	65	0	141	742
03:45 PM	51	182	9	2	244	20	249	22	2	293	26	24	18	0	68	48	19	93	0	160	765
Total	245	718	48	9	1020	55	961	83	5	1104	101	96	74	0	271	218	76	282	0	576	2971
04:00 PM	71	187	12	0	270	14	249	15	3	281	32	24	21	0	77	66	12	76	0	154	782
04:15 PM	62	199	10	4	275	11	248	21	6	286	28	22	20	0	70	38	16	98	0	152	783
04:30 PM	75	163	7	0	245	8	268	31	0	307	19	21	13	0	53	36	12	84	1	133	738
04:45 PM	44	174	8	1	227	13	273	23	4	313	32	34	15	0	81	43	13	92	0	148	769
Total	252	723	37	5	1017	46	1038	90	13	1187	111	101	69	0	281	183	53	350	1	587	3072
05:00 PM	64	197	8	2	271	9	205	43	7	264	21	32	22	0	75	46	14	108	0	168	778
05:15 PM	69	165	5	2	241	9	287	29	0	325	28	30	22	0	80	46	15	78	0	139	785
05:30 PM	63	131	4	0	198	8	248	23	2	281	27	21	18	0	66	59	26	105	0	190	735
05:45 PM	63	160	9	0	232	15	256	29	1	301	30	20	13	0	63	43	20	82	0	145	741
Total	259	653	26	4	942	41	996	124	10	1171	106	103	75	0	284	194	75	373	0	642	3039
06:00 PM	52	181	9	0	242	13	223	20	5	261	23	30	16	0	69	46	12	75	0	133	705
06:15 PM	50	164	11	1	226	16	238	22	4	280	24	15	12	0	51	34	17	51	0	102	659
06:30 PM	52	162	5	1	220	11	226	19	6	262	18	32	8	0	58	28	9	51	0	88	628
06:45 PM	37	157	10	0	204	14	196	25	8	243	20	10	20	0	50	22	12	33	0	67	564
Total	191	664	35	2	892	54	883	86	23	1046	85	87	56	0	228	130	50	210	0	390	2556
Grand Total	1177	3448	177	27	4829	252	4731	472	61	5516	476	468	338	0	1282	904	312	1495	1	2712	14339
Apprch %	24.4	71.4	3.7	0.6		4.6	85.8	8.6	1.1		37.1	36.5	26.4	0		33.3	11.5	55.1	0		
Total %	8.2	24	1.2	0.2	33.7	1.8	33	3.3	0.4	38.5	3.3	3.3	2.4	0	8.9	6.3	2.2	10.4	0	18.9	
Cars	1161	3391	174	27	4753	251	4637	466	61	5415	474	468	337	0	1279	892	311	1469	1	2673	14120
% Cars	98.6	98.3	98.3	100	98.4	99.6	98	98.7	100	98.2	99.6	100	99.7	0	99.8	98.7	99.7	98.3	100	98.6	98.5
Trucks	16	57	3	0	76	1	94	6	0	101	2	0	1	0	3	12	1	26	0	39	219
% Trucks	1.4	1.7	1.7	0	1.6	0.4	2	1.3	0	1.8	0.4	0	0.3	0	0.2	1.3	0.3	1.7	0	1.4	1.5

	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	71	187	12	270		14	249	15	278		32	24	21	77		66	12	76	154		779
04:15 PM	62	199	10	271		11	248	21	280		28	22	20	70		38	16	98	152		773
04:30 PM	75	163	7	245		8	268	31	307		19	21	13	53		36	12	84	132		737
04:45 PM	44	174	8	226		13	273	23	309		32	34	15	81		43	13	92	148		764
Total Volume	252	723	37	1012		46	1038	90	1174		111	101	69	281		183	53	350	586		3053
% App. Total	24.9	71.4	3.7			3.9	88.4	7.7			39.5	35.9	24.6			31.2	9	59.7			
PHF	.840	.908	.771	.934		.821	.951	.726	.950		.867	.743	.821	.867		.693	.828	.893	.951		.980

File Name : 7-Hwy 29 and Broadview Ave_Winchester St PM
Site Code :
Start Date : 8/5/2021
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	Hwy 29 Eastbound					Hwy 29 Westbound					Winchester St Northbound					Broadview Ave Southbound						
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total	
02:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	4
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
04:00 PM	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	1	0	0	0	3	3	0	0	0	1	1	0	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	2	2	2	0	0	0	1	1	0	0	0	0	0	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
06:30 PM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	4
Grand Total	0	0	0	2	2	2	0	0	0	9	9	0	0	0	4	4	0	0	0	3	3	18
Apprch %	0	0	0	100			0	0	0	100		0</										

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	3	79	0	1	83	6	65	2	0	73	0	0	4	0	4	2	0	5	0	7	167
07:15 AM	4	82	0	1	87	5	89	2	0	96	1	0	1	0	2	3	1	2	0	6	191
07:30 AM	7	102	0	0	109	11	101	4	0	116	0	3	5	0	8	5	1	3	0	9	242
07:45 AM	6	121	0	1	128	5	132	6	1	144	0	0	3	0	3	3	1	7	0	11	286
Total	20	384	0	3	407	27	387	14	1	429	1	3	13	0	17	13	3	17	0	33	886
08:00 AM	11	109	0	1	121	5	135	4	1	145	2	3	5	0	10	5	1	7	0	13	289
08:15 AM	10	114	3	1	128	12	130	6	0	148	1	2	9	0	12	3	2	10	0	15	303
08:30 AM	7	125	1	2	135	8	145	6	1	160	4	2	7	0	13	12	1	11	0	24	332
08:45 AM	10	139	3	3	155	11	165	8	2	186	3	3	6	0	12	8	3	11	0	22	375
Total	38	487	7	7	539	36	575	24	4	639	10	10	27	0	47	28	7	39	0	74	1299
09:00 AM	23	127	1	0	151	15	142	7	1	165	5	0	12	0	17	14	6	13	0	33	366
09:15 AM	25	175	1	0	201	23	173	12	1	209	2	9	13	0	24	9	2	19	0	30	464
09:30 AM	21	178	3	0	202	15	194	16	1	226	4	6	18	0	28	12	4	16	0	32	488
09:45 AM	28	191	6	2	227	15	181	6	0	202	4	5	25	0	34	12	4	18	0	34	497
Total	97	671	11	2	781	68	690	41	3	802	15	20	68	0	103	47	16	66	0	129	1815
10:00 AM	28	190	5	5	228	22	215	11	0	248	5	2	16	0	23	16	5	17	0	38	537
10:15 AM	27	205	1	4	237	23	208	18	0	249	5	7	23	0	35	21	2	25	0	48	569
10:30 AM	37	194	2	3	236	13	215	15	1	244	2	7	18	0	27	20	6	22	0	48	555
10:45 AM	29	193	6	3	231	20	230	14	0	264	6	6	15	0	27	13	4	27	0	44	566
Total	121	782	14	15	932	78	868	58	1	1005	18	22	72	0	112	70	17	91	0	178	2227
11:00 AM	28	212	0	5	245	17	218	23	4	262	5	8	20	0	33	23	2	26	0	51	591
11:15 AM	28	191	0	3	222	18	199	16	4	237	4	5	16	0	25	29	4	30	0	63	547
11:30 AM	31	212	0	1	244	22	225	19	3	269	2	3	17	0	22	24	3	32	0	59	594
11:45 AM	31	186	1	2	220	30	226	17	3	276	9	2	18	0	29	28	3	42	0	73	598
Total	118	801	1	11	931	87	868	75	14	1044	20	18	71	0	109	104	12	130	0	246	2330
12:00 PM	34	199	2	8	243	20	234	26	3	283	8	5	22	0	35	30	2	29	0	61	622
12:15 PM	39	213	2	1	255	22	224	22	1	269	5	5	17	0	27	29	4	33	0	66	617
12:30 PM	39	199	1	7	246	16	227	38	2	283	1	2	22	0	25	30	7	27	0	64	618
12:45 PM	32	203	1	2	238	27	209	21	0	257	8	6	18	0	32	32	6	30	0	68	595
Total	144	814	6	18	982	85	894	107	6	1092	22	18	79	0	119	121	19	119	0	259	2452
01:00 PM	25	215	3	3	246	15	189	29	0	233	7	6	17	0	30	32	8	31	0	71	580
01:15 PM	47	200	0	2	249	11	204	17	1	233	5	7	8	0	20	34	4	29	0	67	569
01:30 PM	28	204	2	2	236	17	233	22	0	272	4	4	22	0	30	21	3	27	0	51	589
01:45 PM	26	179	0	5	210	27	217	9	4	257	3	5	21	0	29	29	9	34	0	72	568
Total	126	798	5	12	941	70	843	77	5	995	19	22	68	0	109	116	24	121	0	261	2306
02:00 PM	18	169	0	3	190	12	178	12	4	206	5	3	19	0	27	27	1	26	0	54	477
02:15 PM	29	172	1	3	205	14	193	17	1	225	4	3	17	0	24	20	5	26	0	51	505
02:30 PM	26	171	0	0	197	12	211	21	2	246	8	3	17	0	28	38	4	27	0	69	540
02:45 PM	20	185	0	5	210	12	197	15	2	226	6	3	17	0	26	22	6	30	0	58	520
Total	93	697	1	11	802	50	779	65	9	903	23	12	70	0	105	107	16	109	0	232	2042
03:00 PM	22	195	0	1	218	8	191	19	3	221	3	3	13	0	19	28	6	26	0	60	518
03:15 PM	26	186	0	0	212	12	194	21	3	230	2	2	13	0	17	34	5	27	0	66	525
03:30 PM	42	178	0	2	222	10	199	22	0	231	2	1	15	0	18	30	6	29	0	65	536
03:45 PM	18	173	1	5	197	12	184	25	0	221	5	1	6	0	12	17	3	26	0	46	476
Total	108	732	1	8	849	42	768	87	6	903	12	7	47	0	66	109	20	108	0	237	2055
04:00 PM	19	197	0	2	218	5	174	18	3	200	1	0	14	0	15	19	5	18	0	42	475
04:15 PM	28	211	1	0	240	10	170	12	0	192	3	5	11	0	19	24	3	24	0	51	502
04:30 PM	21	177	0	1	199	9	166	27	1	203	2	2	6	0	10	22	0	25	0	47	459
04:45 PM	16	166	1	2	185	11	156	16	1	184	3	6	12	0	21	19	2	19	0	40	430
Total	84	751	2	5	842	35	666	73	5	779	9	13	43	0	65	84	10	86	0	180	1866
05:00 PM	22	169	0	0	191	12	189	8	0	209	3	2	6	0	11	33	6	22	0	61	472
05:15 PM	11	161	0	5	177	7	142	12	1	162	6	4	14	0	24	20	3	15	0	38	401
05:30 PM	22	200	0	2	224	10	164	22	1	197	2	4	11	0	17	31	3	20	0	54	492
05:45 PM	25	172	1	1	199	13	168	17	0	198	5	3	12	0	20	27	3	12	0	42	459
Total	80	702	1	8	791	42	663	59	2	766	16	13	43	0	72	111	15	69	0	195	1824
06:00 PM	16	160	2	1	179	14	176	17	1	208	1	2	12	0	15	23	2	19	0	44	446
06:15 PM	21	165	0	4	190	13	146	17	1	177	2	6	7	0	15	25	3	15	0	43	425
06:30 PM	12	159	0	3	174	10	175	17	1	203	2	3	7	0	12	23	2	14	0	39	428
06:45 PM	15	144	1	2	162	15	151	14	1	181	5	3	8	0	16	23	5	15	0	43	402
Total	64	628	3	10	705	52	648	65	4	769	10	14	34	0	58	94	12	63	0	169	1701

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	1093	8247	52	110	9502	672	8649	745	60	10126	175	172	635	0	982	1004	171	1018	0	2193	22803
Apprch %	11.5	86.8	0.5	1.2		6.6	85.4	7.4	0.6		17.8	17.5	64.7	0		45.8	7.8	46.4	0		
Total %	4.8	36.2	0.2	0.5	41.7	2.9	37.9	3.3	0.3	44.4	0.8	0.8	2.8	0	4.3	4.4	0.7	4.5	0	9.6	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	28	212	0	240	17	218	23	258	5	8	20	33	23	2	26	51	582
11:15 AM	28	191	0	219	18	199	16	233	4	5	16	25	29	4	30	63	540
11:30 AM	31	212	0	243	22	225	19	266	2	3	17	22	24	3	32	59	590
11:45 AM	31	186	1	218	30	226	17	273	9	2	18	29	28	3	42	73	593
Total Volume	118	801	1	920	87	868	75	1030	20	18	71	109	104	12	130	246	2305
% App. Total	12.8	87.1	0.1		8.4	84.3	7.3		18.3	16.5	65.1		42.3	4.9	52.8		
PHF	.952	.945	.250	.947	.725	.960	.815	.943	.556	.563	.888	.826	.897	.750	.774	.842	.972

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	34	199	2	235		20	234	26	280		8	5	22	35		30	2	29	61	611
12:15 PM	39	213	2	254		22	224	22	268		5	5	17	27		29	4	33	66	615
12:30 PM	39	199	1	239		16	227	38	281		1	2	22	25		30	7	27	64	609
12:45 PM	32	203	1	236		27	209	21	257		8	6	18	32		32	6	30	68	593
Total Volume	144	814	6	964		85	894	107	1086		22	18	79	119		121	19	119	259	2428
% App. Total	14.9	84.4	0.6			7.8	82.3	9.9			18.5	15.1	66.4			46.7	7.3	45.9		
PHF	.923	.955	.750	.949		.787	.955	.704	.966		.688	.750	.898	.850		.945	.679	.902	.952	.987

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr SAT
 Site Code :
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
07:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
07:30 AM	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	7
07:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	12	0	0	12	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	21
08:00 AM	0	4	0	0	4	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	11
08:15 AM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
08:30 AM	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	7
08:45 AM	0	4	0	0	4	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	10
Total	0	15	0	0	15	0	18	1	0	19	0	0	0	0	0	0	0	0	0	0	34
09:00 AM	0	6	0	0	6	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	10
09:15 AM	1	4	0	0	5	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6
09:30 AM	0	7	0	0	7	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	10
09:45 AM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	5
Total	1	20	0	0	21	0	9	0	0	9	0	0	0	0	0	0	0	1	0	1	31
10:00 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
10:15 AM	0	2	0	0	2	0	2	1	1	4	0	0	0	0	0	0	0	0	0	0	6
10:30 AM	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	5
10:45 AM	0	3	1	0	4	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	9
Total	1	9	1	0	11	1	11	1	1	14	0	0	0	0	0	0	0	1	0	1	26
11:00 AM	0	2	0	0	2	0	2	1	0	3	0	0	1	0	1	0	0	0	0	0	6
11:15 AM	0	3	0	0	3	0	5	0	0	5	0	0	1	0	1	0	0	0	0	0	9
11:30 AM	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	7
11:45 AM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
Total	0	9	0	0	9	0	16	1	0	17	0	0	2	0	2	0	0	0	0	0	28
12:00 PM	0	6	0	0	6	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	10
12:15 PM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
12:30 PM	0	2	0	0	2	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	6
12:45 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	4
Total	0	14	0	0	14	1	9	0	0	10	0	0	0	0	0	0	0	2	0	2	26
01:00 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	7
01:15 PM	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	6
01:30 PM	0	2	0	0	2	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	7
01:45 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	1	10	0	0	11	0	9	1	0	10	0	0	0	0	0	1	0	2	0	3	24
02:00 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4
02:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	1	0	0	1	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	12
02:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Total	0	3	0	0	3	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	22
03:00 PM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
03:15 PM	0	6	0	0	6	0	5	0	0	5	0	0	1	0	1	1	0	0	0	1	13
03:30 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
03:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Total	0	15	0	0	15	0	10	0	0	10	0	0	1	0	1	1	0	0	0	1	27
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	1	2	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
04:45 PM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	5
Total	1	6	0	0	7	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	14
05:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
05:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Total	1	7	0	0	8	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	13
06:00 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:15 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
06:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
Total	0	7	0	0	7	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	12

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	5	127	1	0	133	2	126	4	1	133	0	0	3	0	3	3	0	6	0	9	278
Apprch %	3.8	95.5	0.8	0		1.5	94.7	3	0.8		0	0	100	0		33.3	0	66.7	0		
Total %	1.8	45.7	0.4	0	47.8	0.7	45.3	1.4	0.4	47.8	0	0	1.1	0	1.1	1.1	0	2.2	0	3.2	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:45 AM																	
08:45 AM	0	4	0	4	0	6	0	6	0	0	0	0	0	0	0	0	10
09:00 AM	0	6	0	6	0	4	0	4	0	0	0	0	0	0	0	0	10
09:15 AM	1	4	0	5	0	1	0	1	0	0	0	0	0	0	0	0	6
09:30 AM	0	7	0	7	0	3	0	3	0	0	0	0	0	0	0	0	10
Total Volume	1	21	0	22	0	14	0	14	0	0	0	0	0	0	0	0	36
% App. Total	4.5	95.5	0		0	100	0		0	0	0		0	0	0		
PHF	.250	.750	.000	.786	.000	.583	.000	.583	.000	.000	.000	.000	.000	.000	.000	.000	.900

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:30 PM

02:30 PM	0	1	0	1		0	11	0	11		0	0	0	0		0	0	0	0	12
02:45 PM	0	0	0	0		0	4	0	4		0	0	0	0		0	0	0	0	4
03:00 PM	0	4	0	4		0	1	0	1		0	0	0	0		0	0	0	0	5
03:15 PM	0	6	0	6		0	5	0	5		0	0	1	1		1	0	0	1	13
Total Volume	0	11	0	11		0	21	0	21		0	0	1	1		1	0	0	1	34
% App. Total	0	100	0			0	100	0			0	0	100			100	0	0		
PHF	.000	.458	.000	.458		.000	.477	.000	.477		.000	.000	.250	.250		.250	.000	.000	.250	.654

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	3	81	0	1	85	6	67	2	0	75	0	0	4	0	4	2	0	5	0	7	171
07:15 AM	4	86	0	1	91	5	93	2	0	100	1	0	1	0	2	3	1	2	0	6	199
07:30 AM	7	107	0	0	114	11	103	4	0	118	0	3	5	0	8	5	1	3	0	9	249
07:45 AM	6	122	0	1	129	5	133	6	1	145	0	0	3	0	3	3	1	7	0	11	288
Total	20	396	0	3	419	27	396	14	1	438	1	3	13	0	17	13	3	17	0	33	907
08:00 AM	11	113	0	1	125	5	141	5	1	152	2	3	5	0	10	5	1	7	0	13	300
08:15 AM	10	116	3	1	130	12	134	6	0	152	1	2	9	0	12	3	2	10	0	15	309
08:30 AM	7	130	1	2	140	8	147	6	1	162	4	2	7	0	13	12	1	11	0	24	339
08:45 AM	10	143	3	3	159	11	171	8	2	192	3	3	6	0	12	8	3	11	0	22	385
Total	38	502	7	7	554	36	593	25	4	658	10	10	27	0	47	28	7	39	0	74	1333
09:00 AM	23	133	1	0	157	15	146	7	1	169	5	0	12	0	17	14	6	13	0	33	376
09:15 AM	26	179	1	0	206	23	174	12	1	210	2	9	13	0	24	9	2	19	0	30	470
09:30 AM	21	185	3	0	209	15	197	16	1	229	4	6	18	0	28	12	4	16	0	32	498
09:45 AM	28	194	6	2	230	15	182	6	0	203	4	5	25	0	34	12	4	19	0	35	502
Total	98	691	11	2	802	68	699	41	3	811	15	20	68	0	103	47	16	67	0	130	1846
10:00 AM	28	193	5	5	231	22	218	11	0	251	5	2	16	0	23	16	5	17	0	38	543
10:15 AM	27	207	1	4	239	23	210	19	1	253	5	7	23	0	35	21	2	25	0	48	575
10:30 AM	38	195	2	3	238	13	217	15	1	246	2	7	18	0	27	20	6	23	0	49	560
10:45 AM	29	196	7	3	235	21	234	14	0	269	6	6	15	0	27	13	4	27	0	44	575
Total	122	791	15	15	943	79	879	59	2	1019	18	22	72	0	112	70	17	92	0	179	2253
11:00 AM	28	214	0	5	247	17	220	24	4	265	5	8	21	0	34	23	2	26	0	51	597
11:15 AM	28	194	0	3	225	18	204	16	4	242	4	5	17	0	26	29	4	30	0	63	556
11:30 AM	31	214	0	1	246	22	230	19	3	274	2	3	17	0	22	24	3	32	0	59	601
11:45 AM	31	188	1	2	222	30	230	17	3	280	9	2	18	0	29	28	3	42	0	73	604
Total	118	810	1	11	940	87	884	76	14	1061	20	18	73	0	111	104	12	130	0	246	2358
12:00 PM	34	205	2	8	249	20	237	26	3	286	8	5	22	0	35	30	2	30	0	62	632
12:15 PM	39	217	2	1	259	22	226	22	1	271	5	5	17	0	27	29	4	33	0	66	623
12:30 PM	39	201	1	7	248	17	230	38	2	287	1	2	22	0	25	30	7	27	0	64	624
12:45 PM	32	205	1	2	240	27	210	21	0	258	8	6	18	0	32	32	6	31	0	69	599
Total	144	828	6	18	996	86	903	107	6	1102	22	18	79	0	119	121	19	121	0	261	2478
01:00 PM	25	218	3	3	249	15	191	29	0	235	7	6	17	0	30	32	8	33	0	73	587
01:15 PM	48	201	0	2	251	11	207	17	1	236	5	7	8	0	20	35	4	29	0	68	575
01:30 PM	28	206	2	2	238	17	237	23	0	277	4	4	22	0	30	21	3	27	0	51	596
01:45 PM	26	183	0	5	214	27	217	9	4	257	3	5	21	0	29	29	9	34	0	72	572
Total	127	808	5	12	952	70	852	78	5	1005	19	22	68	0	109	117	24	123	0	264	2330
02:00 PM	18	170	0	3	191	12	181	12	4	209	5	3	19	0	27	27	1	26	0	54	481
02:15 PM	29	173	1	3	206	14	194	17	1	226	4	3	17	0	24	20	5	26	0	51	507
02:30 PM	26	172	0	0	198	12	222	21	2	257	8	3	17	0	28	38	4	27	0	69	552
02:45 PM	20	185	0	5	210	12	201	15	2	230	6	3	17	0	26	22	6	30	0	58	524
Total	93	700	1	11	805	50	798	65	9	922	23	12	70	0	105	107	16	109	0	232	2064
03:00 PM	22	199	0	1	222	8	192	19	3	222	3	3	13	0	19	28	6	26	0	60	523
03:15 PM	26	192	0	0	218	12	199	21	3	235	2	2	14	0	18	35	5	27	0	67	538
03:30 PM	42	181	0	2	225	10	201	22	0	233	2	1	15	0	18	30	6	29	0	65	541
03:45 PM	18	175	1	5	199	12	186	25	0	223	5	1	6	0	12	17	3	26	0	46	480
Total	108	747	1	8	864	42	778	87	6	913	12	7	48	0	67	110	20	108	0	238	2082
04:00 PM	19	197	0	2	218	5	175	18	3	201	1	0	14	0	15	19	5	18	0	42	476
04:15 PM	28	214	1	0	243	10	170	12	0	192	3	5	11	0	19	24	3	24	0	51	505
04:30 PM	22	179	0	1	202	9	168	27	1	205	2	2	6	0	10	22	0	25	0	47	464
04:45 PM	16	167	1	2	186	11	160	16	1	188	3	6	12	0	21	19	2	19	0	40	435
Total	85	757	2	5	849	35	673	73	5	786	9	13	43	0	65	84	10	86	0	180	1880
05:00 PM	22	171	0	0	193	12	189	8	0	209	3	2	6	0	11	33	6	22	0	61	474
05:15 PM	11	165	0	5	181	7	143	12	1	163	6	4	14	0	24	20	3	15	0	38	406
05:30 PM	22	201	0	2	225	10	165	22	1	198	2	4	11	0	17	31	3	20	0	54	494
05:45 PM	26	172	1	1	200	13	171	17	0	201	5	3	12	0	20	27	3	12	0	42	463
Total	81	709	1	8	799	42	668	59	2	771	16	13	43	0	72	111	15	69	0	195	1837
06:00 PM	16	164	2	1	183	14	176	17	1	208	1	2	12	0	15	23	2	19	0	44	450
06:15 PM	21	167	0	4	192	13	148	17	1	179	2	6	7	0	15	25	3	15	0	43	429
06:30 PM	12	160	0	3	175	10	175	17	1	203	2	3	7	0	12	23	2	14	0	39	429
06:45 PM	15	144	1	2	162	15	153	14	1	183	5	3	8	0	16	24	5	15	0	44	405
Total	64	635	3	10	712	52	652	65	4	773	10	14	34	0	58	95	12	63	0	170	1713

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	1098	8374	53	110	9635	674	8775	749	61	10259	175	172	638	0	985	1007	171	1024	0	2202	23081
Apprch %	11.4	86.9	0.6	1.1		6.6	85.5	7.3	0.6		17.8	17.5	64.8	0		45.7	7.8	46.5	0		
Total %	4.8	36.3	0.2	0.5	41.7	2.9	38	3.2	0.3	44.4	0.8	0.7	2.8	0	4.3	4.4	0.7	4.4	0	9.5	
Cars	1093	8247	52	110	9502	672	8649	745	60	10126	175	172	635	0	982	1004	171	1018	0	2193	22803
% Cars	99.5	98.5	98.1	100	98.6	99.7	98.6	99.5	98.4	98.7	100	100	99.5	0	99.7	99.7	100	99.4	0	99.6	98.8
Trucks	5	127	1	0	133	2	126	4	1	133	0	0	3	0	3	3	0	6	0	9	278
% Trucks	0.5	1.5	1.9	0	1.4	0.3	1.4	0.5	1.6	1.3	0	0	0.5	0	0.3	0.3	0	0.6	0	0.4	1.2

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	28	214	0	242	17	220	24	261	5	8	21	34	23	2	26	51	588
11:15 AM	28	194	0	222	18	204	16	238	4	5	17	26	29	4	30	63	549
11:30 AM	31	214	0	245	22	230	19	271	2	3	17	22	24	3	32	59	597
11:45 AM	31	188	1	220	30	230	17	277	9	2	18	29	28	3	42	73	599
Total Volume	118	810	1	929	87	884	76	1047	20	18	73	111	104	12	130	246	2333
% App. Total	12.7	87.2	0.1		8.3	84.4	7.3		18	16.2	65.8		42.3	4.9	52.8		
PHF	.952	.946	.250	.948	.725	.961	.792	.945	.556	.563	.869	.816	.897	.750	.774	.842	.974

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	34	205	2	241	20	237	26	283	8	5	22	35	30	2	30	62	621
12:15 PM	39	217	2	258	22	226	22	270	5	5	17	27	29	4	33	66	621
12:30 PM	39	201	1	241	17	230	38	285	1	2	22	25	30	7	27	64	615
12:45 PM	32	205	1	238	27	210	21	258	8	6	18	32	32	6	31	69	597
Total Volume	144	828	6	978	86	903	107	1096	22	18	79	119	121	19	121	261	2454
% App. Total	14.7	84.7	0.6		7.8	82.4	9.8		18.5	15.1	66.4		46.4	7.3	46.4		
PHF	.923	.954	.750	.948	.796	.953	.704	.961	.688	.750	.898	.850	.945	.679	.917	.946	.988

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Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	3
07:30 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	1	1	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	3
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:45 AM	0	0	0	1	1	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	5
Total	0	0	0	2	2	0	0	0	3	3	0	0	0	0	0	0	0	0	2	2	7
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
11:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
01:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	4
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0	4
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	3

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	4	4	0	0	0	11	11	0	0	0	8	8	0	0	0	12	12	35
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	11.4	11.4	0	0	0	31.4	31.4	0	0	0	22.9	22.9	0	0	0	34.3	34.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0	
12:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0	
12:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0	
12:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0	
Total Volume	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	0	
% App. Total	0	0	0			0	0	0			0	0	0			0	0	0			
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000	.000	

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	1	130	0	1	132	2	88	0	0	90	1	0	1	0	2	1	0	3	0	4	228
06:15 AM	4	163	0	1	168	4	82	4	0	90	1	0	8	0	9	1	1	1	0	3	270
06:30 AM	3	171	1	1	176	5	111	3	0	119	2	1	2	0	5	2	1	3	0	6	306
06:45 AM	5	177	0	2	184	3	117	5	0	125	0	2	2	0	4	5	0	4	0	9	322
Total	13	641	1	5	660	14	398	12	0	424	4	3	13	0	20	9	2	11	0	22	1126
07:00 AM	5	153	0	1	159	12	116	2	0	130	2	0	4	0	6	2	0	4	0	6	301
07:15 AM	6	177	0	2	185	9	123	8	0	140	0	1	5	0	6	4	1	5	0	10	341
07:30 AM	7	191	0	1	199	14	165	6	0	185	3	0	7	0	10	3	1	6	0	10	404
07:45 AM	12	197	0	1	210	9	216	11	0	236	4	2	8	0	14	8	1	7	0	16	476
Total	30	718	0	5	753	44	620	27	0	691	9	3	24	0	36	17	3	22	0	42	1522
08:00 AM	4	168	0	0	172	9	178	5	0	192	1	2	12	0	15	9	1	7	0	17	396
08:15 AM	10	202	2	3	217	16	169	7	0	192	3	2	11	0	16	3	1	10	0	14	439
08:30 AM	10	184	3	2	199	9	163	7	1	180	1	3	8	0	12	5	6	8	0	19	410
08:45 AM	14	198	1	0	213	13	203	12	1	229	4	4	12	0	20	5	5	10	0	20	482
Total	38	752	6	5	801	47	713	31	2	793	9	11	43	0	63	22	13	35	0	70	1727
Grand Total	81	2111	7	15	2214	105	1731	70	2	1908	22	17	80	0	119	48	18	68	0	134	4375
Apprch %	3.7	95.3	0.3	0.7		5.5	90.7	3.7	0.1		18.5	14.3	67.2	0		35.8	13.4	50.7	0		
Total %	1.9	48.3	0.2	0.3	50.6	2.4	39.6	1.6	0	43.6	0.5	0.4	1.8	0	2.7	1.1	0.4	1.6	0	3.1	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	4	168	0	172	9	178	5	192	1	2	12	15	9	1	7	17	396
08:15 AM	10	202	2	214	16	169	7	192	3	2	11	16	3	1	10	14	436
08:30 AM	10	184	3	197	9	163	7	179	1	3	8	12	5	6	8	19	407
08:45 AM	14	198	1	213	13	203	12	228	4	4	12	20	5	5	10	20	481
Total Volume	38	752	6	796	47	713	31	791	9	11	43	63	22	13	35	70	1720
% App. Total	4.8	94.5	0.8		5.9	90.1	3.9		14.3	17.5	68.3		31.4	18.6	50		
PHF	.679	.931	.500	.930	.734	.878	.646	.867	.563	.688	.896	.788	.611	.542	.875	.875	.894

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
06:30 AM	0	8	0	0	8	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	12
06:45 AM	0	2	0	0	2	0	5	1	0	6	0	0	1	0	1	1	0	0	0	1	10
Total	0	13	0	0	13	0	15	1	0	16	0	0	1	0	1	1	0	0	0	1	31
07:00 AM	0	1	0	0	1	0	8	0	0	8	0	0	0	0	0	0	0	1	0	1	10
07:15 AM	0	9	0	0	9	1	3	1	0	5	1	0	0	0	1	0	0	0	0	0	15
07:30 AM	0	7	0	0	7	0	11	0	0	11	0	0	1	0	1	1	0	0	0	1	20
07:45 AM	0	9	0	0	9	0	7	2	0	9	0	0	0	0	0	1	0	1	0	2	20
Total	0	26	0	0	26	1	29	3	0	33	1	0	1	0	2	2	0	2	0	4	65
08:00 AM	0	9	0	0	9	0	5	0	0	5	0	0	3	0	3	0	0	1	0	1	18
08:15 AM	0	11	0	0	11	0	9	0	0	9	0	0	2	0	2	1	0	0	0	1	23
08:30 AM	0	7	0	0	7	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	18
08:45 AM	1	10	0	0	11	0	9	0	0	9	0	0	0	0	0	1	0	2	0	3	23
Total	1	37	0	0	38	0	34	0	0	34	0	0	5	0	5	2	0	3	0	5	82
Grand Total	1	76	0	0	77	1	78	4	0	83	1	0	7	0	8	5	0	5	0	10	178
Apprch %	1.3	98.7	0	0		1.2	94	4.8	0		12.5	0	87.5	0		50	0	50	0		
Total %	0.6	42.7	0	0	43.3	0.6	43.8	2.2	0	46.6	0.6	0	3.9	0	4.5	2.8	0	2.8	0	5.6	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	9	0	9	0	5	0	5	0	0	3	3	0	0	1	1	18
08:15 AM	0	11	0	11	0	9	0	9	0	0	2	2	1	0	0	1	23
08:30 AM	0	7	0	7	0	11	0	11	0	0	0	0	0	0	0	0	18
08:45 AM	1	10	0	11	0	9	0	9	0	0	0	0	1	0	2	3	23
Total Volume	1	37	0	38	0	34	0	34	0	0	5	5	2	0	3	5	82
% App. Total	2.6	97.4	0		0	100	0		0	0	100		40	0	60		
PHF	.250	.841	.000	.864	.000	.773	.000	.773	.000	.000	.417	.417	.500	.000	.375	.417	.891

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	1	130	0	1	132	2	91	0	0	93	1	0	1	0	2	1	0	3	0	4	231
06:15 AM	4	166	0	1	171	4	85	4	0	93	1	0	8	0	9	1	1	1	0	3	276
06:30 AM	3	179	1	1	184	5	115	3	0	123	2	1	2	0	5	2	1	3	0	6	318
06:45 AM	5	179	0	2	186	3	122	6	0	131	0	2	3	0	5	6	0	4	0	10	332
Total	13	654	1	5	673	14	413	13	0	440	4	3	14	0	21	10	2	11	0	23	1157
07:00 AM	5	154	0	1	160	12	124	2	0	138	2	0	4	0	6	2	0	5	0	7	311
07:15 AM	6	186	0	2	194	10	126	9	0	145	1	1	5	0	7	4	1	5	0	10	356
07:30 AM	7	198	0	1	206	14	176	6	0	196	3	0	8	0	11	4	1	6	0	11	424
07:45 AM	12	206	0	1	219	9	223	13	0	245	4	2	8	0	14	9	1	8	0	18	496
Total	30	744	0	5	779	45	649	30	0	724	10	3	25	0	38	19	3	24	0	46	1587
08:00 AM	4	177	0	0	181	9	183	5	0	197	1	2	15	0	18	9	1	8	0	18	414
08:15 AM	10	213	2	3	228	16	178	7	0	201	3	2	13	0	18	4	1	10	0	15	462
08:30 AM	10	191	3	2	206	9	174	7	1	191	1	3	8	0	12	5	6	8	0	19	428
08:45 AM	15	208	1	0	224	13	212	12	1	238	4	4	12	0	20	6	5	12	0	23	505
Total	39	789	6	5	839	47	747	31	2	827	9	11	48	0	68	24	13	38	0	75	1809
Grand Total	82	2187	7	15	2291	106	1809	74	2	1991	23	17	87	0	127	53	18	73	0	144	4553
Apprch %	3.6	95.5	0.3	0.7		5.3	90.9	3.7	0.1		18.1	13.4	68.5	0		36.8	12.5	50.7	0		
Total %	1.8	48	0.2	0.3	50.3	2.3	39.7	1.6	0	43.7	0.5	0.4	1.9	0	2.8	1.2	0.4	1.6	0	3.2	
Cars	81	2111	7	15	2214	105	1731	70	2	1908	22	17	80	0	119	48	18	68	0	134	4375
% Cars	98.8	96.5	100	100	96.6	99.1	95.7	94.6	100	95.8	95.7	100	92	0	93.7	90.6	100	93.2	0	93.1	96.1
Trucks	1	76	0	0	77	1	78	4	0	83	1	0	7	0	8	5	0	5	0	10	178
% Trucks	1.2	3.5	0	0	3.4	0.9	4.3	5.4	0	4.2	4.3	0	8	0	6.3	9.4	0	6.8	0	6.9	3.9

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	4	177	0	181	9	183	5	197	1	2	15	18	9	1	8	18	414
08:15 AM	10	213	2	225	16	178	7	201	3	2	13	18	4	1	10	15	459
08:30 AM	10	191	3	204	9	174	7	190	1	3	8	12	5	6	8	19	425
08:45 AM	15	208	1	224	13	212	12	237	4	4	12	20	6	5	12	23	504
Total Volume	39	789	6	834	47	747	31	825	9	11	48	68	24	13	38	75	1802
% App. Total	4.7	94.6	0.7		5.7	90.5	3.8		13.2	16.2	70.6		32	17.3	50.7		
PHF	.650	.926	.500	.927	.734	.881	.646	.870	.563	.688	.800	.850	.667	.542	.792	.815	.894

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	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	3	3	5
07:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	4	4	0	0	0	4	4	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
Grand Total	0	0	0	0	0	0	0	0	2	2	0	0	0	5	5	0	0	0	5	5	12
Apprch %	0	0	0	0		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	0		0	0	0	16.7	16.7	0	0	0	41.7	41.7	0	0	0	41.7	41.7	

[illegible]

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(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr PM
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	16	214	1	4	235	12	229	22	0	263	5	4	13	0	22	28	7	26	0	61	581
02:15 PM	19	164	1	2	186	15	201	22	0	238	7	5	18	0	30	33	3	35	0	71	525
02:30 PM	30	210	0	1	241	21	201	16	2	240	1	9	17	0	27	24	3	16	0	43	551
02:45 PM	18	190	0	1	209	11	241	15	0	267	3	8	7	0	18	25	2	30	0	57	551
Total	83	778	2	8	871	59	872	75	2	1008	16	26	55	0	97	110	15	107	0	232	2208
03:00 PM	26	222	0	2	250	17	216	14	2	249	5	1	5	0	11	43	3	27	0	73	583
03:15 PM	24	193	1	1	219	19	259	20	1	299	2	7	19	0	28	25	5	22	0	52	598
03:30 PM	28	200	0	4	232	21	222	14	1	258	7	12	18	0	37	26	5	27	0	58	585
03:45 PM	19	214	1	1	235	18	268	14	0	300	3	5	12	0	20	26	6	25	0	57	612
Total	97	829	2	8	936	75	965	62	4	1106	17	25	54	0	96	120	19	101	0	240	2378
04:00 PM	32	235	1	2	270	10	258	22	3	293	1	1	15	0	17	30	6	29	0	65	645
04:15 PM	26	229	0	2	257	17	246	17	2	282	3	7	12	0	22	39	5	33	0	77	638
04:30 PM	23	169	3	1	196	14	266	20	1	301	2	6	11	0	19	25	3	17	0	45	561
04:45 PM	19	213	0	3	235	17	287	23	1	328	4	4	11	0	19	31	4	22	0	57	639
Total	100	846	4	8	958	58	1057	82	7	1204	10	18	49	0	77	125	18	101	0	244	2483
05:00 PM	27	220	0	1	248	10	250	18	0	278	4	2	13	0	19	25	7	25	0	57	602
05:15 PM	18	181	1	2	202	16	288	18	4	326	2	1	9	0	12	33	3	26	0	62	602
05:30 PM	25	177	2	1	205	9	250	17	0	276	3	4	17	0	24	29	7	29	0	65	570
05:45 PM	23	186	0	2	211	10	277	19	0	306	5	1	9	0	15	22	1	31	0	54	586
Total	93	764	3	6	866	45	1065	72	4	1186	14	8	48	0	70	109	18	111	0	238	2360
06:00 PM	30	212	0	1	243	6	237	11	1	255	3	3	11	0	17	28	3	21	0	52	567
06:15 PM	20	164	3	2	189	13	234	19	0	266	7	6	4	0	17	26	4	25	0	55	527
06:30 PM	22	165	1	2	190	10	220	17	0	247	8	4	9	0	21	27	4	37	0	68	526
06:45 PM	21	164	0	4	189	13	205	16	2	236	2	1	12	0	15	22	2	21	0	45	485
Total	93	705	4	9	811	42	896	63	3	1004	20	14	36	0	70	103	13	104	0	220	2105
Grand Total	466	3922	15	39	4442	279	4855	354	20	5508	77	91	242	0	410	567	83	524	0	1174	11534
Apprch %	10.5	88.3	0.3	0.9		5.1	88.1	6.4	0.4		18.8	22.2	59	0		48.3	7.1	44.6	0		
Total %	4	34	0.1	0.3	38.5	2.4	42.1	3.1	0.2	47.8	0.7	0.8	2.1	0	3.6	4.9	0.7	4.5	0	10.2	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	32	235	1	268	10	258	22	290	1	1	15	17	30	6	29	65	640
04:15 PM	26	229	0	255	17	246	17	280	3	7	12	22	39	5	33	77	634
04:30 PM	23	169	3	195	14	266	20	300	2	6	11	19	25	3	17	45	559
04:45 PM	19	213	0	232	17	287	23	327	4	4	11	19	31	4	22	57	635
Total Volume	100	846	4	950	58	1057	82	1197	10	18	49	77	125	18	101	244	2468
% App. Total	10.5	89.1	0.4		4.8	88.3	6.9		13	23.4	63.6		51.2	7.4	41.4		
PHF	.781	.900	.333	.886	.853	.921	.891	.915	.625	.643	.817	.875	.801	.750	.765	.792	.964

Peggy Malone & Associates

(888) 247-8602

File Name : 8-Hwy 29 and Branch Dr PM
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	0	6	0	0	6	0	10	0	0	10	0	0	0	0	0	2	0	0	0	2	18
02:15 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	8
02:30 PM	0	6	0	0	6	0	4	0	0	4	0	0	0	0	0	0	0	2	0	2	12
02:45 PM	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	9
Total	0	20	0	0	20	0	20	0	0	20	0	0	0	0	0	5	0	2	0	7	47
03:00 PM	0	3	0	0	3	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	15
03:15 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
03:30 PM	0	6	0	0	6	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	13
03:45 PM	0	5	0	0	5	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	9
Total	0	17	0	0	17	0	26	1	0	27	0	0	0	0	0	0	0	0	0	0	44
04:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	5
04:30 PM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	8
04:45 PM	0	2	0	0	2	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	7
Total	0	9	0	0	9	0	11	0	0	11	0	0	1	0	1	1	0	0	0	1	22
05:00 PM	0	7	0	0	7	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	12
05:15 PM	2	3	0	0	5	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	10
05:30 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	8
05:45 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	8
Total	2	16	0	0	18	0	17	0	0	17	0	0	0	0	0	0	0	3	0	3	38
06:00 PM	0	2	0	0	2	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	9
06:15 PM	0	5	0	0	5	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	7
06:30 PM	0	3	0	0	3	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	9
06:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	10	0	0	10	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	28
Grand Total	2	72	0	0	74	0	92	1	0	93	0	0	1	0	1	6	0	5	0	11	179
Apprch %	2.7	97.3	0	0		0	98.9	1.1	0		0	0	100	0		54.5	0	45.5	0		
Total %	1.1	40.2	0	0	41.3	0	51.4	0.6	0	52	0	0	0.6	0	0.6	3.4	0	2.8	0	6.1	

	Hwy 29 Eastbound				Hwy 29 Westbound				Branch Dr Northbound				Branch Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:00 PM																	
02:00 PM	0	6	0	6	0	10	0	10	0	0	0	0	2	0	0	2	18
02:15 PM	0	3	0	3	0	4	0	4	0	0	0	0	1	0	0	1	8
02:30 PM	0	6	0	6	0	4	0	4	0	0	0	0	0	0	2	2	12
02:45 PM	0	5	0	5	0	2	0	2	0	0	0	0	2	0	0	2	9
Total Volume	0	20	0	20	0	20	0	20	0	0	0	0	5	0	2	7	47
% App. Total	0	100	0		0	100	0		0	0	0		71.4	0	28.6		
PHF	.000	.833	.000	.833	.000	.500	.000	.500	.000	.000	.000	.000	.625	.000	.250	.875	.653

Peggy Malone & Associates

(888) 247-8602

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	16	220	1	4	241	12	239	22	0	273	5	4	13	0	22	30	7	26	0	63	599
02:15 PM	19	167	1	2	189	15	205	22	0	242	7	5	18	0	30	34	3	35	0	72	533
02:30 PM	30	216	0	1	247	21	205	16	2	244	1	9	17	0	27	24	3	18	0	45	563
02:45 PM	18	195	0	1	214	11	243	15	0	269	3	8	7	0	18	27	2	30	0	59	560
Total	83	798	2	8	891	59	892	75	2	1028	16	26	55	0	97	115	15	109	0	239	2255
03:00 PM	26	225	0	2	253	17	228	14	2	261	5	1	5	0	11	43	3	27	0	73	598
03:15 PM	24	196	1	1	222	19	263	20	1	303	2	7	19	0	28	25	5	22	0	52	605
03:30 PM	28	206	0	4	238	21	229	14	1	265	7	12	18	0	37	26	5	27	0	58	598
03:45 PM	19	219	1	1	240	18	271	15	0	304	3	5	12	0	20	26	6	25	0	57	621
Total	97	846	2	8	953	75	991	63	4	1133	17	25	54	0	96	120	19	101	0	240	2422
04:00 PM	32	236	1	2	271	10	259	22	3	294	1	1	15	0	17	30	6	29	0	65	647
04:15 PM	26	231	0	2	259	17	249	17	2	285	3	7	12	0	22	39	5	33	0	77	643
04:30 PM	23	173	3	1	200	14	269	20	1	304	2	6	11	0	19	26	3	17	0	46	569
04:45 PM	19	215	0	3	237	17	291	23	1	332	4	4	12	0	20	31	4	22	0	57	646
Total	100	855	4	8	967	58	1068	82	7	1215	10	18	50	0	78	126	18	101	0	245	2505
05:00 PM	27	227	0	1	255	10	255	18	0	283	4	2	13	0	19	25	7	25	0	57	614
05:15 PM	20	184	1	2	207	16	292	18	4	330	2	1	9	0	12	33	3	27	0	63	612
05:30 PM	25	180	2	1	208	9	254	17	0	280	3	4	17	0	24	29	7	30	0	66	578
05:45 PM	23	189	0	2	214	10	281	19	0	310	5	1	9	0	15	22	1	32	0	55	594
Total	95	780	3	6	884	45	1082	72	4	1203	14	8	48	0	70	109	18	114	0	241	2398
06:00 PM	30	214	0	1	245	6	244	11	1	262	3	3	11	0	17	28	3	21	0	52	576
06:15 PM	20	169	3	2	194	13	236	19	0	268	7	6	4	0	17	26	4	25	0	55	534
06:30 PM	22	168	1	2	193	10	226	17	0	253	8	4	9	0	21	27	4	37	0	68	535
06:45 PM	21	164	0	4	189	13	208	16	2	239	2	1	12	0	15	22	2	21	0	45	488
Total	93	715	4	9	821	42	914	63	3	1022	20	14	36	0	70	103	13	104	0	220	2133
Grand Total	468	3994	15	39	4516	279	4947	355	20	5601	77	91	243	0	411	573	83	529	0	1185	11713
Apprch %	10.4	88.4	0.3	0.9		5	88.3	6.3	0.4		18.7	22.1	59.1	0		48.4	7	44.6	0		
Total %	4	34.1	0.1	0.3	38.6	2.4	42.2	3	0.2	47.8	0.7	0.8	2.1	0	3.5	4.9	0.7	4.5	0	10.1	
Cars	466	3922	15	39	4442	279	4855	354	20	5508	77	91	242	0	410	567	83	524	0	1174	11534
% Cars	99.6	98.2	100	100	98.4	100	98.1	99.7	100	98.3	100	100	99.6	0	99.8	99	100	99.1	0	99.1	98.5
Trucks	2	72	0	0	74	0	92	1	0	93	0	0	1	0	1	6	0	5	0	11	179
% Trucks	0.4	1.8	0	0	1.6	0	1.9	0.3	0	1.7	0	0	0.4	0	0.2	1	0	0.9	0	0.9	1.5

	Hwy 29 Eastbound					Hwy 29 Westbound					Branch Dr Northbound					Branch Dr Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:30 PM																					
03:30 PM	28	206	0	234		21	229	14	264		7	12	18	37		26	5	27	58		593
03:45 PM	19	219	1	239		18	271	15	304		3	5	12	20		26	6	25	57		620
04:00 PM	32	236	1	269		10	259	22	291		1	1	15	17		30	6	29	65		642
04:15 PM	26	231	0	257		17	249	17	283		3	7	12	22		39	5	33	77		639
Total Volume	105	892	2	999		66	1008	68	1142		14	25	57	96		121	22	114	257		2494
% App. Total	10.5	89.3	0.2			5.8	88.3	6			14.6	26	59.4			47.1	8.6	44.4			
PHF	.820	.945	.500	.928		.786	.930	.773	.939		.500	.521	.792	.649		.776	.917	.864	.834		.971

File Name : 8-Hwy 29 and Branch Dr PM
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[illegible][illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	7	75	0	3	85	0	69	0	0	69	0	0	3	0	3	1	0	3	0	4	161
07:15 AM	3	77	0	0	80	0	100	0	1	101	0	0	0	0	0	4	0	2	0	6	187
07:30 AM	9	98	0	3	110	1	117	1	0	119	0	0	3	0	3	3	0	3	0	6	238
07:45 AM	10	118	0	7	135	2	138	0	1	141	1	0	0	0	1	1	0	9	0	10	287
Total	29	368	0	13	410	3	424	1	2	430	1	0	6	0	7	9	0	17	0	26	873
08:00 AM	6	106	1	3	116	0	145	2	1	148	0	1	1	0	2	2	0	7	0	9	275
08:15 AM	9	123	0	1	133	1	145	0	1	147	0	0	0	0	0	4	0	12	0	16	296
08:30 AM	5	134	0	4	143	0	157	2	1	160	0	0	2	0	2	0	0	11	0	11	316
08:45 AM	6	147	0	3	156	2	177	3	1	183	3	1	0	0	4	2	1	12	0	15	358
Total	26	510	1	11	548	3	624	7	4	638	3	2	3	0	8	8	1	42	0	51	1245
09:00 AM	11	143	0	2	156	1	158	3	1	163	1	0	1	0	2	2	0	6	0	8	329
09:15 AM	7	188	0	5	200	2	204	8	0	214	0	0	1	0	1	7	0	6	0	13	428
09:30 AM	10	197	0	5	212	0	210	4	2	216	0	0	2	0	2	1	0	13	0	14	444
09:45 AM	8	203	0	7	218	0	190	2	1	193	3	0	1	0	4	3	0	7	0	10	425
Total	36	731	0	19	786	3	762	17	4	786	4	0	5	0	9	13	0	32	0	45	1626
10:00 AM	4	213	0	3	220	2	256	2	0	260	0	0	5	0	5	4	0	9	0	13	498
10:15 AM	8	232	1	4	245	0	238	2	0	240	0	0	1	0	1	2	0	14	0	16	502
10:30 AM	11	224	0	3	238	1	234	5	0	240	1	0	0	0	1	6	0	15	0	21	500
10:45 AM	6	200	0	3	209	1	258	5	0	264	0	0	4	0	4	4	0	13	0	17	494
Total	29	869	1	13	912	4	986	14	0	1004	1	0	10	0	11	16	0	51	0	67	1994
11:00 AM	7	252	1	5	265	0	270	8	0	278	0	0	3	0	3	2	0	17	0	19	565
11:15 AM	12	228	1	5	246	2	212	3	1	218	0	0	3	0	3	6	0	19	0	25	492
11:30 AM	7	244	0	3	254	1	258	6	1	266	0	0	3	0	3	5	0	14	0	19	542
11:45 AM	18	215	0	4	237	0	276	11	0	287	0	0	3	0	3	4	2	13	0	19	546
Total	44	939	2	17	1002	3	1016	28	2	1049	0	0	12	0	12	17	2	63	0	82	2145
12:00 PM	11	240	0	2	253	2	253	7	0	262	0	0	5	0	5	3	1	15	0	19	539
12:15 PM	10	233	0	2	245	1	254	1	0	256	0	0	3	0	3	6	0	7	0	13	517
12:30 PM	13	241	0	7	261	1	276	4	2	283	0	0	1	0	1	1	0	14	0	15	560
12:45 PM	19	232	1	6	258	1	241	8	1	251	0	0	3	0	3	5	0	9	0	14	526
Total	53	946	1	17	1017	5	1024	20	3	1052	0	0	12	0	12	15	1	45	0	61	2142
01:00 PM	10	253	0	2	265	2	219	9	0	230	0	1	3	0	4	1	0	15	0	16	515
01:15 PM	11	219	0	1	231	1	222	4	0	227	1	0	5	0	6	3	0	13	0	16	480
01:30 PM	10	233	0	0	243	0	256	7	0	263	0	0	3	0	3	5	0	15	0	20	529
01:45 PM	10	214	0	6	230	2	248	6	0	256	0	0	3	0	3	4	0	17	0	21	510
Total	41	919	0	9	969	5	945	26	0	976	1	1	14	0	16	13	0	60	0	73	2034
02:00 PM	10	220	0	2	232	1	188	4	1	194	0	0	2	0	2	5	0	10	0	15	443
02:15 PM	6	199	1	3	209	1	214	3	1	219	0	0	1	0	1	1	0	11	0	12	441
02:30 PM	6	220	0	5	231	2	248	4	0	254	0	0	3	0	3	4	0	11	0	15	503
02:45 PM	11	214	0	1	226	0	224	3	0	227	0	0	2	0	2	3	0	12	0	15	470
Total	33	853	1	11	898	4	874	14	2	894	0	0	8	0	8	13	0	44	0	57	1857
03:00 PM	10	231	0	2	243	0	195	5	2	202	1	1	1	0	3	2	0	15	0	17	465
03:15 PM	12	221	0	2	235	2	222	1	0	225	0	0	2	0	2	5	0	15	0	20	482
03:30 PM	12	210	0	2	224	0	217	3	0	220	0	0	5	0	5	1	0	12	0	13	462
03:45 PM	8	184	1	2	195	1	206	4	1	212	0	0	3	0	3	4	0	15	0	19	429
Total	42	846	1	8	897	3	840	13	3	859	1	1	11	0	13	12	0	57	0	69	1838
04:00 PM	11	221	0	0	232	0	180	10	0	190	2	0	1	0	3	3	0	18	0	21	446
04:15 PM	9	225	1	3	238	1	190	5	0	196	0	0	3	0	3	4	0	12	0	16	453
04:30 PM	8	191	0	2	201	0	193	7	0	200	1	0	7	0	8	1	0	11	0	12	421
04:45 PM	8	182	0	2	192	0	176	3	0	179	0	0	4	0	4	3	0	9	0	12	387
Total	36	819	1	7	863	1	739	25	0	765	3	0	15	0	18	11	0	50	0	61	1707
05:00 PM	7	199	0	4	210	0	193	0	0	193	0	0	2	0	2	7	0	14	0	21	426
05:15 PM	6	180	0	1	187	0	161	3	0	164	0	1	3	0	4	5	1	7	0	13	368
05:30 PM	8	223	1	5	237	1	193	2	0	196	0	0	7	0	7	1	0	7	0	8	448
05:45 PM	6	189	0	3	198	1	205	1	0	207	0	0	0	0	0	4	0	1	0	5	410
Total	27	791	1	13	832	2	752	6	0	760	0	1	12	0	13	17	1	29	0	47	1652
06:00 PM	3	204	0	3	210	0	201	2	0	203	0	0	1	0	1	2	0	5	0	7	421
06:15 PM	9	191	0	1	201	0	171	2	0	173	0	0	0	0	0	2	0	7	0	9	383
06:30 PM	5	192	0	2	199	0	208	2	2	212	0	0	0	0	0	4	0	8	0	12	423
06:45 PM	3	178	0	2	183	0	168	3	0	171	0	0	0	1	1	3	0	6	0	9	364
Total	20	765	0	8	793	0	748	9	2	759	0	0	1	1	2	11	0	26	0	37	1591

Peggy Malone & Associates

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File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	416	9356	9	146	9927	36	9734	180	22	9972	14	5	109	1	129	155	5	516	0	676	20704
Apprch %	4.2	94.2	0.1	1.5		0.4	97.6	1.8	0.2		10.9	3.9	84.5	0.8		22.9	0.7	76.3	0		
Total %	2	45.2	0	0.7	47.9	0.2	47	0.9	0.1	48.2	0.1	0	0.5	0	0.6	0.7	0	2.5	0	3.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	7	252	1	260	0	270	8	278	0	0	3	3	2	0	17	19	560
11:15 AM	12	228	1	241	2	212	3	217	0	0	3	3	6	0	19	25	486
11:30 AM	7	244	0	251	1	258	6	265	0	0	3	3	5	0	14	19	538
11:45 AM	18	215	0	233	0	276	11	287	0	0	3	3	4	2	13	19	542
Total Volume	44	939	2	985	3	1016	28	1047	0	0	12	12	17	2	63	82	2126
% App. Total	4.5	95.3	0.2		0.3	97	2.7		0	0	100		20.7	2.4	76.8		
PHF	.611	.932	.500	.947	.375	.920	.636	.912	.000	.000	1.00	1.00	.708	.250	.829	.820	.949

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	11	240	0	251		2	253	7	262		0	0	5	5		3	1	15	19	537
12:15 PM	10	233	0	243		1	254	1	256		0	0	3	3		6	0	7	13	515
12:30 PM	13	241	0	254		1	276	4	281		0	0	1	1		1	0	14	15	551
12:45 PM	19	232	1	252		1	241	8	250		0	0	3	3		5	0	9	14	519
Total Volume	53	946	1	1000		5	1024	20	1049		0	0	12	12		15	1	45	61	2122
% App. Total	5.3	94.6	0.1			0.5	97.6	1.9			0	0	100			24.6	1.6	73.8		
PHF	.697	.981	.250	.984		.625	.928	.625	.933		.000	.000	.600	.600		.625	.250	.750	.803	.963

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
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	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	2	0	0	2	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	5
07:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
07:30 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	11	0	0	11	1	9	0	0	10	0	0	0	0	0	0	0	0	0	0	21
08:00 AM	0	4	0	0	4	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	11
08:15 AM	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	7
08:30 AM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
08:45 AM	0	3	0	0	3	0	6	0	0	6	0	0	1	0	1	0	0	0	0	0	10
Total	0	12	0	0	12	0	20	0	0	20	0	0	1	0	1	0	0	0	0	0	33
09:00 AM	0	6	0	0	6	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	11
09:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	5
09:30 AM	0	7	0	0	7	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	9
09:45 AM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
Total	0	19	0	0	19	0	11	0	0	11	0	0	1	0	1	0	0	0	0	0	31
10:00 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
10:15 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	5
10:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	3
10:45 AM	0	3	0	0	3	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
Total	0	8	0	0	8	0	13	0	0	13	0	0	1	0	1	0	0	0	0	0	22
11:00 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
11:15 AM	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	9
11:30 AM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	6
11:45 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
Total	0	12	0	0	12	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	28
12:00 PM	0	5	0	0	5	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	9
12:15 PM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
12:30 PM	0	3	0	0	3	0	4														

Peggy Malone & Associates

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File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	2	123	0	0	125	1	139	2	0	142	0	0	4	0	4	0	0	1	0	1	272
Apprch %	1.6	98.4	0	0		0.7	97.9	1.4	0		0	0	100	0		0	0	100	0		
Total %	0.7	45.2	0	0	46	0.4	51.1	0.7	0	52.2	0	0	1.5	0	1.5	0	0	0.4	0	0.4	

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:45 AM																	
08:45 AM	0	3	0	3	0	6	0	6	0	0	1	1	0	0	0	0	10
09:00 AM	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0	11
09:15 AM	0	2	0	2	0	2	0	2	0	0	1	1	0	0	0	0	5
09:30 AM	0	7	0	7	0	2	0	2	0	0	0	0	0	0	0	0	9
Total Volume	0	18	0	18	0	15	0	15	0	0	2	2	0	0	0	0	35
% App. Total	0	100	0		0	100	0		0	0	100		0	0	0		
PHF	.000	.643	.000	.643	.000	.625	.000	.625	.000	.000	.500	.500	.000	.000	.000	.000	.795

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:30 PM

02:30 PM	0	1	0	1	0	12	1	13	0	0	0	0	0	0	0	0	14
02:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
03:00 PM	0	4	0	4	0	2	0	2	0	0	0	0	0	0	0	0	6
03:15 PM	0	7	0	7	0	5	1	6	0	0	1	1	0	0	0	0	14
Total Volume	0	12	0	12	0	22	2	24	0	0	1	1	0	0	0	0	37
% App. Total	0	100	0		0	91.7	8.3		0	0	100		0	0	0		
PHF	.000	.429	.000	.429	.000	.458	.500	.462	.000	.000	.250	.250	.000	.000	.000	.000	.661

Peggy Malone & Associates

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File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	7	77	0	3	87	1	71	0	0	72	0	0	3	0	3	1	0	3	0	4	166
07:15 AM	3	81	0	0	84	0	104	0	1	105	0	0	0	0	0	4	0	2	0	6	195
07:30 AM	9	101	0	3	113	1	120	1	0	122	0	0	3	0	3	3	0	3	0	6	244
07:45 AM	10	120	0	7	137	2	138	0	1	141	1	0	0	0	1	1	0	9	0	10	289
Total	29	379	0	13	421	4	433	1	2	440	1	0	6	0	7	9	0	17	0	26	894
08:00 AM	6	110	1	3	120	0	152	2	1	155	0	1	1	0	2	2	0	7	0	9	286
08:15 AM	9	125	0	1	135	1	150	0	1	152	0	0	0	0	0	4	0	12	0	16	303
08:30 AM	5	137	0	4	146	0	159	2	1	162	0	0	2	0	2	0	0	11	0	11	321
08:45 AM	6	150	0	3	159	2	183	3	1	189	3	1	1	0	5	2	1	12	0	15	368
Total	26	522	1	11	560	3	644	7	4	658	3	2	4	0	9	8	1	42	0	51	1278
09:00 AM	11	149	0	2	162	1	163	3	1	168	1	0	1	0	2	2	0	6	0	8	340
09:15 AM	7	190	0	5	202	2	206	8	0	216	0	0	2	0	2	7	0	6	0	13	433
09:30 AM	10	204	0	5	219	0	212	4	2	218	0	0	2	0	2	1	0	13	0	14	453
09:45 AM	8	207	0	7	222	0	192	2	1	195	3	0	1	0	4	3	0	7	0	10	431
Total	36	750	0	19	805	3	773	17	4	797	4	0	6	0	10	13	0	32	0	45	1657
10:00 AM	4	216	0	3	223	2	259	2	0	263	0	0	5	0	5	4	0	9	0	13	504
10:15 AM	8	233	1	4	246	0	242	2	0	244	0	0	1	0	1	2	0	14	0	16	507
10:30 AM	11	225	0	3	239	1	235	5	0	241	1	0	1	0	2	6	0	15	0	21	503
10:45 AM	6	203	0	3	212	1	263	5	0	269	0	0	4	0	4	4	0	13	0	17	502
Total	29	877	1	13	920	4	999	14	0	1017	1	0	11	0	12	16	0	51	0	67	2016
11:00 AM	7	255	1	5	268	0	273	8	0	281	0	0	3	0	3	2	0	17	0	19	571
11:15 AM	12	232	1	5	250	2	217	3	1	223	0	0	3	0	3	6	0	19	0	25	501
11:30 AM	7	245	0	3	255	1	263	6	1	271	0	0	3	0	3	5	0	14	0	19	548
11:45 AM	18	219	0	4	241	0	279	11	0	290	0	0	3	0	3	4	2	13	0	19	553
Total	44	951	2	17	1014	3	1032	28	2	1065	0	0	12	0	12	17	2	63	0	82	2173
12:00 PM	11	245	0	2	258	2	257	7	0	266	0	0	5	0	5	3	1	15	0	19	548
12:15 PM	10	237	0	2	249	1	257	1	0	259	0	0	3	0	3	6	0	7	0	13	524
12:30 PM	13	244	0	7	264	1	280	4	2	287	0	0	1	0	1	1	0	14	0	15	567
12:45 PM	19	234	1	6	260	1	242	8	1	252	0	0	3	0	3	5	0	9	0	14	529
Total	53	960	1	17	1031	5	1036	20	3	1064	0	0	12	0	12	15	1	45	0	61	2168
01:00 PM	10	255	0	2	267	2	220	9	0	231	0	1	3	0	4	1	0	16	0	17	519
01:15 PM	11	221	0	1	233	1	224	4	0	229	1	0	5	0	6	3	0	13	0	16	484
01:30 PM	10	235	0	0	245	0	261	7	0	268	0	0	3	0	3	5	0	15	0	20	536
01:45 PM	10	218	0	6	234	2	249	6	0	257	0	0	3	0	3	4	0	17	0	21	515
Total	41	929	0	9	979	5	954	26	0	985	1	1	14	0	16	13	0	61	0	74	2054
02:00 PM	10	221	0	2	233	1	191	4	1	197	0	0	2	0	2	5	0	10	0	15	447
02:15 PM	6	200	1	3	210	1	215	3	1	220	0	0	1	0	1	1	0	11	0	12	443
02:30 PM	6	221	0	5	232	2	260	5	0	267	0	0	3	0	3	4	0	11	0	15	517
02:45 PM	11	214	0	1	226	0	227	3	0	230	0	0	2	0	2	3	0	12	0	15	473
Total	33	856	1	11	901	4	893	15	2	914	0	0	8	0	8	13	0	44	0	57	1880
03:00 PM	10	235	0	2	247	0	197	5	2	204	1	1	1	0	3	2	0	15	0	17	471
03:15 PM	12	228	0	2	242	2	227	2	0	231	0	0	3	0	3	5	0	15	0	20	496
03:30 PM	13	212	0	2	227	0	219	3	0	222	0	0	5	0	5	1	0	12	0	13	467
03:45 PM	8	186	1	2	197	1	207	4	1	213	0	0	3	0	3	4	0	15	0	19	432
Total	43	861	1	8	913	3	850	14	3	870	1	1	12	0	14	12	0	57	0	69	1866
04:00 PM	11	221	0	0	232	0	181	10	0	191	2	0	1	0	3	3	0	18	0	21	447
04:15 PM	9	227	1	3	240	1	190	5	0	196	0	0	3	0	3	4	0	12	0	16	455
04:30 PM	8	193	0	2	203	0	196	7	0	203	1	0	7	0	8	1	0	11	0	12	426
04:45 PM	8	183	0	2	193	0	180	3	0	183	0	0	4	0	4	3	0	9	0	12	392
Total	36	824	1	7	868	1	747	25	0	773	3	0	15	0	18	11	0	50	0	61	1720
05:00 PM	7	201	0	4	212	0	194	0	0	194	0	0	2	0	2	7	0	14	0	21	429
05:15 PM	6	183	0	1	190	0	163	3	0	166	0	1	3	0	4	5	1	7	0	13	373
05:30 PM	8	226	1	5	240	1	194	2	0	197	0	0	7	0	7	1	0	7	0	8	452
05:45 PM	6	189	0	3	198	1	208	1	0	210	0	0	0	0	0	4	0	1	0	5	413
Total	27	799	1	13	840	2	759	6	0	767	0	1	12	0	13	17	1	29	0	47	1667
06:00 PM	4	207	0	3	214	0	202	2	0	204	0	0	1	0	1	2	0	5	0	7	426
06:15 PM	9	192	0	1	202	0	173	2	0	175	0	0	0	0	0	2	0	7	0	9	386
06:30 PM	5	193	0	2	200	0	208	2	2	212	0	0	0	0	0	4	0	8	0	12	424
06:45 PM	3	179	0	2	184	0	170	3	0	173	0	0	0	1	1	3	0	6	0	9	367
Total	21	771	0	8	800	0	753	9	2	764	0	0	1	1	2	11	0	26	0	37	1603

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	418	9479	9	146	10052	37	9873	182	22	10114	14	5	113	1	133	155	5	517	0	677	20976
Apprch %	4.2	94.3	0.1	1.5		0.4	97.6	1.8	0.2		10.5	3.8	85	0.8		22.9	0.7	76.4	0		
Total %	2	45.2	0	0.7	47.9	0.2	47.1	0.9	0.1	48.2	0.1	0	0.5	0	0.6	0.7	0	2.5	0	3.2	
Cars	416	9356	9	146	9927	36	9734	180	22	9972	14	5	109	1	129	155	5	516	0	676	20704
% Cars	99.5	98.7	100	100	98.8	97.3	98.6	98.9	100	98.6	100	100	96.5	100	97	100	100	99.8	0	99.9	98.7
Trucks	2	123	0	0	125	1	139	2	0	142	0	0	4	0	4	0	0	1	0	1	272
% Trucks	0.5	1.3	0	0	1.2	2.7	1.4	1.1	0	1.4	0	0	3.5	0	3	0	0	0.2	0	0.1	1.3

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	7	255	1	263	0	273	8	281	0	0	3	3	2	0	17	19	566
11:15 AM	12	232	1	245	2	217	3	222	0	0	3	3	6	0	19	25	495
11:30 AM	7	245	0	252	1	263	6	270	0	0	3	3	5	0	14	19	544
11:45 AM	18	219	0	237	0	279	11	290	0	0	3	3	4	2	13	19	549
Total Volume	44	951	2	997	3	1032	28	1063	0	0	12	12	17	2	63	82	2154
% App. Total	4.4	95.4	0.2		0.3	97.1	2.6		0	0	100		20.7	2.4	76.8		
PHF	.611	.932	.500	.948	.375	.925	.636	.916	.000	.000	1.00	1.00	.708	.250	.829	.820	.951

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	11	245	0	256	2	257	7	266	0	0	5	5	3	1	15	19	546
12:15 PM	10	237	0	247	1	257	1	259	0	0	3	3	6	0	7	13	522
12:30 PM	13	244	0	257	1	280	4	285	0	0	1	1	1	0	14	15	558
12:45 PM	19	234	1	254	1	242	8	251	0	0	3	3	5	0	9	14	522
Total Volume	53	960	1	1014	5	1036	20	1061	0	0	12	12	15	1	45	61	2148
% App. Total	5.2	94.7	0.1		0.5	97.6	1.9		0	0	100		24.6	1.6	73.8		
PHF	.697	.980	.250	.986	.625	.925	.625	.931	.000	.000	.600	.600	.625	.250	.750	.803	.962

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	4
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
10:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr SAT
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Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	4	4	0	0	0	0	0	0	0	0	7	7	0	0	0	13	13	24
Apprch %	0	0	0	100		0	0	0	0		0	0	0	100		0	0	0	100		
Total %	0	0	0	16.7	16.7	0	0	0	0	0	0	0	0	29.2	29.2	0	0	0	54.2	54.2	

[illegible]

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	3	124	0	2	129	0	90	2	0	92	0	0	0	0	0	6	0	2	0	8	229
06:15 AM	1	165	0	3	169	0	91	0	0	91	0	0	0	0	0	5	0	5	0	10	270
06:30 AM	3	171	0	3	177	1	117	0	0	118	0	0	0	0	0	3	0	5	0	8	303
06:45 AM	3	161	0	5	169	0	132	1	0	133	0	0	3	0	3	2	0	7	0	9	314
Total	10	621	0	13	644	1	430	3	0	434	0	0	3	0	3	16	0	19	0	35	1116
07:00 AM	3	157	0	3	163	1	118	2	0	121	0	0	1	0	1	1	0	9	0	10	295
07:15 AM	5	173	0	8	186	0	142	0	0	142	0	0	1	0	1	8	0	8	0	16	345
07:30 AM	4	193	0	3	200	0	197	0	0	197	0	0	1	0	1	3	0	9	0	12	410
07:45 AM	12	195	0	5	212	1	230	2	3	236	0	0	3	0	3	3	0	7	0	10	461
Total	24	718	0	19	761	2	687	4	3	696	0	0	6	0	6	15	0	33	0	48	1511
08:00 AM	5	175	0	5	185	0	182	4	1	187	0	0	0	0	0	0	0	18	0	18	390
08:15 AM	12	195	0	6	213	0	167	1	1	169	0	0	1	0	1	3	0	14	0	17	400
08:30 AM	6	181	0	4	191	1	170	0	2	173	0	0	4	0	4	3	0	12	0	15	383
08:45 AM	7	207	0	5	219	2	206	3	1	212	0	0	0	0	0	3	0	12	0	15	446
Total	30	758	0	20	808	3	725	8	5	741	0	0	5	0	5	9	0	56	0	65	1619
Grand Total	64	2097	0	52	2213	6	1842	15	8	1871	0	0	14	0	14	40	0	108	0	148	4246
Apprch %	2.9	94.8	0	2.3		0.3	98.5	0.8	0.4		0	0	100	0		27	0	73	0		
Total %	1.5	49.4	0	1.2	52.1	0.1	43.4	0.4	0.2	44.1	0	0	0.3	0	0.3	0.9	0	2.5	0	3.5	

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	193	0	197	0	197	0	197	0	0	1	1	3	0	9	12	407
07:45 AM	12	195	0	207	1	230	2	233	0	0	3	3	3	0	7	10	453
08:00 AM	5	175	0	180	0	182	4	186	0	0	0	0	0	0	18	18	384
08:15 AM	12	195	0	207	0	167	1	168	0	0	1	1	3	0	14	17	393
Total Volume	33	758	0	791	1	776	7	784	0	0	5	5	9	0	48	57	1637
% App. Total	4.2	95.8	0		0.1	99	0.9		0	0	100		15.8	0	84.2		
PHF	.688	.972	.000	.955	.250	.843	.438	.841	.000	.000	.417	.417	.750	.000	.667	.792	.903

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr AM
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[illegible][illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr AM
 Site Code :
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	3	125	0	2	130	0	93	2	0	95	0	0	0	0	0	6	0	2	0	8	233
06:15 AM	1	168	0	3	172	0	94	0	0	94	0	0	0	0	0	5	0	5	0	10	276
06:30 AM	3	178	0	3	184	1	121	1	0	123	0	0	0	0	0	3	0	5	0	8	315
06:45 AM	4	165	0	5	174	0	139	1	0	140	0	0	3	0	3	2	0	7	0	9	326
Total	11	636	0	13	660	1	447	4	0	452	0	0	3	0	3	16	0	19	0	35	1150
07:00 AM	3	158	0	3	164	1	125	2	0	128	0	0	1	0	1	1	0	9	0	10	303
07:15 AM	5	182	0	8	195	0	146	0	0	146	0	0	1	0	1	8	0	8	0	16	358
07:30 AM	4	201	0	3	208	0	209	0	0	209	0	0	1	0	1	3	0	9	0	12	430
07:45 AM	12	203	0	5	220	1	239	3	3	246	0	0	3	0	3	3	0	7	0	10	479
Total	24	744	0	19	787	2	719	5	3	729	0	0	6	0	6	15	0	33	0	48	1570
08:00 AM	5	187	0	5	197	0	188	4	1	193	0	0	0	0	0	0	0	18	0	18	408
08:15 AM	13	208	0	6	227	0	176	1	1	178	0	0	1	0	1	3	0	14	0	17	423
08:30 AM	6	188	0	4	198	1	183	0	2	186	0	0	4	0	4	3	0	12	0	15	403
08:45 AM	8	217	0	5	230	2	215	3	1	221	0	0	0	0	0	3	0	12	0	15	466
Total	32	800	0	20	852	3	762	8	5	778	0	0	5	0	5	9	0	56	0	65	1700
Grand Total	67	2180	0	52	2299	6	1928	17	8	1959	0	0	14	0	14	40	0	108	0	148	4420
Apprch %	2.9	94.8	0	2.3		0.3	98.4	0.9	0.4		0	0	100	0		27	0	73	0		
Total %	1.5	49.3	0	1.2	52	0.1	43.6	0.4	0.2	44.3	0	0	0.3	0	0.3	0.9	0	2.4	0	3.3	
Cars	64	2097	0	52	2213	6	1842	15	8	1871	0	0	14	0	14	40	0	108	0	148	4246
% Cars	95.5	96.2	0	100	96.3	100	95.5	88.2	100	95.5	0	0	100	0	100	100	0	100	0	100	96.1
Trucks	3	83	0	0	86	0	86	2	0	88	0	0	0	0	0	0	0	0	0	0	174
% Trucks	4.5	3.8	0	0	3.7	0	4.5	11.8	0	4.5	0	0	0	0	0	0	0	0	0	0	3.9

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	4	201	0	205	0	209	0	209	0	0	1	1	3	0	9	12	427
07:45 AM	12	203	0	215	1	239	3	243	0	0	3	3	3	0	7	10	471
08:00 AM	5	187	0	192	0	188	4	192	0	0	0	0	0	0	18	18	402
08:15 AM	13	208	0	221	0	176	1	177	0	0	1	1	3	0	14	17	416
Total Volume	34	799	0	833	1	812	8	821	0	0	5	5	9	0	48	57	1716
% App. Total	4.1	95.9	0		0.1	98.9	1		0	0	100		15.8	0	84.2		
PHF	.654	.960	.000	.942	.250	.849	.500	.845	.000	.000	.417	.417	.750	.000	.667	.792	.911

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	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
07:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	4	4	0	0	0	5	5	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	5	5	6
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	5	5	0	0	0	10	10	16
Apprch %	0	0	0	100		0	0	0	0		0	0	0	100		0	0	0	100		
Total %	0	0	0	6.2	6.2	0	0	0	0	0	0	0	0	31.2	31.2	0	0	0	62.5	62.5	

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr PM
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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	8	229	0	2	239	0	256	7	0	263	0	0	4	0	4	2	0	16	0	18	524
02:15 PM	10	211	0	2	223	0	235	4	1	240	0	0	4	0	4	2	2	8	0	12	479
02:30 PM	9	229	0	2	240	2	240	3	0	245	0	0	1	0	1	5	0	13	0	18	504
02:45 PM	6	221	1	1	229	2	252	9	0	263	0	0	2	0	2	2	0	13	0	15	509
Total	33	890	1	7	931	4	983	23	1	1011	0	0	11	0	11	11	2	50	0	63	2016
03:00 PM	10	250	0	4	264	1	237	3	0	241	0	0	2	0	2	1	0	13	0	14	521
03:15 PM	4	238	1	3	246	0	294	4	1	299	0	0	2	0	2	2	0	10	0	12	559
03:30 PM	9	228	0	3	240	1	258	1	0	260	0	0	3	0	3	1	0	7	0	8	511
03:45 PM	0	241	0	0	241	1	291	6	0	298	0	0	2	0	2	2	0	6	0	8	549
Total	23	957	1	10	991	3	1080	14	1	1098	0	0	9	0	9	6	0	36	0	42	2140
04:00 PM	15	266	0	1	282	0	290	6	2	298	0	0	7	0	7	1	0	12	0	13	600
04:15 PM	9	273	0	3	285	0	268	3	2	273	0	0	4	0	4	2	0	15	0	17	579
04:30 PM	8	203	0	2	213	0	321	1	0	322	0	0	0	0	0	0	0	9	0	9	544
04:45 PM	8	248	0	3	259	1	308	1	0	310	0	0	1	0	1	5	0	7	0	12	582
Total	40	990	0	9	1039	1	1187	11	4	1203	0	0	12	0	12	8	0	43	0	51	2305
05:00 PM	8	248	0	2	258	1	280	1	0	282	1	0	3	0	4	0	0	8	0	8	552
05:15 PM	1	222	1	4	228	0	315	3	1	319	0	0	4	0	4	1	0	10	0	11	562
05:30 PM	6	224	0	1	231	1	267	4	0	272	0	0	2	0	2	3	0	12	0	15	520
05:45 PM	11	204	0	2	217	0	311	4	0	315	0	0	2	0	2	1	0	7	0	8	542
Total	26	898	1	9	934	2	1173	12	1	1188	1	0	11	0	12	5	0	37	0	42	2176
06:00 PM	8	237	2	3	250	0	237	0	0	237	0	0	3	0	3	2	0	3	0	5	495
06:15 PM	2	195	0	1	198	1	271	2	0	274	0	0	1	0	1	0	0	6	0	6	479
06:30 PM	14	182	0	1	197	1	244	4	0	249	0	0	1	0	1	1	0	4	0	5	452
06:45 PM	7	195	0	4	206	1	236	2	0	239	3	0	1	0	4	3	0	9	0	12	461
Total	31	809	2	9	851	3	988	8	0	999	3	0	6	0	9	6	0	22	0	28	1887
Grand Total	153	4544	5	44	4746	13	5411	68	7	5499	4	0	49	0	53	36	2	188	0	226	10524
Apprch %	3.2	95.7	0.1	0.9		0.2	98.4	1.2	0.1		7.5	0	92.5	0		15.9	0.9	83.2	0		
Total %	1.5	43.2	0	0.4	45.1	0.1	51.4	0.6	0.1	52.3	0	0	0.5	0	0.5	0.3	0	1.8	0	2.1	

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	15	266	0	281	0	290	6	296	0	0	7	7	1	0	12	13	597
04:15 PM	9	273	0	282	0	268	3	271	0	0	4	4	2	0	15	17	574
04:30 PM	8	203	0	211	0	321	1	322	0	0	0	0	0	0	9	9	542
04:45 PM	8	248	0	256	1	308	1	310	0	0	1	1	5	0	7	12	579
Total Volume	40	990	0	1030	1	1187	11	1199	0	0	12	12	8	0	43	51	2292
% App. Total	3.9	96.1	0		0.1	99	0.9		0	0	100		15.7	0	84.3		
PHF	.667	.907	.000	.913	.250	.924	.458	.931	.000	.000	.429	.429	.400	.000	.717	.750	.960

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr PM
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	0	8	0	0	8	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	15
02:15 PM	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	10
02:30 PM	0	6	0	0	6	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	9
02:45 PM	0	6	0	0	6	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	9
Total	0	24	0	0	24	0	18	0	0	18	0	0	0	0	0	1	0	0	0	1	43
03:00 PM	0	5	0	0	5	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	16
03:15 PM	1	3	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
03:30 PM	0	6	0	0	6	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	13
03:45 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
Total	1	18	0	0	19	0	24	0	0	24	0	0	0	0	0	0	0	0	0	0	43
04:00 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
04:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
04:45 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
Total	0	10	0	0	10	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	21
05:00 PM	0	6	0	0	6	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	11
05:15 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
05:30 PM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	8
05:45 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
Total	0	16	0	0	16	0	17	0	0	17	0	0	0	0	0	0	0	0	0	0	33
06:00 PM	0	6	0	0	6	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	13
06:15 PM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
06:30 PM	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	9
06:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	14	0	0	14	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	30
Grand Total	1	82	0	0	83	0	86	0	0	86	0	0	0	0	0	1	0	0	0	1	170
Apprch %	1.2	98.8	0	0		0	100	0	0		0	0	0	0		100	0	0	0		
Total %	0.6	48.2	0	0	48.8	0	50.6	0	0	50.6	0	0	0	0	0	0.6	0	0	0	0.6	

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	4	0	4	0	5	0	5	0	0	0	0	1	0	0	1	10
02:30 PM	0	6	0	6	0	3	0	3	0	0	0	0	0	0	0	0	9
02:45 PM	0	6	0	6	0	3	0	3	0	0	0	0	0	0	0	0	9
03:00 PM	0	5	0	5	0	11	0	11	0	0	0	0	0	0	0	0	16
Total Volume	0	21	0	21	0	22	0	22	0	0	0	0	1	0	0	1	44
% App. Total	0	100	0		0	100	0		0	0	0		100	0	0		
PHF	.000	.875	.000	.875	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.688

Peggy Malone & Associates

(888) 247-8602

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr PM
 Site Code :
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	8	237	0	2	247	0	263	7	0	270	0	0	4	0	4	2	0	16	0	18	539
02:15 PM	10	215	0	2	227	0	240	4	1	245	0	0	4	0	4	3	2	8	0	13	489
02:30 PM	9	235	0	2	246	2	243	3	0	248	0	0	1	0	1	5	0	13	0	18	513
02:45 PM	6	227	1	1	235	2	255	9	0	266	0	0	2	0	2	2	0	13	0	15	518
Total	33	914	1	7	955	4	1001	23	1	1029	0	0	11	0	11	12	2	50	0	64	2059
03:00 PM	10	255	0	4	269	1	248	3	0	252	0	0	2	0	2	1	0	13	0	14	537
03:15 PM	5	241	1	3	250	0	296	4	1	301	0	0	2	0	2	2	0	10	0	12	565
03:30 PM	9	234	0	3	246	1	265	1	0	267	0	0	3	0	3	1	0	7	0	8	524
03:45 PM	0	245	0	0	245	1	295	6	0	302	0	0	2	0	2	2	0	6	0	8	557
Total	24	975	1	10	1010	3	1104	14	1	1122	0	0	9	0	9	6	0	36	0	42	2183
04:00 PM	15	267	0	1	283	0	292	6	2	300	0	0	7	0	7	1	0	12	0	13	603
04:15 PM	9	276	0	3	288	0	271	3	2	276	0	0	4	0	4	2	0	15	0	17	585
04:30 PM	8	205	0	2	215	0	323	1	0	324	0	0	0	0	0	0	0	9	0	9	548
04:45 PM	8	252	0	3	263	1	312	1	0	314	0	0	1	0	1	5	0	7	0	12	590
Total	40	1000	0	9	1049	1	1198	11	4	1214	0	0	12	0	12	8	0	43	0	51	2326
05:00 PM	8	254	0	2	264	1	285	1	0	287	1	0	3	0	4	0	0	8	0	8	563
05:15 PM	1	225	1	4	231	0	319	3	1	323	0	0	4	0	4	1	0	10	0	11	569
05:30 PM	6	228	0	1	235	1	271	4	0	276	0	0	2	0	2	3	0	12	0	15	528
05:45 PM	11	207	0	2	220	0	315	4	0	319	0	0	2	0	2	1	0	7	0	8	549
Total	26	914	1	9	950	2	1190	12	1	1205	1	0	11	0	12	5	0	37	0	42	2209
06:00 PM	8	243	2	3	256	0	244	0	0	244	0	0	3	0	3	2	0	3	0	5	508
06:15 PM	2	199	0	1	202	1	272	2	0	275	0	0	1	0	1	0	0	6	0	6	484
06:30 PM	14	186	0	1	201	1	249	4	0	254	0	0	1	0	1	1	0	4	0	5	461
06:45 PM	7	195	0	4	206	1	239	2	0	242	3	0	1	0	4	3	0	9	0	12	464
Total	31	823	2	9	865	3	1004	8	0	1015	3	0	6	0	9	6	0	22	0	28	1917
Grand Total	154	4626	5	44	4829	13	5497	68	7	5585	4	0	49	0	53	37	2	188	0	227	10694
Apprch %	3.2	95.8	0.1	0.9		0.2	98.4	1.2	0.1		7.5	0	92.5	0		16.3	0.9	82.8	0		
Total %	1.4	43.3	0	0.4	45.2	0.1	51.4	0.6	0.1	52.2	0	0	0.5	0	0.5	0.3	0	1.8	0	2.1	
Cars	153	4544	5	44	4746	13	5411	68	7	5499	4	0	49	0	53	36	2	188	0	226	10524
% Cars	99.4	98.2	100	100	98.3	100	98.4	100	100	98.5	100	0	100	0	100	97.3	100	100	0	99.6	98.4
Trucks	1	82	0	0	83	0	86	0	0	86	0	0	0	0	0	1	0	0	0	1	170
% Trucks	0.6	1.8	0	0	1.7	0	1.6	0	0	1.5	0	0	0	0	0	2.7	0	0	0	0.4	1.6

	Hwy 29 Eastbound				Hwy 29 Westbound				BP Driveway Northbound				Safeway Warrenton Village Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	15	267	0	282	0	292	6	298	0	0	7	7	1	0	12	13	600
04:15 PM	9	276	0	285	0	271	3	274	0	0	4	4	2	0	15	17	580
04:30 PM	8	205	0	213	0	323	1	324	0	0	0	0	0	0	9	9	546
04:45 PM	8	252	0	260	1	312	1	314	0	0	1	1	5	0	7	12	587
Total Volume	40	1000	0	1040	1	1198	11	1210	0	0	12	12	8	0	43	51	2313
% App. Total	3.8	96.2	0		0.1	99	0.9		0	0	100		15.7	0	84.3		
PHF	.667	.906	.000	.912	.250	.927	.458	.934	.000	.000	.429	.429	.400	.000	.717	.750	.964

File Name : 9-Hwy 29 and Safeway Warrenton Village Ctr PM
Site Code :
Start Date : 8/5/2021
Page No : 1

	Hwy 29 Eastbound					Hwy 29 Westbound					BP Driveway Northbound					Safeway Warrenton Village Southbound						
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
03:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	7	7	9
Apprch %	0	0	0	100		0	0	0	0	</												

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	5	69	4	0	78	1	69	2	1	73	1	0	6	0	7	2	0	0	0	2	160
07:15 AM	0	75	10	0	85	3	97	2	1	103	0	0	2	0	2	0	1	1	0	2	192
07:30 AM	5	93	2	0	100	3	115	1	0	119	4	2	4	0	10	4	1	2	0	7	236
07:45 AM	4	105	10	0	119	5	131	4	1	141	5	0	2	0	7	5	1	5	0	11	278
Total	14	342	26	0	382	12	412	9	3	436	10	2	14	0	26	11	3	8	0	22	866
08:00 AM	5	99	7	0	111	3	137	3	0	143	4	2	2	0	8	5	2	4	0	11	273
08:15 AM	5	111	11	0	127	6	143	11	2	162	6	2	5	0	13	4	3	3	0	10	312
08:30 AM	7	115	13	0	135	8	154	13	1	176	4	0	3	0	7	9	3	2	0	14	332
08:45 AM	9	120	18	0	147	13	166	8	1	188	14	4	6	0	24	11	3	3	0	17	376
Total	26	445	49	0	520	30	600	35	4	669	28	8	16	0	52	29	11	12	0	52	1293
09:00 AM	6	119	15	0	140	4	149	11	0	164	8	2	7	0	17	14	7	9	0	30	351
09:15 AM	15	170	13	0	198	11	204	10	0	225	14	3	5	0	22	14	2	11	0	27	472
09:30 AM	12	169	19	1	201	10	181	19	1	211	12	3	8	0	23	15	5	10	0	30	465
09:45 AM	21	167	17	0	205	9	185	12	3	209	10	6	13	0	29	22	8	10	0	40	483
Total	54	625	64	1	744	34	719	52	4	809	44	14	33	0	91	65	22	40	0	127	1771
10:00 AM	19	187	25	0	231	6	213	18	0	237	13	10	14	0	37	11	1	23	0	35	540
10:15 AM	22	193	25	2	242	12	212	17	1	242	14	7	12	0	33	32	5	21	0	58	575
10:30 AM	15	189	20	0	224	12	193	22	4	231	13	6	17	0	36	22	9	24	0	55	546
10:45 AM	21	177	23	0	221	14	227	18	2	261	17	5	12	1	35	34	9	26	0	69	586
Total	77	746	93	2	918	44	845	75	7	971	57	28	55	1	141	99	24	94	0	217	2247
11:00 AM	20	196	29	0	245	14	229	26	0	269	23	11	17	0	51	14	8	19	0	41	606
11:15 AM	21	198	28	0	247	10	190	24	3	227	22	5	14	0	41	22	6	17	0	45	560
11:30 AM	13	201	32	1	247	15	222	32	1	270	20	13	17	0	50	18	12	13	0	43	610
11:45 AM	16	185	29	1	231	15	251	25	0	291	31	11	13	0	55	26	8	17	0	51	628
Total	70	780	118	2	970	54	892	107	4	1057	96	40	61	0	197	80	34	66	0	180	2404
12:00 PM	16	199	31	0	246	15	212	28	2	257	29	7	14	0	50	34	10	11	0	55	608
12:15 PM	13	196	29	0	238	17	214	18	3	252	25	8	16	0	49	23	5	19	0	47	586
12:30 PM	21	189	33	0	243	9	238	24	4	275	24	6	14	0	44	28	7	18	0	53	615
12:45 PM	17	205	29	2	253	19	214	33	5	271	16	13	24	0	53	18	12	23	0	53	630
Total	67	789	122	2	980	60	878	103	14	1055	94	34	68	0	196	103	34	71	0	208	2439
01:00 PM	11	213	27	0	251	15	204	25	2	246	20	10	21	0	51	29	3	15	0	47	595
01:15 PM	11	194	29	1	235	25	175	29	4	233	28	10	18	0	56	27	7	24	0	58	582
01:30 PM	14	207	17	1	239	16	214	32	0	262	28	6	21	0	55	22	11	17	0	50	606
01:45 PM	21	174	22	1	218	17	217	28	1	263	22	4	23	0	49	24	2	15	0	41	571
Total	57	788	95	3	943	73	810	114	7	1004	98	30	83	0	211	102	23	71	0	196	2354
02:00 PM	6	197	25	1	229	11	152	22	1	186	21	5	18	0	44	25	6	11	0	42	501
02:15 PM	11	163	24	0	198	15	194	27	0	236	24	5	21	0	50	23	9	12	0	44	528
02:30 PM	14	190	21	2	227	7	225	21	2	255	9	10	17	0	36	23	4	13	0	40	558
02:45 PM	8	179	32	2	221	14	195	27	1	237	15	8	12	0	35	25	6	17	0	48	541
Total	39	729	102	5	875	47	766	97	4	914	69	28	68	0	165	96	25	53	0	174	2128
03:00 PM	12	199	29	0	240	20	188	24	0	232	9	7	21	0	37	24	7	14	0	45	554
03:15 PM	22	164	26	0	212	14	186	19	1	220	21	6	27	0	54	19	7	26	0	52	538
03:30 PM	10	190	18	0	218	6	196	21	0	223	12	6	20	0	38	32	3	14	0	49	528
03:45 PM	9	160	38	0	207	23	196	16	2	237	17	8	20	0	45	25	7	10	0	42	531
Total	53	713	111	0	877	63	766	80	3	912	59	27	88	0	174	100	24	64	0	188	2151
04:00 PM	9	203	22	1	235	15	159	15	5	194	17	9	21	0	47	12	4	11	0	27	503
04:15 PM	13	191	35	0	239	16	169	20	3	208	18	5	21	0	44	17	6	8	0	31	522
04:30 PM	10	164	20	0	194	14	167	27	2	210	21	5	17	0	43	29	7	15	0	51	498
04:45 PM	15	169	23	0	207	14	163	13	2	192	20	7	22	0	49	12	8	9	0	29	477
Total	47	727	100	1	875	59	658	75	12	804	76	26	81	0	183	70	25	43	0	138	2000
05:00 PM	6	179	20	0	205	11	151	20	0	182	18	1	14	0	33	30	2	14	0	46	466
05:15 PM	11	160	23	0	194	14	154	25	2	195	20	7	17	0	44	15	6	3	0	24	457
05:30 PM	5	207	22	0	234	18	160	12	1	191	13	7	21	0	41	27	4	8	0	39	505
05:45 PM	3	167	15	1	186	16	176	26	1	219	18	11	12	0	41	16	3	17	0	36	482
Total	25	713	80	1	819	59	641	83	4	787	69	26	64	0	159	88	15	42	0	145	1910
06:00 PM	11	171	28	0	210	17	179	15	1	212	12	6	20	0	38	24	4	8	0	36	496
06:15 PM	11	167	10	0	188	18	144	18	4	184	23	5	23	0	51	19	4	10	0	33	456
06:30 PM	7	166	17	0	190	12	173	12	1	198	20	8	13	0	41	21	8	11	0	40	469
06:45 PM	10	150	16	1	177	12	149	12	0	173	15	5	15	0	35	24	3	7	0	34	419
Total	39	654	71	1	765	59	645	57	6	767	70	24	71	0	165	88	19	36	0	143	1840

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	568	8051	1031	18	9668	594	8632	887	72	10185	770	287	702	1	1760	931	259	600	0	1790	23403
Apprch %	5.9	83.3	10.7	0.2		5.8	84.8	8.7	0.7		43.8	16.3	39.9	0.1		52	14.5	33.5	0		
Total %	2.4	34.4	4.4	0.1	41.3	2.5	36.9	3.8	0.3	43.5	3.3	1.2	3	0	7.5	4	1.1	2.6	0	7.6	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	20	196	29	245	14	229	26	269	23	11	17	51	14	8	19	41	606
11:15 AM	21	198	28	247	10	190	24	224	22	5	14	41	22	6	17	45	557
11:30 AM	13	201	32	246	15	222	32	269	20	13	17	50	18	12	13	43	608
11:45 AM	16	185	29	230	15	251	25	291	31	11	13	55	26	8	17	51	627
Total Volume	70	780	118	968	54	892	107	1053	96	40	61	197	80	34	66	180	2398
% App. Total	7.2	80.6	12.2		5.1	84.7	10.2		48.7	20.3	31		44.4	18.9	36.7		
PHF	.833	.970	.922	.980	.900	.888	.836	.905	.774	.769	.897	.895	.769	.708	.868	.882	.956

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	16	199	31	246		15	212	28	255		29	7	14	50		34	10	11	55	606
12:15 PM	13	196	29	238		17	214	18	249		25	8	16	49		23	5	19	47	583
12:30 PM	21	189	33	243		9	238	24	271		24	6	14	44		28	7	18	53	611
12:45 PM	17	205	29	251		19	214	33	266		16	13	24	53		18	12	23	53	623
Total Volume	67	789	122	978		60	878	103	1041		94	34	68	196		103	34	71	208	2423
% App. Total	6.9	80.7	12.5			5.8	84.3	9.9			48	17.3	34.7			49.5	16.3	34.1		
PHF	.798	.962	.924	.974		.789	.922	.780	.960		.810	.654	.708	.925		.757	.708	.772	.945	.972

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 1

Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	1	2	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
07:15 AM	0	1	0	0	1	0	4	1	0	5	0	0	1	0	1	0	0	0	0	0	7
07:30 AM	0	4	0	0	4	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	7
07:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	3
Total	1	8	0	0	9	1	10	1	0	12	0	0	1	0	1	1	0	0	0	1	23
08:00 AM	0	4	0	0	4	0	7	0	0	7	1	0	0	0	1	1	0	0	0	1	13
08:15 AM	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	6
08:30 AM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	8
08:45 AM	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	7
Total	0	11	0	0	11	1	18	0	0	19	1	0	0	0	1	3	0	0	0	3	34
09:00 AM	0	5	1	0	6	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	11
09:15 AM	0	3	0	0	3	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	6
09:30 AM	0	6	1	0	7	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	9
09:45 AM	1	3	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
Total	1	17	2	0	20	0	11	0	0	11	0	0	1	0	1	0	0	0	0	0	32
10:00 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
10:15 AM	0	1	0	0	1	2	4	0	0	6	0	0	0	0	0	0	0	0	0	0	7
10:30 AM	0	2	0	0	2	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	6
10:45 AM	0	3	0	0	3	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	8
Total	0	9	0	0	9	2	13	0	0	15	1	2	0	0	3	0	0	0	0	0	27
11:00 AM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
11:15 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	9
11:30 AM	0	1	1	0	2	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	7
11:45 AM	0	3	1	0	4	0	2	1	0	3	0	0	0	0	0	0	0	1	0	1	8
Total	0	11	2	0	13	0	12	1	0	13	1	0	0	0	1	0	0	2	0	2	29
12:00 PM	0	5	0	0	5	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	9
12:15 PM	0	4	0	0	4	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1	8
12:30 PM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
12:45 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	13	0	0	13	0	10	1	0	11	1	0	0	0	1	1	0	0	0	1	26
01:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
01:30 PM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	7
01:45 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	0	8	0	0	8	0	9	0	0	9	0	0	0	0	0	1	0	0	0	1	18
02:00 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4
02:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	12
02:45 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	1	0	0	0	1	5
Total	0	3	0	0	3	0	19	0	0	19	0	0	0	0	0	1	0	0	0	1	23
03:00 PM	0	4	0	0	4	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	6
03:15 PM	0	6	0	0	6	0	6	0	0	6	0	0	1	0	1	0	0	0	0	0	13
03:30 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
03:45 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	4
Total	0	13	0	0	13	1	10	0	0	11	0	0	1	0	1	1	0	0	0	1	26
04:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
04:45 PM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	5
Total	0	6	0	0	6	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	14
05:00 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	0	1	2	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	6	2	0	8	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	14
06:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
06:15 PM	0	1	0	0	1	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	4
06:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:45 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total	0	6	0	0	6	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	11

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	2	111	6	0	119	5	130	3	0	138	5	2	3	0	10	8	0	2	0	10	277
Apprch %	1.7	93.3	5	0		3.6	94.2	2.2	0		50	20	30	0		80	0	20	0		
Total %	0.7	40.1	2.2	0	43	1.8	46.9	1.1	0	49.8	1.8	0.7	1.1	0	3.6	2.9	0	0.7	0	3.6	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	4	0	4	0	7	0	7	1	0	0	1	1	0	0	1	13
08:15 AM	0	1	0	1	1	4	0	5	0	0	0	0	0	0	0	0	6
08:30 AM	0	4	0	4	0	2	0	2	0	0	0	0	2	0	0	2	8
08:45 AM	0	2	0	2	0	5	0	5	0	0	0	0	0	0	0	0	7
Total Volume	0	11	0	11	1	18	0	19	1	0	0	1	3	0	0	3	34
% App. Total	0	100	0		5.3	94.7	0		100	0	0		100	0	0		
PHF	.000	.688	.000	.688	.250	.643	.000	.679	.250	.000	.000	.250	.375	.000	.000	.375	.654

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:30 PM

02:30 PM	0	0	0	0	0	12	0	12	0	0	0	0	0	0	0	0	12
02:45 PM	0	1	0	1	0	3	0	3	0	0	0	0	1	0	0	1	5
03:00 PM	0	4	0	4	1	1	0	2	0	0	0	0	0	0	0	0	6
03:15 PM	0	6	0	6	0	6	0	6	0	0	1	1	0	0	0	0	13
Total Volume	0	11	0	11	1	22	0	23	0	0	1	1	1	0	0	1	36
% App. Total	0	100	0		4.3	95.7	0		0	0	100		100	0	0		
PHF	.000	.458	.000	.458	.250	.458	.000	.479	.000	.000	.250	.250	.250	.000	.000	.250	.692

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	6	71	4	0	81	1	72	2	1	76	1	0	6	0	7	2	0	0	0	2	166
07:15 AM	0	76	10	0	86	3	101	3	1	108	0	0	3	0	3	0	1	1	0	2	199
07:30 AM	5	97	2	0	104	4	117	1	0	122	4	2	4	0	10	4	1	2	0	7	243
07:45 AM	4	106	10	0	120	5	132	4	1	142	5	0	2	0	7	6	1	5	0	12	281
Total	15	350	26	0	391	13	422	10	3	448	10	2	15	0	27	12	3	8	0	23	889
08:00 AM	5	103	7	0	115	3	144	3	0	150	5	2	2	0	9	6	2	4	0	12	286
08:15 AM	5	112	11	0	128	7	147	11	2	167	6	2	5	0	13	4	3	3	0	10	318
08:30 AM	7	119	13	0	139	8	156	13	1	178	4	0	3	0	7	11	3	2	0	16	340
08:45 AM	9	122	18	0	149	13	171	8	1	193	14	4	6	0	24	11	3	3	0	17	383
Total	26	456	49	0	531	31	618	35	4	688	29	8	16	0	53	32	11	12	0	55	1327
09:00 AM	6	124	16	0	146	4	154	11	0	169	8	2	7	0	17	14	7	9	0	30	362
09:15 AM	15	173	13	0	201	11	206	10	0	227	14	3	6	0	23	14	2	11	0	27	478
09:30 AM	12	175	20	1	208	10	183	19	1	213	12	3	8	0	23	15	5	10	0	30	474
09:45 AM	22	170	17	0	209	9	187	12	3	211	10	6	13	0	29	22	8	10	0	40	489
Total	55	642	66	1	764	34	730	52	4	820	44	14	34	0	92	65	22	40	0	127	1803
10:00 AM	19	190	25	0	234	6	216	18	0	240	13	10	14	0	37	11	1	23	0	35	546
10:15 AM	22	194	25	2	243	14	216	17	1	248	14	7	12	0	33	32	5	21	0	58	582
10:30 AM	15	191	20	0	226	12	195	22	4	233	13	8	17	0	38	22	9	24	0	55	552
10:45 AM	21	180	23	0	224	14	231	18	2	265	18	5	12	1	36	34	9	26	0	69	594
Total	77	755	93	2	927	46	858	75	7	986	58	30	55	1	144	99	24	94	0	217	2274
11:00 AM	20	199	29	0	248	14	231	26	0	271	23	11	17	0	51	14	8	19	0	41	611
11:15 AM	21	202	28	0	251	10	194	24	3	231	22	5	14	0	41	22	6	18	0	46	569
11:30 AM	13	202	33	1	249	15	226	32	1	271	21	13	17	0	51	18	12	13	0	43	617
11:45 AM	16	188	30	1	235	15	253	26	0	294	31	11	13	0	55	26	8	18	0	52	636
Total	70	791	120	2	983	54	904	108	4	1070	97	40	61	0	198	80	34	68	0	182	2433
12:00 PM	16	204	31	0	251	15	215	28	2	260	30	7	14	0	51	34	10	11	0	55	617
12:15 PM	13	200	29	0	242	17	216	19	3	255	25	8	16	0	49	24	5	19	0	48	594
12:30 PM	21	191	33	0	245	9	242	24	4	279	24	6	14	0	44	28	7	18	0	53	621
12:45 PM	17	207	29	2	255	19	215	33	5	272	16	13	24	0	53	18	12	23	0	53	633
Total	67	802	122	2	993	60	888	104	14	1066	95	34	68	0	197	104	34	71	0	209	2465
01:00 PM	11	214	27	0	252	15	205	25	2	247	20	10	21	0	51	29	3	15	0	47	597
01:15 PM	11	197	29	1	238	25	177	29	4	235	28	10	18	0	56	27	7	24	0	58	587
01:30 PM	14	208	17	1	240	16	219	32	0	267	28	6	21	0	55	23	11	17	0	51	613
01:45 PM	21	177	22	1	221	17	218	28	1	264	22	4	23	0	49	24	2	15	0	41	575
Total	57	796	95	3	951	73	819	114	7	1013	98	30	83	0	211	103	23	71	0	197	2372
02:00 PM	6	198	25	1	230	11	155	22	1	189	21	5	18	0	44	25	6	11	0	42	505
02:15 PM	11	164	24	0	199	15	195	27	0	237	24	5	21	0	50	23	9	12	0	44	530
02:30 PM	14	190	21	2	227	7	237	21	2	267	9	10	17	0	36	23	4	13	0	40	570
02:45 PM	8	180	32	2	222	14	198	27	1	240	15	8	12	0	35	26	6	17	0	49	546
Total	39	732	102	5	878	47	785	97	4	933	69	28	68	0	165	97	25	53	0	175	2151
03:00 PM	12	203	29	0	244	21	189	24	0	234	9	7	21	0	37	24	7	14	0	45	560
03:15 PM	22	170	26	0	218	14	192	19	1	226	21	6	28	0	55	19	7	26	0	52	551
03:30 PM	10	192	18	0	220	6	197	21	0	224	12	6	20	0	38	32	3	14	0	49	531
03:45 PM	9	161	38	0	208	23	198	16	2	239	17	8	20	0	45	26	7	10	0	43	535
Total	53	726	111	0	890	64	776	80	3	923	59	27	89	0	175	101	24	64	0	189	2177
04:00 PM	9	203	22	1	235	15	161	15	5	196	17	9	21	0	47	12	4	11	0	27	505
04:15 PM	13	194	35	0	242	16	169	20	3	208	18	5	21	0	44	17	6	8	0	31	525
04:30 PM	10	166	20	0	196	14	169	27	2	212	21	5	17	0	43	29	7	15	0	51	502
04:45 PM	15	170	23	0	208	14	167	13	2	196	20	7	22	0	49	12	8	9	0	29	482
Total	47	733	100	1	881	59	666	75	12	812	76	26	81	0	183	70	25	43	0	138	2014
05:00 PM	6	181	20	0	207	11	152	20	0	183	18	1	14	0	33	30	2	14	0	46	469
05:15 PM	11	163	23	0	197	14	155	25	2	196	20	7	17	0	44	15	6	3	0	24	461
05:30 PM	5	208	24	0	237	18	161	12	1	192	13	7	21	0	41	27	4	8	0	39	509
05:45 PM	3	167	15	1	186	16	179	26	1	222	18	11	12	0	41	16	3	17	0	36	485
Total	25	719	82	1	827	59	647	83	4	793	69	26	64	0	159	88	15	42	0	145	1924
06:00 PM	11	174	28	0	213	17	179	15	1	212	12	6	20	0	38	24	4	8	0	36	499
06:15 PM	11	168	10	0	189	18	146	18	4	186	24	5	23	0	52	19	4	10	0	33	460
06:30 PM	7	167	17	0	191	12	173	12	1	198	20	8	13	0	41	21	8	11	0	40	470
06:45 PM	10	151	16	1	178	12	151	12	0	175	15	5	15	0	35	24	3	7	0	34	422
Total	39	660	71	1	771	59	649	57	6	771	71	24	71	0	166	88	19	36	0	143	1851

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	570	8162	1037	18	9787	599	8762	890	72	10323	775	289	705	1	1770	939	259	602	0	1800	23680
Apprch %	5.8	83.4	10.6	0.2		5.8	84.9	8.6	0.7		43.8	16.3	39.8	0.1		52.2	14.4	33.4	0		
Total %	2.4	34.5	4.4	0.1	41.3	2.5	37	3.8	0.3	43.6	3.3	1.2	3	0	7.5	4	1.1	2.5	0	7.6	
Cars	568	8051	1031	18	9668	594	8632	887	72	10185	770	287	702	1	1760	931	259	600	0	1790	23403
% Cars	99.6	98.6	99.4	100	98.8	99.2	98.5	99.7	100	98.7	99.4	99.3	99.6	100	99.4	99.1	100	99.7	0	99.4	98.8
Trucks	2	111	6	0	119	5	130	3	0	138	5	2	3	0	10	8	0	2	0	10	277
% Trucks	0.4	1.4	0.6	0	1.2	0.8	1.5	0.3	0	1.3	0.6	0.7	0.4	0	0.6	0.9	0	0.3	0	0.6	1.2

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	20	199	29	248		14	231	26	271		23	11	17	51		14	8	19	41		611
11:15 AM	21	202	28	251		10	194	24	228		22	5	14	41		22	6	18	46		566
11:30 AM	13	202	33	248		15	226	32	273		21	13	17	51		18	12	13	43		615
11:45 AM	16	188	30	234		15	253	26	294		31	11	13	55		26	8	18	52		635
Total Volume	70	791	120	981		54	904	108	1066		97	40	61	198		80	34	68	182		2427
% App. Total	7.1	80.6	12.2			5.1	84.8	10.1			49	20.2	30.8			44	18.7	37.4			
PHF	.833	.979	.909	.977		.900	.893	.844	.906		.782	.769	.897	.900		.769	.708	.895	.875		.956

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	16	204	31	251		15	215	28	258		30	7	14	51		34	10	11	55		615
12:15 PM	13	200	29	242		17	216	19	252		25	8	16	49		24	5	19	48		591
12:30 PM	21	191	33	245		9	242	24	275		24	6	14	44		28	7	18	53		617
12:45 PM	17	207	29	253		19	215	33	267		16	13	24	53		18	12	23	53		626
Total Volume	67	802	122	991		60	888	104	1052		95	34	68	197		104	34	71	209		2449
% App. Total	6.8	80.9	12.3			5.7	84.4	9.9			48.2	17.3	34.5			49.8	16.3	34			
PHF	.798	.969	.924	.979		.789	.917	.788	.956		.792	.654	.708	.929		.765	.708	.772	.950		.978

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
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Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	5	5	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
Total	0	0	0	4	4	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	7
09:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	2
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3	0	0	0	1	1	5
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
03:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	3
04:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 2

Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	11	11	0	0	0	3	3	0	0	0	9	9	0	0	0	7	7	30
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	36.7	36.7	0	0	0	10	10	0	0	0	30	30	0	0	0	23.3	23.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
Total Volume	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
% App. Total	0	0	0			0	0	0			0	0	0			0	0	0			
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	130	1	0	131	1	93	0	0	94	0	0	0	0	0	3	0	0	0	3	228
06:15 AM	0	165	6	0	171	1	87	0	0	88	1	2	1	0	4	0	0	0	0	0	263
06:30 AM	0	171	5	0	176	2	116	1	0	119	2	0	3	0	5	5	0	1	0	6	306
06:45 AM	0	163	7	0	170	1	135	6	1	143	3	0	1	0	4	3	1	0	0	4	321
Total	0	629	19	0	648	5	431	7	1	444	6	2	5	0	13	11	1	1	0	13	1118
07:00 AM	0	159	3	0	162	2	109	1	1	113	2	1	1	0	4	3	0	2	0	5	284
07:15 AM	2	166	6	0	174	0	143	7	1	151	6	1	2	0	9	3	3	0	0	6	340
07:30 AM	2	174	3	0	179	4	196	3	0	203	0	1	4	0	5	6	0	1	0	7	394
07:45 AM	3	182	14	1	200	5	222	9	1	237	1	1	1	0	3	6	3	7	0	16	456
Total	7	681	26	1	715	11	670	20	3	704	9	4	8	0	21	18	6	10	0	34	1474
08:00 AM	7	169	10	0	186	3	184	9	0	196	2	2	5	0	9	12	2	4	0	18	409
08:15 AM	10	180	10	1	201	5	153	8	1	167	4	1	2	0	7	9	2	8	0	19	394
08:30 AM	9	184	12	1	206	3	175	8	0	186	3	1	7	0	11	10	2	7	0	19	422
08:45 AM	9	171	20	0	200	8	185	9	0	202	11	3	3	0	17	13	4	2	0	19	438
Total	35	704	52	2	793	19	697	34	1	751	20	7	17	0	44	44	10	21	0	75	1663
Grand Total	42	2014	97	3	2156	35	1798	61	5	1899	35	13	30	0	78	73	17	32	0	122	4255
Apprch %	1.9	93.4	4.5	0.1		1.8	94.7	3.2	0.3		44.9	16.7	38.5	0		59.8	13.9	26.2	0		
Total %	1	47.3	2.3	0.1	50.7	0.8	42.3	1.4	0.1	44.6	0.8	0.3	0.7	0	1.8	1.7	0.4	0.8	0	2.9	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	3	182	14	199	5	222	9	236	1	1	1	3	6	3	7	16	454
08:00 AM	7	169	10	186	3	184	9	196	2	2	5	9	12	2	4	18	409
08:15 AM	10	180	10	200	5	153	8	166	4	1	2	7	9	2	8	19	392
08:30 AM	9	184	12	205	3	175	8	186	3	1	7	11	10	2	7	19	421
Total Volume	29	715	46	790	16	734	34	784	10	5	15	30	37	9	26	72	1676
% App. Total	3.7	90.5	5.8		2	93.6	4.3		33.3	16.7	50		51.4	12.5	36.1		
PHF	.725	.971	.821	.963	.800	.827	.944	.831	.625	.625	.536	.682	.771	.750	.813	.947	.923

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	1	0	0	0	1	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	6
06:30 AM	0	5	0	0	5	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	9
06:45 AM	0	3	0	0	3	2	8	0	0	10	0	0	0	0	0	0	0	0	0	0	13
Total	1	8	0	0	9	2	19	0	0	21	0	0	1	0	1	0	0	0	0	0	31
07:00 AM	0	1	0	0	1	1	5	1	0	7	1	0	0	0	1	0	0	0	0	0	9
07:15 AM	0	11	0	0	11	0	4	0	0	4	0	0	1	0	1	0	0	1	0	1	17
07:30 AM	0	12	0	0	12	0	12	0	0	12	0	0	1	0	1	0	0	0	0	0	25
07:45 AM	0	10	0	0	10	0	8	0	0	8	0	0	0	0	0	0	0	1	0	1	19
Total	0	34	0	0	34	1	29	1	0	31	1	0	2	0	3	0	0	2	0	2	70
08:00 AM	0	12	0	0	12	1	5	0	0	6	0	0	2	0	2	0	0	1	0	1	21
08:15 AM	0	12	0	0	12	0	8	0	0	8	0	0	0	0	0	2	0	0	0	2	22
08:30 AM	0	7	1	0	8	0	11	0	0	11	0	1	0	0	1	0	1	2	0	3	23
08:45 AM	0	7	1	0	8	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	17
Total	0	38	2	0	40	1	33	0	0	34	0	1	2	0	3	2	1	3	0	6	83
Grand Total	1	80	2	0	83	4	81	1	0	86	1	1	5	0	7	2	1	5	0	8	184
Apprch %	1.2	96.4	2.4	0		4.7	94.2	1.2	0		14.3	14.3	71.4	0		25	12.5	62.5	0		
Total %	0.5	43.5	1.1	0	45.1	2.2	44	0.5	0	46.7	0.5	0.5	2.7	0	3.8	1.1	0.5	2.7	0	4.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	12	0	12	0	12	0	12	0	0	1	1	0	0	0	0	25
07:45 AM	0	10	0	10	0	8	0	8	0	0	0	0	0	0	1	1	19
08:00 AM	0	12	0	12	1	5	0	6	0	0	2	2	0	0	1	1	21
08:15 AM	0	12	0	12	0	8	0	8	0	0	0	0	2	0	0	2	22
Total Volume	0	46	0	46	1	33	0	34	0	0	3	3	2	0	2	4	87
% App. Total	0	100	0		2.9	97.1	0		0	0	100		50	0	50		
PHF	.000	.958	.000	.958	.250	.688	.000	.708	.000	.000	.375	.375	.250	.000	.500	.500	.870

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr AM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound						
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total	
06:00 AM	0	130	1	0	131	1	96	0	0	97	0	0	0	0	0	3	0	0	0	0	3	231
06:15 AM	1	165	6	0	172	1	91	0	0	92	1	2	2	0	5	0	0	0	0	0	0	269
06:30 AM	0	176	5	0	181	2	120	1	0	123	2	0	3	0	5	5	0	1	0	6	315	
06:45 AM	0	166	7	0	173	3	143	6	1	153	3	0	1	0	4	3	1	0	0	4	334	
Total	1	637	19	0	657	7	450	7	1	465	6	2	6	0	14	11	1	1	0	13	1149	
07:00 AM	0	160	3	0	163	3	114	2	1	120	3	1	1	0	5	3	0	2	0	5	293	
07:15 AM	2	177	6	0	185	0	147	7	1	155	6	1	3	0	10	3	3	1	0	7	357	
07:30 AM	2	186	3	0	191	4	208	3	0	215	0	1	5	0	6	6	0	1	0	7	419	
07:45 AM	3	192	14	1	210	5	230	9	1	245	1	1	1	0	3	6	3	8	0	17	475	
Total	7	715	26	1	749	12	699	21	3	735	10	4	10	0	24	18	6	12	0	36	1544	
08:00 AM	7	181	10	0	198	4	189	9	0	202	2	2	7	0	11	12	2	5	0	19	430	
08:15 AM	10	192	10	1	213	5	161	8	1	175	4	1	2	0	7	11	2	8	0	21	416	
08:30 AM	9	191	13	1	214	3	186	8	0	197	3	2	7	0	12	10	3	9	0	22	445	
08:45 AM	9	178	21	0	208	8	194	9	0	211	11	3	3	0	17	13	4	2	0	19	455	
Total	35	742	54	2	833	20	730	34	1	785	20	8	19	0	47	46	11	24	0	81	1746	
Grand Total	43	2094	99	3	2239	39	1879	62	5	1985	36	14	35	0	85	75	18	37	0	130	4439	
Apprch %	1.9	93.5	4.4	0.1		2	94.7	3.1	0.3		42.4	16.5	41.2	0		57.7	13.8	28.5	0			
Total %	1	47.2	2.2	0.1	50.4	0.9	42.3	1.4	0.1	44.7	0.8	0.3	0.8	0	1.9	1.7	0.4	0.8	0	2.9		
Cars	42	2014	97	3	2156	35	1798	61	5	1899	35	13	30	0	78	73	17	32	0	122	4255	
% Cars	97.7	96.2	98	100	96.3	89.7	95.7	98.4	100	95.7	97.2	92.9	85.7	0	91.8	97.3	94.4	86.5	0	93.8	95.9	
Trucks	1	80	2	0	83	4	81	1	0	86	1	1	5	0	7	2	1	5	0	8	184	
% Trucks	2.3	3.8	2	0	3.7	10.3	4.3	1.6	0	4.3	2.8	7.1	14.3	0	8.2	2.7	5.6	13.5	0	6.2	4.1	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	3	192	14	209	5	230	9	244	1	1	1	3	6	3	8	17	473
08:00 AM	7	181	10	198	4	189	9	202	2	2	7	11	12	2	5	19	430
08:15 AM	10	192	10	212	5	161	8	174	4	1	2	7	11	2	8	21	414
08:30 AM	9	191	13	213	3	186	8	197	3	2	7	12	10	3	9	22	444
Total Volume	29	756	47	832	17	766	34	817	10	6	17	33	39	10	30	79	1761
% App. Total	3.5	90.9	5.6		2.1	93.8	4.2		30.3	18.2	51.5		49.4	12.7	38		
PHF	.725	.984	.839	.977	.850	.833	.944	.837	.625	.750	.607	.688	.813	.833	.833	.898	.931

File Name : 10-Hwy 29 and Fletcher Dr AM
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	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3
07:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3	0	0	0	1	1	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
07:45 AM	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	4	4	0	0	0	1	1	0	0	0	5	5	0	0	0	2	2	12
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2
08:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	4	4	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	5	5	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	8
Grand Total	0	0	0	10	10	0	0	0	2	2	0	0	0	9	9	0	0	0	2	2	23
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	43.5	43.5	0	0	0	8.7	8.7	0	0	0	39.1	39.1	0	0	0	8.7	8.7	

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr PM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	15	195	27	1	238	15	215	18	0	248	22	12	17	0	51	15	12	18	0	45	582
02:15 PM	19	165	27	1	212	15	188	13	1	217	32	8	23	0	63	28	12	20	0	60	552
02:30 PM	14	202	36	0	252	9	211	14	0	234	24	4	23	0	51	24	10	20	0	54	591
02:45 PM	20	184	25	0	229	9	219	21	1	250	14	7	17	0	38	32	6	15	0	53	570
Total	68	746	115	2	931	48	833	66	2	949	92	31	80	0	203	99	40	73	0	212	2295
03:00 PM	10	207	37	0	254	22	207	25	1	255	28	5	23	0	56	18	9	14	0	41	606
03:15 PM	21	191	25	1	238	11	247	27	2	287	22	6	21	0	49	18	18	28	0	64	638
03:30 PM	17	180	31	0	228	18	221	18	0	257	29	8	17	0	54	19	10	14	0	43	582
03:45 PM	14	204	31	1	250	11	262	16	0	289	15	11	17	0	43	21	8	19	0	48	630
Total	62	782	124	2	970	62	937	86	3	1088	94	30	78	0	202	76	45	75	0	196	2456
04:00 PM	18	210	37	0	265	15	247	20	3	285	35	7	19	0	61	27	6	18	0	51	662
04:15 PM	21	220	37	1	279	23	238	23	2	286	24	11	27	0	62	23	4	15	0	42	669
04:30 PM	11	169	23	0	203	15	284	24	1	324	23	8	19	0	50	27	11	23	0	61	638
04:45 PM	16	200	27	2	245	23	261	30	2	316	19	8	16	0	43	19	6	19	0	44	648
Total	66	799	124	3	992	76	1030	97	8	1211	101	34	81	0	216	96	27	75	0	198	2617
05:00 PM	15	216	36	0	267	13	236	14	2	265	32	8	29	0	69	18	6	14	0	38	639
05:15 PM	10	184	22	0	216	22	283	19	0	324	26	11	25	0	62	23	15	11	0	49	651
05:30 PM	15	194	29	0	238	19	252	16	0	287	20	6	19	0	45	19	3	14	0	36	606
05:45 PM	15	174	28	0	217	16	275	26	2	319	22	6	29	0	57	24	6	12	0	42	635
Total	55	768	115	0	938	70	1046	75	4	1195	100	31	102	0	233	84	30	51	0	165	2531
06:00 PM	11	195	36	1	243	22	201	24	2	249	23	8	32	0	63	18	6	15	0	39	594
06:15 PM	10	169	20	0	199	17	226	13	0	256	32	7	21	0	60	25	8	14	0	47	562
06:30 PM	11	167	16	0	194	9	221	16	3	249	19	7	18	0	44	28	5	11	0	44	531
06:45 PM	12	161	20	0	193	15	202	18	1	236	20	7	16	0	43	21	6	16	0	43	515
Total	44	692	92	1	829	63	850	71	6	990	94	29	87	0	210	92	25	56	0	173	2202
Grand Total	295	3787	570	8	4660	319	4696	395	23	5433	481	155	428	0	1064	447	167	330	0	944	12101
Apprch %	6.3	81.3	12.2	0.2		5.9	86.4	7.3	0.4		45.2	14.6	40.2	0		47.4	17.7	35	0		
Total %	2.4	31.3	4.7	0.1	38.5	2.6	38.8	3.3	0.2	44.9	4	1.3	3.5	0	8.8	3.7	1.4	2.7	0	7.8	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	18	210	37	265	15	247	20	282	35	7	19	61	27	6	18	51	659
04:15 PM	21	220	37	278	23	238	23	284	24	11	27	62	23	4	15	42	666
04:30 PM	11	169	23	203	15	284	24	323	23	8	19	50	27	11	23	61	637
04:45 PM	16	200	27	243	23	261	30	314	19	8	16	43	19	6	19	44	644
Total Volume	66	799	124	989	76	1030	97	1203	101	34	81	216	96	27	75	198	2606
% App. Total	6.7	80.8	12.5		6.3	85.6	8.1		46.8	15.7	37.5		48.5	13.6	37.9		
PHF	.786	.908	.838	.889	.826	.907	.808	.931	.721	.773	.750	.871	.889	.614	.815	.811	.978

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr PM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	0	8	0	0	8	0	8	1	0	9	0	0	1	0	1	0	0	0	0	0	18
02:15 PM	1	5	0	0	6	0	7	1	0	8	0	1	0	0	1	0	0	0	0	0	15
02:30 PM	0	5	0	0	5	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	8
02:45 PM	0	5	0	0	5	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	9
Total	1	23	0	0	24	0	20	4	0	24	0	1	1	0	2	0	0	0	0	0	50
03:00 PM	0	3	1	0	4	0	10	0	0	10	1	0	0	0	1	2	0	0	0	2	17
03:15 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
03:30 PM	1	5	0	0	6	0	6	1	0	7	0	0	0	0	0	0	0	1	0	1	14
03:45 PM	0	5	0	0	5	0	4	1	0	5	0	0	0	0	0	0	1	0	0	1	11
Total	1	15	1	0	17	0	22	2	0	24	1	0	0	0	1	2	1	1	0	4	46
04:00 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	0	6	0	0	6	0	3	2	0	5	0	0	1	0	1	0	0	0	0	0	12
04:30 PM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	3	0	0	3	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	8
Total	0	14	0	0	14	0	12	3	0	15	0	0	1	0	1	0	0	0	0	0	30
05:00 PM	0	7	0	0	7	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	11
05:15 PM	0	3	0	0	3	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	7
05:30 PM	0	3	0	0	3	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	9
05:45 PM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	1	14	0	0	15	0	13	2	0	15	0	0	0	0	0	0	0	0	0	0	30
06:00 PM	0	3	0	0	3	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	11
06:15 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
06:30 PM	0	3	0	0	3	0	6	0	0	6	1	0	0	0	1	0	0	0	0	0	10
06:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	2	0	0	0	2	6
Total	0	9	0	0	9	0	19	1	0	20	1	0	0	0	1	2	0	0	0	2	32
Grand Total	3	75	1	0	79	0	86	12	0	98	2	1	2	0	5	4	1	1	0	6	188
Apprch %	3.8	94.9	1.3	0		0	87.8	12.2	0		40	20	40	0		66.7	16.7	16.7	0		
Total %	1.6	39.9	0.5	0	42	0	45.7	6.4	0	52.1	1.1	0.5	1.1	0	2.7	2.1	0.5	0.5	0	3.2	

	Hwy 29 Eastbound				Hwy 29 Westbound				Fletcher Dr Northbound				Fletcher Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:00 PM																	
02:00 PM	0	8	0	8	0	8	1	9	0	0	1	1	0	0	0	0	18
02:15 PM	1	5	0	6	0	7	1	8	0	1	0	1	0	0	0	0	15
02:30 PM	0	5	0	5	0	2	1	3	0	0	0	0	0	0	0	0	8
02:45 PM	0	5	0	5	0	3	1	4	0	0	0	0	0	0	0	0	9
Total Volume	1	23	0	24	0	20	4	24	0	1	1	2	0	0	0	0	50
% App. Total	4.2	95.8	0		0	83.3	16.7		0	50	50		0	0	0		
PHF	.250	.719	.000	.750	.000	.625	1.00	.667	.000	.250	.250	.500	.000	.000	.000	.000	.694

Peggy Malone & Associates

(888) 247-8602

File Name : 10-Hwy 29 and Fletcher Dr PM
 Site Code :
 Start Date : 8/5/2021
 Page No : 1

Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	15	203	27	1	246	15	223	19	0	257	22	12	18	0	52	15	12	18	0	45	600
02:15 PM	20	170	27	1	218	15	195	14	1	225	32	9	23	0	64	28	12	20	0	60	567
02:30 PM	14	207	36	0	257	9	213	15	0	237	24	4	23	0	51	24	10	20	0	54	599
02:45 PM	20	189	25	0	234	9	222	22	1	254	14	7	17	0	38	32	6	15	0	53	579
Total	69	769	115	2	955	48	853	70	2	973	92	32	81	0	205	99	40	73	0	212	2345
03:00 PM	10	210	38	0	258	22	217	25	1	265	29	5	23	0	57	20	9	14	0	43	623
03:15 PM	21	193	25	1	240	11	249	27	2	289	22	6	21	0	49	18	18	28	0	64	642
03:30 PM	18	185	31	0	234	18	227	19	0	264	29	8	17	0	54	19	10	15	0	44	596
03:45 PM	14	209	31	1	255	11	266	17	0	294	15	11	17	0	43	21	9	19	0	49	641
Total	63	797	125	2	987	62	959	88	3	1112	95	30	78	0	203	78	46	76	0	200	2502
04:00 PM	18	211	37	0	266	15	249	20	3	287	35	7	19	0	61	27	6	18	0	51	665
04:15 PM	21	226	37	1	285	23	241	25	2	291	24	11	28	0	63	23	4	15	0	42	681
04:30 PM	11	173	23	0	207	15	287	24	1	327	23	8	19	0	50	27	11	23	0	61	645
04:45 PM	16	203	27	2	248	23	265	31	2	321	19	8	16	0	43	19	6	19	0	44	656
Total	66	813	124	3	1006	76	1042	100	8	1226	101	34	82	0	217	96	27	75	0	198	2647
05:00 PM	15	223	36	0	274	13	240	14	2	269	32	8	29	0	69	18	6	14	0	38	650
05:15 PM	10	187	22	0	219	22	286	20	0	328	26	11	25	0	62	23	15	11	0	49	658
05:30 PM	15	197	29	0	241	19	257	17	0	293	20	6	19	0	45	19	3	14	0	36	615
05:45 PM	16	175	28	0	219	16	276	26	2	320	22	6	29	0	57	24	6	12	0	42	638
Total	56	782	115	0	953	70	1059	77	4	1210	100	31	102	0	233	84	30	51	0	165	2561
06:00 PM	11	198	36	1	246	22	208	25	2	257	23	8	32	0	63	18	6	15	0	39	605
06:15 PM	10	172	20	0	202	17	228	13	0	258	32	7	21	0	60	25	8	14	0	47	567
06:30 PM	11	170	16	0	197	9	227	16	3	255	20	7	18	0	45	28	5	11	0	44	541
06:45 PM	12	161	20	0	193	15	206	18	1	240	20	7	16	0	43	23	6	16	0	45	521
Total	44	701	92	1	838	63	869	72	6	1010	95	29	87	0	211	94	25	56	0	175	2234
Grand Total	298	3862	571	8	4739	319	4782	407	23	5531	483	156	430	0	1069	451	168	331	0	950	12289
Apprch %	6.3	81.5	12	0.2		5.8	86.5	7.4	0.4		45.2	14.6	40.2	0		47.5	17.7	34.8	0		
Total %	2.4	31.4	4.6	0.1	38.6	2.6	38.9	3.3	0.2	45	3.9	1.3	3.5	0	8.7	3.7	1.4	2.7	0	7.7	
Cars	295	3787	570	8	4660	319	4696	395	23	5433	481	155	428	0	1064	447	167	330	0	944	12101
% Cars	99	98.1	99.8	100	98.3	100	98.2	97.1	100	98.2	99.6	99.4	99.5	0	99.5	99.1	99.4	99.7	0	99.4	98.5
Trucks	3	75	1	0	79	0	86	12	0	98	2	1	2	0	5	4	1	1	0	6	188
% Trucks	1	1.9	0.2	0	1.7	0	1.8	2.9	0	1.8	0.4	0.6	0.5	0	0.5	0.9	0.6	0.3	0	0.6	1.5

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	18	211	37	266		15	249	20	284		35	7	19	61		27	6	18	51		662
04:15 PM	21	226	37	284		23	241	25	289		24	11	28	63		23	4	15	42		678
04:30 PM	11	173	23	207		15	287	24	326		23	8	19	50		27	11	23	61		644
04:45 PM	16	203	27	246		23	265	31	319		19	8	16	43		19	6	19	44		652
Total Volume	66	813	124	1003		76	1042	100	1218		101	34	82	217		96	27	75	198		2636
% App. Total	6.6	81.1	12.4			6.2	85.6	8.2			46.5	15.7	37.8			48.5	13.6	37.9			
PHF	.786	.899	.838	.883		.826	.908	.806	.934		.721	.773	.732	.861		.889	.614	.815	.811		.972

File Name : 10-Hwy 29 and Fletcher Dr PM
Site Code :
Start Date : 8/5/2021
Page No : 1

	Hwy 29 Eastbound					Hwy 29 Westbound					Fletcher Dr Northbound					Fletcher Dr Southbound						
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
03:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	9	9	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1		11
Apprch %	0	0	0	100		0	0	0	0		0	0										

[illegible]

Peggy Malone & Associates

(888) 247-8602

File Name : 11-Hwy 29 and Blackwell Rd SAT
 Site Code :
 Start Date : 8/7/2021
 Page No : 1

Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	2	67	6	1	76	6	56	7	1	70	8	4	10	0	22	6	2	2	0	10	178
07:15 AM	4	69	4	2	79	20	92	9	0	121	6	3	11	0	20	14	6	2	0	22	242
07:30 AM	4	77	11	0	92	20	112	15	1	148	11	8	8	0	27	4	2	3	0	9	276
07:45 AM	5	97	7	0	109	28	116	17	1	162	12	2	18	0	32	11	4	5	0	20	323
Total	15	310	28	3	356	74	376	48	3	501	37	17	47	0	101	35	14	12	0	61	1019
08:00 AM	3	88	10	2	103	36	119	16	0	171	13	8	24	0	45	13	7	1	0	21	340
08:15 AM	8	101	20	0	129	35	136	29	1	201	25	7	24	0	56	14	5	1	0	20	406
08:30 AM	5	97	17	1	120	31	144	17	2	194	23	9	31	0	63	23	4	1	0	28	405
08:45 AM	7	116	14	1	138	34	157	27	1	219	28	13	29	0	70	17	7	5	0	29	456
Total	23	402	61	4	490	136	556	89	4	785	89	37	108	0	234	67	23	8	0	98	1607
09:00 AM	9	117	19	0	145	40	141	26	0	207	28	11	48	0	87	25	18	5	0	48	487
09:15 AM	12	158	20	3	193	37	177	23	3	240	33	12	42	0	87	37	12	5	0	54	574
09:30 AM	13	147	20	2	182	51	184	30	0	265	31	15	43	0	89	31	11	8	0	50	586
09:45 AM	14	153	29	3	199	31	159	40	6	236	25	22	42	0	89	34	15	12	0	61	585
Total	48	575	88	8	719	159	661	119	9	948	117	60	175	0	352	127	56	30	0	213	2232
10:00 AM	15	156	28	1	200	43	174	37	1	255	56	26	37	0	119	28	21	10	0	59	633
10:15 AM	11	189	37	1	238	47	192	36	3	278	29	16	47	0	92	36	20	7	0	63	671
10:30 AM	11	206	27	1	245	34	185	36	1	256	38	19	51	0	108	33	17	8	0	58	667
10:45 AM	15	181	30	0	226	45	199	33	4	281	46	20	48	0	114	37	16	9	0	62	683
Total	52	732	122	3	909	169	750	142	9	1070	169	81	183	0	433	134	74	34	0	242	2654
11:00 AM	9	186	20	4	219	45	198	37	3	283	66	21	50	0	137	34	14	7	0	55	694
11:15 AM	10	187	21	5	223	45	178	47	6	276	52	27	44	0	123	33	22	13	0	68	690
11:30 AM	13	208	18	2	241	42	209	30	3	284	34	19	41	0	94	50	20	9	0	79	698
11:45 AM	8	174	20	0	202	26	214	51	2	293	46	18	58	0	122	50	19	11	0	80	697
Total	40	755	79	11	885	158	799	165	14	1136	198	85	193	0	476	167	75	40	0	282	2779
12:00 PM	14	194	23	5	236	42	191	32	0	265	54	20	46	0	120	41	12	9	0	62	683
12:15 PM	16	220	24	4	264	34	208	39	4	285	36	13	50	0	99	39	17	13	0	69	717
12:30 PM	6	186	26	1	219	44	197	33	5	279	42	29	46	0	117	45	18	13	0	76	691
12:45 PM	10	200	34	5	249	25	192	45	4	266	52	15	44	0	111	27	21	10	0	58	684
Total	46	800	107	15	968	145	788	149	13	1095	184	77	186	0	447	152	68	45	0	265	2775
01:00 PM	16	211	25	3	255	44	204	42	3	293	30	18	39	0	87	27	12	9	0	48	683
01:15 PM	8	205	24	2	239	40	196	38	2	276	26	23	39	0	88	33	18	8	0	59	662
01:30 PM	11	181	20	0	212	47	190	34	7	278	37	23	48	0	108	42	16	8	0	66	664
01:45 PM	13	188	22	5	228	35	202	33	3	273	38	13	30	0	81	42	11	11	0	64	646
Total	48	785	91	10	934	166	792	147	15	1120	131	77	156	0	364	144	57	36	0	237	2655
02:00 PM	11	195	25	5	236	21	135	27	3	186	30	10	38	0	78	37	14	12	0	63	563
02:15 PM	12	190	19	3	224	20	193	37	5	255	42	10	22	0	74	37	10	6	0	53	606
02:30 PM	15	182	24	1	222	30	182	34	1	247	33	17	39	0	89	35	18	9	0	62	620
02:45 PM	12	190	13	2	217	25	182	36	3	246	35	17	24	0	76	33	14	5	0	52	591
Total	50	757	81	11	899	96	692	134	12	934	140	54	123	0	317	142	56	32	0	230	2380
03:00 PM	6	211	26	2	245	36	197	39	0	272	28	19	47	0	94	37	18	9	0	64	675
03:15 PM	10	188	17	4	219	31	169	39	6	245	36	25	30	0	91	46	15	11	0	72	627
03:30 PM	15	210	27	0	252	30	167	25	2	224	39	15	37	0	91	41	21	7	0	69	636
03:45 PM	14	168	16	0	198	34	171	34	2	241	30	17	28	0	75	27	18	10	0	55	569
Total	45	777	86	6	914	131	704	137	10	982	133	76	142	0	351	151	72	37	0	260	2507
04:00 PM	14	189	21	1	225	28	157	28	2	215	24	15	38	0	77	35	15	8	0	58	575
04:15 PM	14	187	13	1	215	43	177	34	2	256	28	12	40	0	80	36	9	8	0	53	604
04:30 PM	6	196	23	2	227	40	173	30	6	249	37	18	37	0	92	42	14	6	0	62	630
04:45 PM	8	171	16	2	197	48	138	24	1	211	29	12	29	0	70	36	9	7	0	52	530
Total	42	743	73	6	864	159	645	116	11	931	118	57	144	0	319	149	47	29	0	225	2339
05:00 PM	11	200	17	2	230	37	151	41	5	234	33	10	32	0	75	45	16	10	0	71	610
05:15 PM	4	168	13	3	188	29	148	37	2	216	23	11	30	0	64	34	14	5	0	53	521
05:30 PM	9	212	18	2	241	20	148	37	0	205	28	6	22	0	56	35	10	4	0	49	551
05:45 PM	11	180	17	0	208	20	165	20	4	209	39	9	37	0	85	35	15	5	0	55	557
Total	35	760	65	7	867	106	612	135	11	864	123	36	121	0	280	149	55	24	0	228	2239
06:00 PM	6	194	25	3	228	28	176	28	4	236	26	11	58	0	95	34	13	1	0	48	607
06:15 PM	8	174	13	5	200	18	153	28	2	201	21	16	21	0	58	30	8	5	0	43	502
06:30 PM	6	182	24	1	213	17	168	26	2	213	26	11	23	0	60	28	13	6	0	47	533
06:45 PM	6	130	24	2	162	36	116	36	0	188	28	13	19	0	60	29	11	8	0	48	458
Total	26	680	86	11	803	99	613	118	8	838	101	51	121	0	273	121	45	20	0	186	2100

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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	470	8076	967	95	9608	1598	7988	1499	119	11204	1540	708	1699	0	3947	1538	642	347	0	2527	27286
Apprch %	4.9	84.1	10.1	1		14.3	71.3	13.4	1.1		39	17.9	43	0		60.9	25.4	13.7	0		
Total %	1.7	29.6	3.5	0.3	35.2	5.9	29.3	5.5	0.4	41.1	5.6	2.6	6.2	0	14.5	5.6	2.4	1.3	0	9.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	9	186	20	215	45	198	37	280	66	21	50	137	34	14	7	55	687
11:15 AM	10	187	21	218	45	178	47	270	52	27	44	123	33	22	13	68	679
11:30 AM	13	208	18	239	42	209	30	281	34	19	41	94	50	20	9	79	693
11:45 AM	8	174	20	202	26	214	51	291	46	18	58	122	50	19	11	80	695
Total Volume	40	755	79	874	158	799	165	1122	198	85	193	476	167	75	40	282	2754
% App. Total	4.6	86.4	9		14.1	71.2	14.7		41.6	17.9	40.5		59.2	26.6	14.2		
PHF	.769	.907	.940	.914	.878	.933	.809	.964	.750	.787	.832	.869	.835	.852	.769	.881	.991

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	14	194	23	231		42	191	32	265		54	20	46	120		41	12	9	62	678
12:15 PM	16	220	24	260		34	208	39	281		36	13	50	99		39	17	13	69	709
12:30 PM	6	186	26	218		44	197	33	274		42	29	46	117		45	18	13	76	685
12:45 PM	10	200	34	244		25	192	45	262		52	15	44	111		27	21	10	58	675
Total Volume	46	800	107	953		145	788	149	1082		184	77	186	447		152	68	45	265	2747
% App. Total	4.8	83.9	11.2			13.4	72.8	13.8			41.2	17.2	41.6			57.4	25.7	17		
PHF	.719	.909	.787	.916		.824	.947	.828	.963		.852	.664	.930	.931		.844	.810	.865	.872	.969

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	3	1	0	4	0	0	1	0	1	0	0	1	0	1	7
07:15 AM	0	5	0	0	5	0	5	1	0	6	0	0	0	0	0	1	0	0	0	1	12
07:30 AM	0	2	1	0	3	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	7
07:45 AM	0	5	0	0	5	0	1	2	0	3	0	0	0	0	0	1	0	0	0	1	9
Total	0	13	1	0	14	1	12	4	0	17	0	0	1	0	1	2	0	1	0	3	35
08:00 AM	0	5	0	0	5	0	6	0	0	6	0	0	0	0	0	0	0	1	0	1	12
08:15 AM	0	2	0	0	2	0	6	0	0	6	0	0	0	0	0	1	0	0	0	1	9
08:30 AM	0	6	0	0	6	2	2	1	0	5	0	0	0	0	0	1	0	0	0	1	12
08:45 AM	0	4	0	0	4	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	11
Total	0	17	0	0	17	2	21	1	0	24	0	0	0	0	0	2	0	1	0	3	44
09:00 AM	0	5	0	0	5	2	3	0	0	5	0	0	0	0	0	1	0	1	0	2	12
09:15 AM	0	5	0	0	5	0	2	1	0	3	1	0	1	0	2	0	0	0	0	0	10
09:30 AM	0	5	1	0	6	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	9
09:45 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	5
Total	0	17	1	0	18	2	8	1	0	11	1	2	1	0	4	2	0	1	0	3	36
10:00 AM	0	3	0	0	3	0	2	0	0	2	1	0	0	0	1	0	0	1	0	1	7
10:15 AM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
10:30 AM	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
10:45 AM	1	2	0	0	3	0	5	0	0	5	0	0	0	0	0	0	0	1	0	1	9
Total	1	8	1	0	10	0	12	0	0	12	1	1	0	0	2	0	0	2	0	2	26
11:00 AM	0	2	0	0	2	1	4	2	0	7	0	0	0	0	0	0	0	0	0	0	9
11:15 AM	1	5	0	0	6	0	3	0	0	3	0	0	2	0	2	1	0	0	0	1	12
11:30 AM	0	4	0	0	4	0	4	0	0	4	0	1	1	0	2	0	0	0	0	0	10
11:45 AM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
Total	1	13	0	0	14	1	15	2	0	18	0	1	3	0	4	1	0	0	0	1	37
12:00 PM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	5	1	0	6	0	3	1	0	4	0	0	1	0	1	1	0	0	0	1	12
12:30 PM	0	2	0	0	2	0	3	1	0	4	0	1	0	0	1	1	0	0	0	1	8
12:45 PM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	1	0	0	0	1	4
Total	0	12	1	0	13	0	8	3	0	11	1	1	1	0	3	3	0	0	0	3	30
01:00 PM	0	2	0	0	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
01:15 PM	0	3	0	0	3	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	7
01:30 PM	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	6
01:45 PM	0	4	0	0	4	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	7
Total	0	10	0	0	10	3	9	0	0	12	1	0	0	0	1	0	1	0	0	1	24
02:00 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
02:15 PM	0	1	0	0	1	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	4
02:30 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	1	0	0	0	1	12
02:45 PM	0	2	0	0	2	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	7
Total	0	3	0	0	3	1	17	1	0	19	1	1	0	0	2	1	0	0	0	1	25
03:00 PM	0	3	0	0	3	0	2	0	0	2	0	1	2	0	3	0	0	0	0	0	8
03:15 PM	0	9	0	0	9	1	6	1	0	8	0	0	0	0	0	0	0	1	0	1	18
03:30 PM	0	1	0	0	1	1	1	0	0	2	0	0	2	0	2	0	0	0	0	0	5
03:45 PM	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	2	0	0	0	2	7
Total	0	15	0	0	15	2	11	1	0	14	0	2	4	0	6	2	0	1	0	3	38
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
04:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	4
04:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
04:45 PM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	5
Total	0	5	1	0	6	0	3	0	0	3	1	1	3	0	5	0	0	0	0	0	14
05:00 PM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
05:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	0	6	0	0	6	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	13
06:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:15 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
06:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
06:45 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total	0	5	0	0	5	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	10

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	2	124	5	0	131	13	126	13	0	152	6	9	14	0	29	13	1	6	0	20	332
Apprch %	1.5	94.7	3.8	0		8.6	82.9	8.6	0		20.7	31	48.3	0		65	5	30	0		
Total %	0.6	37.3	1.5	0	39.5	3.9	38	3.9	0	45.8	1.8	2.7	4.2	0	8.7	3.9	0.3	1.8	0	6	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:30 AM																	
08:30 AM	0	6	0	6	2	2	1	5	0	0	0	0	1	0	0	1	12
08:45 AM	0	4	0	4	0	7	0	7	0	0	0	0	0	0	0	0	11
09:00 AM	0	5	0	5	2	3	0	5	0	0	0	0	1	0	1	2	12
09:15 AM	0	5	0	5	0	2	1	3	1	0	1	2	0	0	0	0	10
Total Volume	0	20	0	20	4	14	2	20	1	0	1	2	2	0	1	3	45
% App. Total	0	100	0		20	70	10		50	0	50		66.7	0	33.3		
PHF	.000	.833	.000	.833	.500	.500	.500	.714	.250	.000	.250	.250	.500	.000	.250	.375	.938

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 02:30 PM

02:30 PM	0	0	0	0		0	11	0	11		0	0	0	0		1	0	0	1	12
02:45 PM	0	2	0	2		0	4	0	4		0	1	0	1		0	0	0	0	7
03:00 PM	0	3	0	3		0	2	0	2		0	1	2	3		0	0	0	0	8
03:15 PM	0	9	0	9		1	6	1	8		0	0	0	0		0	0	1	1	18
Total Volume	0	14	0	14		1	23	1	25		0	2	2	4		1	0	1	2	45
% App. Total	0	100	0			4	92	4			0	50	50			50	0	50		
PHF	.000	.389	.000	.389		.250	.523	.250	.568		.000	.500	.250	.333		.250	.000	.250	.500	.625

Peggy Malone & Associates

(888) 247-8602

File Name : 11-Hwy 29 and Blackwell Rd SAT
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	2	68	6	1	77	6	59	8	1	74	8	4	11	0	23	6	2	3	0	11	185
07:15 AM	4	74	4	2	84	20	97	10	0	127	6	3	11	0	20	15	6	2	0	23	254
07:30 AM	4	79	12	0	95	21	115	15	1	152	11	8	8	0	27	4	2	3	0	9	283
07:45 AM	5	102	7	0	114	28	117	19	1	165	12	2	18	0	32	12	4	5	0	21	332
Total	15	323	29	3	370	75	388	52	3	518	37	17	48	0	102	37	14	13	0	64	1054
08:00 AM	3	93	10	2	108	36	125	16	0	177	13	8	24	0	45	13	7	2	0	22	352
08:15 AM	8	103	20	0	131	35	142	29	1	207	25	7	24	0	56	15	5	1	0	21	415
08:30 AM	5	103	17	1	126	33	146	18	2	199	23	9	31	0	63	24	4	1	0	29	417
08:45 AM	7	120	14	1	142	34	164	27	1	226	28	13	29	0	70	17	7	5	0	29	467
Total	23	419	61	4	507	138	577	90	4	809	89	37	108	0	234	69	23	9	0	101	1651
09:00 AM	9	122	19	0	150	42	144	26	0	212	28	11	48	0	87	26	18	6	0	50	499
09:15 AM	12	163	20	3	198	37	179	24	3	243	34	12	43	0	89	37	12	5	0	54	584
09:30 AM	13	152	21	2	188	51	186	30	0	267	31	16	43	0	90	31	11	8	0	50	595
09:45 AM	14	155	29	3	201	31	160	40	6	237	25	23	42	0	90	35	15	12	0	62	590
Total	48	592	89	8	737	161	669	120	9	959	118	62	176	0	356	129	56	31	0	216	2268
10:00 AM	15	159	28	1	203	43	176	37	1	257	57	26	37	0	120	28	21	11	0	60	640
10:15 AM	11	191	37	1	240	47	196	36	3	282	29	16	47	0	92	36	20	7	0	63	677
10:30 AM	11	207	28	1	247	34	186	36	1	257	38	20	51	0	109	33	17	8	0	58	671
10:45 AM	16	183	30	0	229	45	204	33	4	286	46	20	48	0	114	37	16	10	0	63	692
Total	53	740	123	3	919	169	762	142	9	1082	170	82	183	0	435	134	74	36	0	244	2680
11:00 AM	9	188	20	4	221	46	202	39	3	290	66	21	50	0	137	34	14	7	0	55	703
11:15 AM	11	192	21	5	229	45	181	47	6	279	52	27	46	0	125	34	22	13	0	69	702
11:30 AM	13	212	18	2	245	42	213	30	3	288	34	20	42	0	96	50	20	9	0	79	708
11:45 AM	8	176	20	0	204	26	218	51	2	297	46	18	58	0	122	50	19	11	0	80	703
Total	41	768	79	11	899	159	814	167	14	1154	198	86	196	0	480	168	75	40	0	283	2816
12:00 PM	14	198	23	5	240	42	193	32	0	267	54	20	46	0	120	41	12	9	0	62	689
12:15 PM	16	225	25	4	270	34	211	40	4	289	36	13	51	0	100	40	17	13	0	70	729
12:30 PM	6	188	26	1	221	44	200	34	5	283	42	30	46	0	118	46	18	13	0	77	699
12:45 PM	10	201	34	5	250	25	192	46	4	267	53	15	44	0	112	28	21	10	0	59	688
Total	46	812	108	15	981	145	796	152	13	1106	185	78	187	0	450	155	68	45	0	268	2805
01:00 PM	16	213	25	3	257	45	205	42	3	295	30	18	39	0	87	27	12	9	0	48	687
01:15 PM	8	208	24	2	242	41	199	38	2	280	26	23	39	0	88	33	18	8	0	59	669
01:30 PM	11	182	20	0	213	48	194	34	7	283	37	23	48	0	108	42	16	8	0	66	670
01:45 PM	13	192	22	5	232	35	203	33	3	274	39	13	30	0	82	42	12	11	0	65	653
Total	48	795	91	10	944	169	801	147	15	1132	132	77	156	0	365	144	58	36	0	238	2679
02:00 PM	11	195	25	5	236	21	136	27	3	187	31	10	38	0	79	37	14	12	0	63	565
02:15 PM	12	191	19	3	225	21	194	38	5	258	42	10	22	0	74	37	10	6	0	53	610
02:30 PM	15	182	24	1	222	30	193	34	1	258	33	17	39	0	89	36	18	9	0	63	632
02:45 PM	12	192	13	2	219	25	186	36	3	250	35	18	24	0	77	33	14	5	0	52	598
Total	50	760	81	11	902	97	709	135	12	953	141	55	123	0	319	143	56	32	0	231	2405
03:00 PM	6	214	26	2	248	36	199	39	0	274	28	20	49	0	97	37	18	9	0	64	683
03:15 PM	10	197	17	4	228	32	175	40	6	253	36	25	30	0	91	46	15	12	0	73	645
03:30 PM	15	211	27	0	253	31	168	25	2	226	39	15	39	0	93	41	21	7	0	69	641
03:45 PM	14	170	16	0	200	34	173	34	2	243	30	18	28	0	76	29	18	10	0	57	576
Total	45	792	86	6	929	133	715	138	10	996	133	78	146	0	357	153	72	38	0	263	2545
04:00 PM	14	189	21	1	225	28	157	28	2	215	24	15	40	0	79	35	15	8	0	58	577
04:15 PM	14	190	13	1	218	43	177	34	2	256	28	12	41	0	81	36	9	8	0	53	608
04:30 PM	6	198	23	2	229	40	173	30	6	249	37	19	37	0	93	42	14	6	0	62	633
04:45 PM	8	171	17	2	198	48	141	24	1	214	30	12	29	0	71	36	9	7	0	52	535
Total	42	748	74	6	870	159	648	116	11	934	119	58	147	0	324	149	47	29	0	225	2353
05:00 PM	11	202	17	2	232	38	151	41	5	235	33	10	32	0	75	45	16	10	0	71	613
05:15 PM	4	171	13	3	191	29	150	37	2	218	23	11	30	0	64	34	14	5	0	53	526
05:30 PM	9	213	18	2	242	20	149	37	0	206	28	6	22	0	56	35	10	4	0	49	553
05:45 PM	11	180	17	0	208	20	168	20	4	212	39	9	37	0	85	35	15	5	0	55	560
Total	35	766	65	7	873	107	618	135	11	871	123	36	121	0	280	149	55	24	0	228	2252
06:00 PM	6	196	25	3	230	28	176	28	4	236	26	11	58	0	95	34	13	1	0	48	609
06:15 PM	8	175	13	5	201	18	155	28	2	203	21	16	21	0	58	30	8	5	0	43	505
06:30 PM	6	183	24	1	214	17	168	26	2	213	26	11	24	0	61	28	13	6	0	47	535
06:45 PM	6	131	24	2	163	36	118	36	0	190	28	13	19	0	60	29	11	8	0	48	461
Total	26	685	86	11	808	99	617	118	8	842	101	51	122	0	274	121	45	20	0	186	2110

Peggy Malone & Associates

(888) 247-8602

File Name : 11-Hwy 29 and Blackwell Rd SAT
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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	472	8200	972	95	9739	1611	8114	1512	119	11356	1546	717	1713	0	3976	1551	643	353	0	2547	27618
Apprch %	4.8	84.2	10	1		14.2	71.5	13.3	1		38.9	18	43.1	0		60.9	25.2	13.9	0		
Total %	1.7	29.7	3.5	0.3	35.3	5.8	29.4	5.5	0.4	41.1	5.6	2.6	6.2	0	14.4	5.6	2.3	1.3	0	9.2	
Cars	470	8076	967	95	9608	1598	7988	1499	119	11204	1540	708	1699	0	3947	1538	642	347	0	2527	27286
% Cars	99.6	98.5	99.5	100	98.7	99.2	98.4	99.1	100	98.7	99.6	98.7	99.2	0	99.3	99.2	99.8	98.3	0	99.2	98.8
Trucks	2	124	5	0	131	13	126	13	0	152	6	9	14	0	29	13	1	6	0	20	332
% Trucks	0.4	1.5	0.5	0	1.3	0.8	1.6	0.9	0	1.3	0.4	1.3	0.8	0	0.7	0.8	0.2	1.7	0	0.8	1.2

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	9	188	20	217	46	202	39	287	66	21	50	137	34	14	7	55	696
11:15 AM	11	192	21	224	45	181	47	273	52	27	46	125	34	22	13	69	691
11:30 AM	13	212	18	243	42	213	30	285	34	20	42	96	50	20	9	79	703
11:45 AM	8	176	20	204	26	218	51	295	46	18	58	122	50	19	11	80	701
Total Volume	41	768	79	888	159	814	167	1140	198	86	196	480	168	75	40	283	2791
% App. Total	4.6	86.5	8.9		13.9	71.4	14.6		41.2	17.9	40.8		59.4	26.5	14.1		
PHF	.788	.906	.940	.914	.864	.933	.819	.966	.750	.796	.845	.876	.840	.852	.769	.884	.993

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	14	198	23	235	42	193	32	267	54	20	46	120	41	12	9	62	684
12:15 PM	16	225	25	266	34	211	40	285	36	13	51	100	40	17	13	70	721
12:30 PM	6	188	26	220	44	200	34	278	42	30	46	118	46	18	13	77	693
12:45 PM	10	201	34	245	25	192	46	263	53	15	44	112	28	21	10	59	679
Total Volume	46	812	108	966	145	796	152	1093	185	78	187	450	155	68	45	268	2777
% App. Total	4.8	84.1	11.2		13.3	72.8	13.9		41.1	17.3	41.6		57.8	25.4	16.8		
PHF	.719	.902	.794	.908	.824	.943	.826	.959	.856	.650	.917	.938	.842	.810	.865	.870	.963

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[illegible]

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Groups Printed- Pedestrians

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Grand Total	0	0	0	14	14	0	0	0	2	2	0	0	0	4	4	0	0	0	2	2	22
Apprch %	0	0	0	100		0	0	0	100		0	0	0	100		0	0	0	100		
Total %	0	0	0	63.6	63.6	0	0	0	9.1	9.1	0	0	0	18.2	18.2	0	0	0	9.1	9.1	

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
07:15 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
07:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
07:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
Total Volume	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
% App. Total	0	0	0			0	0	0			0	0	0			0	0	0			
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
12:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
Total Volume	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
% App. Total	0	0	0			0	0	0			0	0	0			0	0	0			
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000

Peggy Malone & Associates

(888) 247-8602

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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	2	123	4	1	130	5	81	9	0	95	5	4	24	0	33	9	5	0	0	14	272
06:15 AM	1	155	6	0	162	8	76	9	0	93	9	2	32	0	43	7	0	1	0	8	306
06:30 AM	5	165	8	1	179	10	103	7	1	121	10	3	28	0	41	10	3	1	0	14	355
06:45 AM	6	147	12	0	165	8	128	17	0	153	10	1	29	0	40	20	8	2	0	30	388
Total	14	590	30	2	636	31	388	42	1	462	34	10	113	0	157	46	16	4	0	66	1321
07:00 AM	5	126	9	1	141	22	99	13	0	134	16	5	42	0	63	13	9	0	0	22	360
07:15 AM	7	157	21	1	186	31	135	16	1	183	21	6	27	0	54	22	5	2	0	29	452
07:30 AM	9	148	18	0	175	50	160	21	1	232	23	6	32	0	61	24	8	8	0	40	508
07:45 AM	7	135	32	2	176	53	197	28	1	279	30	9	33	0	72	22	16	1	0	39	566
Total	28	566	80	4	678	156	591	78	3	828	90	26	134	0	250	81	38	11	0	130	1886
08:00 AM	6	154	25	1	186	51	166	25	0	242	21	8	29	0	58	18	13	3	0	34	520
08:15 AM	6	132	23	3	164	50	131	25	2	208	23	10	45	0	78	17	7	2	0	26	476
08:30 AM	11	153	24	2	190	42	154	29	1	226	30	14	39	0	83	23	10	5	0	38	537
08:45 AM	8	155	23	3	189	55	183	37	2	277	24	11	46	0	81	26	10	3	0	39	586
Total	31	594	95	9	729	198	634	116	5	953	98	43	159	0	300	84	40	13	0	137	2119
Grand Total	73	1750	205	15	2043	385	1613	236	9	2243	222	79	406	0	707	211	94	28	0	333	5326
Apprch %	3.6	85.7	10	0.7		17.2	71.9	10.5	0.4		31.4	11.2	57.4	0		63.4	28.2	8.4	0		
Total %	1.4	32.9	3.8	0.3	38.4	7.2	30.3	4.4	0.2	42.1	4.2	1.5	7.6	0	13.3	4	1.8	0.5	0	6.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	6	154	25	185	51	166	25	242	21	8	29	58	18	13	3	34	519
08:15 AM	6	132	23	161	50	131	25	206	23	10	45	78	17	7	2	26	471
08:30 AM	11	153	24	188	42	154	29	225	30	14	39	83	23	10	5	38	534
08:45 AM	8	155	23	186	55	183	37	275	24	11	46	81	26	10	3	39	581
Total Volume	31	594	95	720	198	634	116	948	98	43	159	300	84	40	13	137	2105
% App. Total	4.3	82.5	13.2		20.9	66.9	12.2		32.7	14.3	53		61.3	29.2	9.5		
PHF	.705	.958	.950	.957	.900	.866	.784	.862	.817	.768	.864	.904	.808	.769	.650	.878	.906

Peggy Malone & Associates

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Groups Printed- Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	5
06:15 AM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	5
06:30 AM	0	3	0	0	3	0	4	2	0	6	0	0	0	0	0	2	0	0	0	2	11
06:45 AM	0	3	0	0	3	0	9	2	0	11	0	0	0	0	0	0	0	1	0	1	15
Total	0	7	0	0	7	0	19	5	0	24	0	0	0	0	0	2	0	3	0	5	36
07:00 AM	0	2	0	0	2	0	6	1	0	7	0	0	2	0	2	1	0	0	0	1	12
07:15 AM	1	9	0	0	10	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	13
07:30 AM	2	8	0	0	10	2	15	2	0	19	0	1	2	0	3	1	0	0	0	1	33
07:45 AM	3	9	1	0	13	1	8	0	0	9	1	0	0	0	1	1	0	0	0	1	24
Total	6	28	1	0	35	3	31	3	0	37	1	1	4	0	6	4	0	0	0	4	82
08:00 AM	2	6	1	0	9	2	4	3	0	9	1	1	0	0	2	0	0	0	0	0	20
08:15 AM	1	15	0	0	16	1	9	0	0	10	0	1	1	0	2	1	0	1	0	2	30
08:30 AM	0	7	0	0	7	1	10	2	0	13	0	0	1	0	1	2	1	0	0	3	24
08:45 AM	0	8	1	0	9	1	7	0	0	8	1	0	3	0	4	2	0	0	0	2	23
Total	3	36	2	0	41	5	30	5	0	40	2	2	5	0	9	5	1	1	0	7	97
Grand Total	9	71	3	0	83	8	80	13	0	101	3	3	9	0	15	11	1	4	0	16	215
Apprch %	10.8	85.5	3.6	0		7.9	79.2	12.9	0		20	20	60	0		68.8	6.2	25	0		
Total %	4.2	33	1.4	0	38.6	3.7	37.2	6	0	47	1.4	1.4	4.2	0	7	5.1	0.5	1.9	0	7.4	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	8	0	10	2	15	2	19	0	1	2	3	1	0	0	1	33
07:45 AM	3	9	1	13	1	8	0	9	1	0	0	1	1	0	0	1	24
08:00 AM	2	6	1	9	2	4	3	9	1	1	0	2	0	0	0	0	20
08:15 AM	1	15	0	16	1	9	0	10	0	1	1	2	1	0	1	2	30
Total Volume	8	38	2	48	6	36	5	47	2	3	3	8	3	0	1	4	107
% App. Total	16.7	79.2	4.2		12.8	76.6	10.6		25	37.5	37.5		75	0	25		
PHF	.667	.633	.500	.750	.750	.600	.417	.618	.500	.750	.375	.667	.750	.000	.250	.500	.811

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
06:00 AM	2	123	4	1	130	5	85	10	0	100	5	4	24	0	33	9	5	0	0	14	277
06:15 AM	1	156	6	0	163	8	78	9	0	95	9	2	32	0	43	7	0	3	0	10	311
06:30 AM	5	168	8	1	182	10	107	9	1	127	10	3	28	0	41	12	3	1	0	16	366
06:45 AM	6	150	12	0	168	8	137	19	0	164	10	1	29	0	40	20	8	3	0	31	403
Total	14	597	30	2	643	31	407	47	1	486	34	10	113	0	157	48	16	7	0	71	1357
07:00 AM	5	128	9	1	143	22	105	14	0	141	16	5	44	0	65	14	9	0	0	23	372
07:15 AM	8	166	21	1	196	31	137	16	1	185	21	6	27	0	54	23	5	2	0	30	465
07:30 AM	11	156	18	0	185	52	175	23	1	251	23	7	34	0	64	25	8	8	0	41	541
07:45 AM	10	144	33	2	189	54	205	28	1	288	31	9	33	0	73	23	16	1	0	40	590
Total	34	594	81	4	713	159	622	81	3	865	91	27	138	0	256	85	38	11	0	134	1968
08:00 AM	8	160	26	1	195	53	170	28	0	251	22	9	29	0	60	18	13	3	0	34	540
08:15 AM	7	147	23	3	180	51	140	25	2	218	23	11	46	0	80	18	7	3	0	28	506
08:30 AM	11	160	24	2	197	43	164	31	1	239	30	14	40	0	84	25	11	5	0	41	561
08:45 AM	8	163	24	3	198	56	190	37	2	285	25	11	49	0	85	28	10	3	0	41	609
Total	34	630	97	9	770	203	664	121	5	993	100	45	164	0	309	89	41	14	0	144	2216
Grand Total	82	1821	208	15	2126	393	1693	249	9	2344	225	82	415	0	722	222	95	32	0	349	5541
Apprch %	3.9	85.7	9.8	0.7		16.8	72.2	10.6	0.4		31.2	11.4	57.5	0		63.6	27.2	9.2	0		
Total %	1.5	32.9	3.8	0.3	38.4	7.1	30.6	4.5	0.2	42.3	4.1	1.5	7.5	0	13	4	1.7	0.6	0	6.3	
Cars	73	1750	205	15	2043	385	1613	236	9	2243	222	79	406	0	707	211	94	28	0	333	5326
% Cars	89	96.1	98.6	100	96.1	98	95.3	94.8	100	95.7	98.7	96.3	97.8	0	97.9	95	98.9	87.5	0	95.4	96.1
Trucks	9	71	3	0	83	8	80	13	0	101	3	3	9	0	15	11	1	4	0	16	215
% Trucks	11	3.9	1.4	0	3.9	2	4.7	5.2	0	4.3	1.3	3.7	2.2	0	2.1	5	1.1	12.5	0	4.6	3.9

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	8	160	26	194	53	170	28	251	22	9	29	60	18	13	3	34	539
08:15 AM	7	147	23	177	51	140	25	216	23	11	46	80	18	7	3	28	501
08:30 AM	11	160	24	195	43	164	31	238	30	14	40	84	25	11	5	41	558
08:45 AM	8	163	24	195	56	190	37	283	25	11	49	85	28	10	3	41	604
Total Volume	34	630	97	761	203	664	121	988	100	45	164	309	89	41	14	144	2202
% App. Total	4.5	82.8	12.7		20.5	67.2	12.2		32.4	14.6	53.1		61.8	28.5	9.7		
PHF	.773	.966	.933	.976	.906	.874	.818	.873	.833	.804	.837	.909	.795	.788	.700	.878	.911

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Groups Printed- Cars

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	8	173	34	4	219	49	178	29	2	258	59	26	53	0	138	32	30	10	0	72	687
02:15 PM	11	166	45	3	225	44	169	31	3	247	45	18	44	0	107	40	17	3	0	60	639
02:30 PM	9	196	34	1	240	50	201	39	2	292	35	18	41	0	94	31	17	4	0	52	678
02:45 PM	10	188	34	3	235	50	194	33	2	279	45	27	65	0	137	44	22	14	0	80	731
Total	38	723	147	11	919	193	742	132	9	1076	184	89	203	0	476	147	86	31	0	264	2735
03:00 PM	3	190	37	3	233	52	196	51	2	301	38	22	46	0	106	29	24	7	0	60	700
03:15 PM	8	192	33	4	237	61	222	42	3	328	60	21	36	0	117	30	18	7	0	55	737
03:30 PM	10	177	30	1	218	46	193	30	2	271	53	29	41	0	123	43	20	8	0	71	683
03:45 PM	6	197	43	1	247	67	240	44	1	352	45	23	49	0	117	35	14	5	0	54	770
Total	27	756	143	9	935	226	851	167	8	1252	196	95	172	0	463	137	76	27	0	240	2890
04:00 PM	20	220	28	3	271	43	205	37	2	287	63	40	51	0	154	33	29	6	0	68	780
04:15 PM	12	233	23	5	273	51	213	36	1	301	61	29	58	0	148	40	28	14	0	82	804
04:30 PM	5	182	25	5	217	32	263	46	2	343	49	27	73	0	149	56	25	9	0	90	799
04:45 PM	10	203	30	0	243	39	233	47	2	321	58	23	64	0	145	44	27	8	0	79	788
Total	47	838	106	13	1004	165	914	166	7	1252	231	119	246	0	596	173	109	37	0	319	3171
05:00 PM	14	206	27	3	250	39	197	40	4	280	49	22	101	0	172	59	13	8	0	80	782
05:15 PM	12	195	23	5	235	44	259	40	0	343	54	17	64	0	135	46	27	7	0	80	793
05:30 PM	11	192	29	1	233	41	245	43	1	330	43	21	53	0	117	37	17	4	0	58	738
05:45 PM	13	203	27	0	243	52	258	31	3	344	34	16	46	0	96	39	15	10	0	64	747
Total	50	796	106	9	961	176	959	154	8	1297	180	76	264	0	520	181	72	29	0	282	3060
06:00 PM	8	217	27	3	255	41	216	28	1	286	29	14	51	0	94	42	14	4	0	60	695
06:15 PM	12	180	24	2	218	27	215	40	2	284	29	7	31	0	67	38	17	4	0	59	628
06:30 PM	9	187	24	3	223	37	211	41	4	293	41	19	28	0	88	36	14	8	0	58	662
06:45 PM	9	154	27	3	193	43	184	32	2	261	31	14	19	0	64	40	18	4	0	62	580
Total	38	738	102	11	889	148	826	141	9	1124	130	54	129	0	313	156	63	20	0	239	2565
Grand Total	200	3851	604	53	4708	908	4292	760	41	6001	921	433	1014	0	2368	794	406	144	0	1344	14421
Apprch %	4.2	81.8	12.8	1.1		15.1	71.5	12.7	0.7		38.9	18.3	42.8	0		59.1	30.2	10.7	0		
Total %	1.4	26.7	4.2	0.4	32.6	6.3	29.8	5.3	0.3	41.6	6.4	3	7	0	16.4	5.5	2.8	1	0	9.3	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	20	220	28	268	43	205	37	285	63	40	51	154	33	29	6	68	775
04:15 PM	12	233	23	268	51	213	36	300	61	29	58	148	40	28	14	82	798
04:30 PM	5	182	25	212	32	263	46	341	49	27	73	149	56	25	9	90	792
04:45 PM	10	203	30	243	39	233	47	319	58	23	64	145	44	27	8	79	786
Total Volume	47	838	106	991	165	914	166	1245	231	119	246	596	173	109	37	319	3151
% App. Total	4.7	84.6	10.7		13.3	73.4	13.3		38.8	20	41.3		54.2	34.2	11.6		
PHF	.588	.899	.883	.924	.809	.869	.883	.913	.917	.744	.842	.968	.772	.940	.661	.886	.987

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Groups Printed- Trucks

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Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	0	9	0	0	9	0	9	1	0	10	0	0	1	0	1	0	0	0	0	0	20
02:15 PM	1	4	0	0	5	0	5	1	0	6	0	0	1	0	1	1	0	1	0	2	14
02:30 PM	0	5	0	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	10
02:45 PM	0	4	1	0	5	0	2	0	0	2	1	0	0	0	1	1	0	0	0	1	9
Total	1	22	1	0	24	0	21	2	0	23	1	0	2	0	3	2	0	1	0	3	53
03:00 PM	0	6	0	0	6	1	12	0	0	13	0	0	0	0	0	0	0	0	0	0	19
03:15 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
03:30 PM	0	4	0	0	4	1	5	0	0	6	0	0	1	0	1	1	0	0	0	1	12
03:45 PM	1	2	0	0	3	0	4	0	1	5	1	0	1	0	2	1	0	0	0	1	11
Total	1	15	0	0	16	2	25	0	1	28	1	0	2	0	3	2	0	0	0	2	49
04:00 PM	0	1	1	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4
04:15 PM	0	8	0	0	8	2	5	1	0	8	0	0	0	0	0	1	1	0	0	2	18
04:30 PM	0	3	0	0	3	0	2	0	0	2	0	1	1	0	2	0	0	0	0	0	7
04:45 PM	0	2	0	0	2	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	7
Total	0	14	1	0	15	3	11	1	0	15	0	2	2	0	4	1	1	0	0	2	36
05:00 PM	0	4	1	0	5	0	5	0	0	5	0	0	0	0	0	1	0	1	0	2	12
05:15 PM	0	5	0	0	5	0	4	1	0	5	1	2	0	0	3	0	0	0	0	0	13
05:30 PM	0	3	0	0	3	0	7	0	0	7	0	0	2	0	2	2	1	0	0	3	15
05:45 PM	0	2	0	0	2	0	3	1	0	4	2	1	0	0	3	0	0	0	0	0	9
Total	0	14	1	0	15	0	19	2	0	21	3	3	2	0	8	3	1	1	0	5	49
06:00 PM	0	2	0	0	2	0	3	1	0	4	0	0	0	0	0	1	1	1	0	3	9
06:15 PM	0	3	0	0	3	0	1	0	0	1	1	0	0	0	1	2	0	0	0	2	7
06:30 PM	0	3	0	0	3	0	1	0	0	1	2	0	0	0	2	0	0	0	0	0	6
06:45 PM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	4
Total	0	8	0	0	8	0	8	1	0	9	3	1	0	0	4	3	1	1	0	5	26
Grand Total	2	73	3	0	78	5	84	6	1	96	8	6	8	0	22	11	3	3	0	17	213
Apprch %	2.6	93.6	3.8	0		5.2	87.5	6.2	1		36.4	27.3	36.4	0		64.7	17.6	17.6	0		
Total %	0.9	34.3	1.4	0	36.6	2.3	39.4	2.8	0.5	45.1	3.8	2.8	3.8	0	10.3	5.2	1.4	1.4	0	8	

	Hwy 29 Eastbound				Hwy 29 Westbound				Blackwell Rd Northbound				Blackwell Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:00 PM																	
02:00 PM	0	9	0	9	0	9	1	10	0	0	1	1	0	0	0	0	20
02:15 PM	1	4	0	5	0	5	1	6	0	0	1	1	1	0	1	2	14
02:30 PM	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0	10
02:45 PM	0	4	1	5	0	2	0	2	1	0	0	1	1	0	0	1	9
Total Volume	1	22	1	24	0	21	2	23	1	0	2	3	2	0	1	3	53
% App. Total	4.2	91.7	4.2		0	91.3	8.7		33.3	0	66.7		66.7	0	33.3		
PHF	.250	.611	.250	.667	.000	.583	.500	.575	.250	.000	.500	.750	.500	.000	.250	.375	.663

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Groups Printed- Cars - Trucks

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	8	182	34	4	228	49	187	30	2	268	59	26	54	0	139	32	30	10	0	72	707
02:15 PM	12	170	45	3	230	44	174	32	3	253	45	18	45	0	108	41	17	4	0	62	653
02:30 PM	9	201	34	1	245	50	206	39	2	297	35	18	41	0	94	31	17	4	0	52	688
02:45 PM	10	192	35	3	240	50	196	33	2	281	46	27	65	0	138	45	22	14	0	81	740
Total	39	745	148	11	943	193	763	134	9	1099	185	89	205	0	479	149	86	32	0	267	2788
03:00 PM	3	196	37	3	239	53	208	51	2	314	38	22	46	0	106	29	24	7	0	60	719
03:15 PM	8	195	33	4	240	61	226	42	3	332	60	21	36	0	117	30	18	7	0	55	744
03:30 PM	10	181	30	1	222	47	198	30	2	277	53	29	42	0	124	44	20	8	0	72	695
03:45 PM	7	199	43	1	250	67	244	44	2	357	46	23	50	0	119	36	14	5	0	55	781
Total	28	771	143	9	951	228	876	167	9	1280	197	95	174	0	466	139	76	27	0	242	2939
04:00 PM	20	221	29	3	273	44	205	37	2	288	63	41	51	0	155	33	29	6	0	68	784
04:15 PM	12	241	23	5	281	53	218	37	1	309	61	29	58	0	148	41	29	14	0	84	822
04:30 PM	5	185	25	5	220	32	265	46	2	345	49	28	74	0	151	56	25	9	0	90	806
04:45 PM	10	205	30	0	245	39	237	47	2	325	58	23	65	0	146	44	27	8	0	79	795
Total	47	852	107	13	1019	168	925	167	7	1267	231	121	248	0	600	174	110	37	0	321	3207
05:00 PM	14	210	28	3	255	39	202	40	4	285	49	22	101	0	172	60	13	9	0	82	794
05:15 PM	12	200	23	5	240	44	263	41	0	348	55	19	64	0	138	46	27	7	0	80	806
05:30 PM	11	195	29	1	236	41	252	43	1	337	43	21	55	0	119	39	18	4	0	61	753
05:45 PM	13	205	27	0	245	52	261	32	3	348	36	17	46	0	99	39	15	10	0	64	756
Total	50	810	107	9	976	176	978	156	8	1318	183	79	266	0	528	184	73	30	0	287	3109
06:00 PM	8	219	27	3	257	41	219	29	1	290	29	14	51	0	94	43	15	5	0	63	704
06:15 PM	12	183	24	2	221	27	216	40	2	285	30	7	31	0	68	40	17	4	0	61	635
06:30 PM	9	190	24	3	226	37	212	41	4	294	43	19	28	0	90	36	14	8	0	58	668
06:45 PM	9	154	27	3	193	43	187	32	2	264	31	15	19	0	65	40	18	4	0	62	584
Total	38	746	102	11	897	148	834	142	9	1133	133	55	129	0	317	159	64	21	0	244	2591
Grand Total	202	3924	607	53	4786	913	4376	766	42	6097	929	439	1022	0	2390	805	409	147	0	1361	14634
Apprch %	4.2	82	12.7	1.1		15	71.8	12.6	0.7		38.9	18.4	42.8	0		59.1	30.1	10.8	0		
Total %	1.4	26.8	4.1	0.4	32.7	6.2	29.9	5.2	0.3	41.7	6.3	3	7	0	16.3	5.5	2.8	1	0	9.3	
Cars	200	3851	604	53	4708	908	4292	760	41	6001	921	433	1014	0	2368	794	406	144	0	1344	14421
% Cars	99	98.1	99.5	100	98.4	99.5	98.1	99.2	97.6	98.4	99.1	98.6	99.2	0	99.1	98.6	99.3	98	0	98.8	98.5
Trucks	2	73	3	0	78	5	84	6	1	96	8	6	8	0	22	11	3	3	0	17	213
% Trucks	1	1.9	0.5	0	1.6	0.5	1.9	0.8	2.4	1.6	0.9	1.4	0.8	0	0.9	1.4	0.7	2	0	1.2	1.5

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	12	241	23	276		53	218	37	308		61	29	58	148		41	29	14	84		816
04:30 PM	5	185	25	215		32	265	46	343		49	28	74	151		56	25	9	90		799
04:45 PM	10	205	30	245		39	237	47	323		58	23	65	146		44	27	8	79		793
05:00 PM	14	210	28	252		39	202	40	281		49	22	101	172		60	13	9	82		787
Total Volume	41	841	106	988		163	922	170	1255		217	102	298	617		201	94	40	335		3195
% App. Total	4.1	85.1	10.7			13	73.5	13.5			35.2	16.5	48.3			60	28.1	11.9			
PHF	.732	.872	.883	.895		.769	.870	.904	.915		.889	.879	.738	.897		.838	.810	.714	.931		.979

File Name : 11-Hwy 29 and Blackwell Rd PM
Site Code :
Start Date : 8/5/2021
Page No : 1

	Hwy 29 Eastbound					Hwy 29 Westbound					Blackwell Rd Northbound					Blackwell Rd Southbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
02:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00 PM	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	8	8	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	11
Apprch %	0	0	0	100		0	0	0	100		0	0	0	0		0	0	0	0		
Total %	0	0	0	72.7	72.7	0	0	0	27.3	27.3	0	0									

[illegible]

Appendix B:

Synchro Reports

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	718	19	25	628	135	63	46	48	130	73	174
Future Volume (vph)	221	718	19	25	628	135	63	46	48	130	73	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3335	3425		1805	3438	1524	1770	1900	1615	1649	1759	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3335	3425		1805	3438	1524	1770	1900	1615	1649	1759	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	238	772	20	27	675	145	68	49	52	140	78	187
RTOR Reduction (vph)	0	1	0	0	0	58	0	0	0	0	0	0
Lane Group Flow (vph)	238	791	0	27	675	87	68	49	52	108	110	187
Heavy Vehicles (%)	5%	5%	5%	0%	5%	6%	2%	0%	0%	4%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4		4
Permitted Phases						6			Free			Free
Actuated Green, G (s)	15.3	80.9		5.2	69.3	84.0	9.4	9.4	140.0	14.7	14.7	140.0
Effective Green, g (s)	15.3	80.9		5.2	69.3	84.0	9.4	9.4	140.0	14.7	14.7	140.0
Actuated g/C Ratio	0.11	0.58		0.04	0.49	0.60	0.07	0.07	1.00	0.10	0.10	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	364	1979		67	1701	914	118	127	1615	173	184	1583
v/s Ratio Prot	c0.07	c0.23		0.01	0.20	0.01	c0.04	0.03		c0.07	0.06	
v/s Ratio Perm						0.05			0.03			0.12
v/c Ratio	0.65	0.40		0.40	0.40	0.10	0.58	0.39	0.03	0.62	0.60	0.12
Uniform Delay, d1	59.8	16.2		65.9	22.2	11.9	63.4	62.5	0.0	60.0	59.8	0.0
Progression Factor	1.00	1.00		1.14	0.60	2.35	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	0.6		3.8	0.7	0.0	6.7	1.9	0.0	6.8	5.1	0.2
Delay (s)	64.0	16.8		79.0	13.9	28.0	70.0	64.5	0.0	66.9	65.0	0.2
Level of Service	E	B		E	B	C	E	E	A	E	E	A
Approach Delay (s)		27.7			18.4			46.9			35.5	
Approach LOS		C			B			D			D	
Intersection Summary												
HCM 2000 Control Delay		27.1										
HCM 2000 Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		140.0							31.3			
Intersection Capacity Utilization		55.6%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	855	6	49	759	31	9	11	48	38	13	24
Future Volume (vph)	44	855	6	49	759	31	9	11	48	38	13	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1752	3438	1615	1805	3438	1615		1858	1468		1728	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1752	3438	1615	1805	3438	1615		1858	1468		1728	1495
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	950	7	54	843	34	10	12	53	42	14	27
RTOR Reduction (vph)	0	0	2	0	0	12	0	0	51	0	0	25
Lane Group Flow (vph)	49	950	5	54	843	22	0	22	2	0	56	2
Heavy Vehicles (%)	3%	5%	0%	0%	5%	0%	0%	0%	10%	8%	0%	8%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	8.2	90.2	90.2	8.4	90.9	90.9		6.1	6.1		8.7	8.7
Effective Green, g (s)	8.2	90.2	90.2	8.4	90.9	90.9		6.1	6.1		8.7	8.7
Actuated g/C Ratio	0.06	0.64	0.64	0.06	0.65	0.65		0.04	0.04		0.06	0.06
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	102	2215	1040	108	2232	1048		80	63		107	92
v/s Ratio Prot	0.03	c0.28		c0.03	0.25			c0.01			c0.03	
v/s Ratio Perm			0.00			0.01			0.00			0.00
v/c Ratio	0.48	0.43	0.00	0.50	0.38	0.02		0.28	0.04		0.52	0.02
Uniform Delay, d1	63.8	12.2	8.9	63.8	11.4	8.7		64.8	64.1		63.6	61.6
Progression Factor	1.15	0.42	1.00	1.24	0.15	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	3.4	0.6	0.0	3.5	0.5	0.0		1.9	0.2		4.6	0.1
Delay (s)	76.8	5.7	8.9	82.8	2.2	8.8		66.7	64.4		68.2	61.7
Level of Service	E	A	A	F	A	A		E	E		E	E
Approach Delay (s)		9.2			7.1			65.0			66.1	
Approach LOS		A			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)				26.6	
Intersection Capacity Utilization			54.8%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

12/03/2021

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	20	32	891	0	5	3	763	8	0	0	5	9
Future Volume (Veh/h)	20	32	891	0	5	3	763	8	0	0	5	9
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	35	979	0	0	3	838	9	0	0	5	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage (veh)												
Upstream signal (ft)			549				429					
pX, platoon unblocked	0.00	0.90			0.00	0.87			0.92	0.92	0.87	0.92
vC, conflicting volume	0	847			0	979			1536	1902	490	1408
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	611			0	674			921	1320	111	783
tC, single (s)	0.0	4.2			0.0	4.1			7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	0.0	2.3			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	96			0	100			100	100	99	96
cM capacity (veh/h)	0	845			0	805			187	139	806	254
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1	SB 2	
Volume Total	35	490	490	0	3	419	419	9	5	10	62	
Volume Left	35	0	0	0	3	0	0	0	0	10	0	
Volume Right	0	0	0	0	0	0	0	9	5	0	62	
cSH	845	1700	1700	1700	805	1700	1700	1700	806	254	806	
Volume to Capacity	0.04	0.29	0.29	0.00	0.00	0.25	0.25	0.01	0.01	0.04	0.08	
Queue Length 95th (ft)	3	0	0	0	0	0	0	0	0	3	6	
Control Delay (s)	9.4	0.0	0.0	0.0	9.5	0.0	0.0	0.0	9.5	19.8	9.8	
Lane LOS	A				A				A	C	A	
Approach Delay (s)	0.3				0.0				9.5	11.2		
Approach LOS									A	B		
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			45.1%			ICU Level of Service				A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: BP Gas Station/Village Center & Lee Highway

12/03/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	56
Future Volume (Veh/h)	0	56
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.91	0.91
Hourly flow rate (vph)	0	62
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked	0.92	0.90
vC, conflicting volume	1893	419
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1310	136
tC, single (s)	6.5	6.9
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	92
cM capacity (veh/h)	141	806
Direction, Lane #		

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	819	54	20	733	34	20	8	19	46	11	24
Future Volume (vph)	37	819	54	20	733	34	20	8	19	46	11	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3438	1553	1719	3438	1615	1715	1649	1455		1740	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3438	1553	1719	3438	1615	1715	1649	1455		1740	1429
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	39	853	56	21	764	35	21	8	20	48	11	25
RTOR Reduction (vph)	0	0	17	0	0	10	0	0	18	0	0	23
Lane Group Flow (vph)	39	853	39	21	764	25	14	15	2	0	59	2
Heavy Vehicles (%)	0%	5%	4%	5%	5%	0%	0%	13%	11%	4%	9%	13%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	5	2	4	1	6	3	4	4	1	3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	7.3	92.2	98.0	4.9	90.2	99.1	5.8	5.8	10.7		8.9	8.9
Effective Green, g (s)	7.3	92.2	98.0	4.9	90.2	99.1	5.8	5.8	10.7		8.9	8.9
Actuated g/C Ratio	0.05	0.66	0.70	0.04	0.64	0.71	0.04	0.04	0.08		0.06	0.06
Clearance Time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	94	2264	1087	60	2215	1143	71	68	111		110	90
v/s Ratio Prot	c0.02	c0.25	0.00	0.01	0.22	0.00	0.01	c0.01	0.00		c0.03	
v/s Ratio Perm			0.02			0.01			0.00			0.00
v/c Ratio	0.41	0.38	0.04	0.35	0.34	0.02	0.20	0.22	0.01		0.54	0.02
Uniform Delay, d1	64.3	10.9	6.5	66.0	11.4	6.1	64.8	64.9	59.8		63.5	61.5
Progression Factor	1.14	0.50	0.00	1.47	0.05	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.8	0.5	0.0	3.2	0.4	0.0	1.4	1.6	0.0		5.0	0.1
Delay (s)	75.9	5.9	0.0	100.1	1.0	6.1	66.2	66.6	59.8		68.5	61.5
Level of Service	E	A	A	F	A	A	E	E	E		E	E
Approach Delay (s)		8.4			3.8			63.7			66.4	
Approach LOS		A			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			10.4				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			28.2		
Intersection Capacity Utilization			52.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (vph)	43	744	97	208	664	121	100	45	164	89	41	14
Future Volume (vph)	43	744	97	208	664	121	100	45	164	89	41	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	4.0	6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1656	3406	1583	1770	3438	1553	1770	1827	1568	1618	1712	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1656	3406	1583	1770	3438	1553	1770	1827	1568	1618	1712	1509
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	47	818	107	229	730	133	110	49	180	98	45	15
RTOR Reduction (vph)	0	0	0	0	0	75	0	0	162	0	0	14
Lane Group Flow (vph)	47	818	107	229	730	58	110	49	18	71	72	1
Heavy Vehicles (%)	9%	6%	2%	2%	5%	4%	2%	4%	3%	6%	2%	7%
Turn Type	Prot	NA	Free	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			Free			6			4			3
Actuated Green, G (s)	24.1	61.4	140.0	23.4	60.9	60.9	14.2	14.2	14.2	11.5	11.5	11.5
Effective Green, g (s)	24.1	61.4	140.0	23.4	60.9	60.9	14.2	14.2	14.2	11.5	11.5	11.5
Actuated g/C Ratio	0.17	0.44	1.00	0.17	0.43	0.43	0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	6.7	5.7		6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	1493	1583	295	1495	675	179	185	159	132	140	123
v/s Ratio Prot	0.03	c0.24		c0.13	0.21		c0.06	0.03		c0.04	0.04	
v/s Ratio Perm			0.07			0.04			0.01			0.00
v/c Ratio	0.16	0.55	0.07	0.78	0.49	0.09	0.61	0.26	0.11	0.54	0.51	0.01
Uniform Delay, d1	49.4	29.0	0.0	55.8	28.4	23.2	60.3	58.1	57.2	61.7	61.6	59.0
Progression Factor	0.66	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.4	0.1	12.1	1.1	0.2	6.1	0.8	0.3	4.2	3.2	0.0
Delay (s)	33.0	18.4	0.1	67.9	29.5	23.5	66.4	58.8	57.5	65.9	64.7	59.1
Level of Service	C	B	A	E	C	C	E	E	E	E	E	E
Approach Delay (s)		17.1			36.8			60.6			64.7	
Approach LOS		B			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			34.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			29.5		
Intersection Capacity Utilization			62.0%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: Winchester St/Broadview Avenue & Lee Highway

02/16/2022

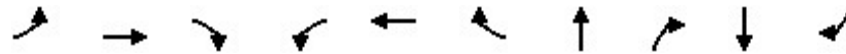


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	238	792	27	675	145	68	49	52	108	110	187
v/c Ratio	0.66	0.38	0.27	0.39	0.15	0.50	0.34	0.03	0.63	0.60	0.12
Control Delay	68.4	17.9	78.3	15.0	2.8	74.2	66.4	0.0	75.2	72.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	17.9	78.3	15.0	2.8	74.2	66.4	0.0	75.2	72.4	0.1
Queue Length 50th (ft)	108	212	26	60	0	61	43	0	101	102	0
Queue Length 95th (ft)	150	322	61	164	45	109	84	0	163	162	0
Internal Link Dist (ft)		770		835			259			1381	
Turn Bay Length (ft)	283		128		195	75		85	210		
Base Capacity (vph)	481	2087	120	1744	1093	236	253	1615	313	334	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.38	0.23	0.39	0.13	0.29	0.19	0.03	0.35	0.33	0.12
Intersection Summary											

Queues

2: Branch Drive & Lee Highway

02/16/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	49	950	7	54	843	34	22	53	56	27
v/c Ratio	0.42	0.41	0.01	0.44	0.36	0.03	0.23	0.27	0.46	0.12
Control Delay	81.7	6.3	0.0	87.6	2.4	0.0	68.6	3.3	73.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	6.3	0.0	87.6	2.4	0.0	68.6	3.3	73.7	1.2
Queue Length 50th (ft)	44	105	0	51	32	0	20	0	50	0
Queue Length 95th (ft)	89	118	m0	101	43	0	49	0	94	0
Internal Link Dist (ft)		835			469		866		979	
Turn Bay Length (ft)	240		330	155		155		75		
Base Capacity (vph)	195	2345	1145	234	2361	1151	244	304	178	264
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	0.25	0.41	0.01	0.23	0.36	0.03	0.09	0.17	0.31	0.10

Intersection Summary

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

Queues

4: Fletcher Drive & Lee Highway

02/16/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	39	853	56	21	764	35	14	15	20	59	25
v/c Ratio	0.35	0.35	0.05	0.23	0.32	0.03	0.16	0.18	0.07	0.47	0.11
Control Delay	79.3	6.1	0.1	98.2	1.0	0.1	67.4	68.3	0.5	73.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.3	6.1	0.1	98.2	1.0	0.1	67.4	68.3	0.5	73.7	1.0
Queue Length 50th (ft)	38	73	0	20	2	0	12	13	0	53	0
Queue Length 95th (ft)	80	94	0	m45	55	1	38	40	0	99	0
Internal Link Dist (ft)	349			910			1093			912	
Turn Bay Length (ft)	155	255		255	288		75		200		
Base Capacity (vph)	184	2435	1248	224	2351	1334	207	199	379	224	295
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.35	0.04	0.09	0.32	0.03	0.07	0.08	0.05	0.26	0.08

Intersection Summary

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

Queues

5: Blackwell Road & Lee Highway

02/16/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	818	107	229	730	133	110	49	180	71	72	15
v/c Ratio	0.16	0.55	0.07	0.78	0.48	0.17	0.61	0.27	0.55	0.54	0.51	0.05
Control Delay	31.3	20.0	0.1	73.1	32.6	2.7	74.3	60.0	13.0	75.8	73.7	0.3
Queue Delay	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 Delay	31.3	20.0	0.1	73.1	32.6	2.7	74.3	60.0	13.0	75.8	73.7	0.3
Queue Length 50th (ft)	27	129	0	202	269	0	98	42	0	66	67	0
Queue Length 95th (ft)	58	303	0	280	361	27	156	80	62	118	120	0
Internal Link Dist (ft)		910			996			609			979	
Turn Bay Length (ft)	210		150	530		320	350			180		228
Base Capacity (vph)	308	1496	1583	408	1728	860	244	252	378	217	230	369
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.55	0.07	0.56	0.42	0.15	0.45	0.19	0.48	0.33	0.31	0.04
Intersection Summary												

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	718	36	59	1080	90	111	101	69	181	53	343
Future Volume (vph)	255	718	36	59	1080	90	111	101	69	181	53	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	260	733	37	60	1102	92	113	103	70	185	54	350
RTOR Reduction (vph)	0	2	0	0	0	37	0	0	0	0	0	0
Lane Group Flow (vph)	260	768	0	60	1102	55	113	103	70	118	121	350
Heavy Vehicles (%)	1%	1%	3%	0%	1%	0%	0%	0%	0%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases						6			Free			Free
Actuated Green, G (s)	16.2	80.7		9.1	72.1	88.1	14.4	14.4	150.0	16.0	16.0	150.0
Effective Green, g (s)	16.2	80.7		9.1	72.1	88.1	14.4	14.4	150.0	16.0	16.0	150.0
Actuated g/C Ratio	0.11	0.54		0.06	0.48	0.59	0.10	0.10	1.00	0.11	0.11	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	374	1907		109	1717	948	173	182	1615	179	185	1583
v/s Ratio Prot	c0.07	c0.22		0.03	c0.31	0.01	c0.06	0.05		c0.07	0.07	
v/s Ratio Perm						0.03			0.04			0.22
v/c Ratio	0.70	0.40		0.55	0.64	0.06	0.65	0.57	0.04	0.66	0.65	0.22
Uniform Delay, d1	64.5	20.4		68.5	29.3	13.2	65.4	64.8	0.0	64.4	64.3	0.0
Progression Factor	1.00	1.00		1.32	0.50	1.45	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.6		5.1	1.6	0.0	8.5	4.0	0.1	8.5	8.0	0.3
Delay (s)	70.0	21.1		95.4	16.3	19.2	73.9	68.8	0.1	72.9	72.4	0.3
Level of Service	E	C		F	B	B	E	E	A	E	E	A
Approach Delay (s)		33.4			20.3			54.0			29.7	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			29.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			31.3		
Intersection Capacity Utilization			69.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	868	4	65	1110	82	10	18	50	126	18	101
Future Volume (vph)	108	868	4	65	1110	82	10	18	50	126	18	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3574	1615	1805	3574	1615		1868	1583		1805	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3574	1615	1805	3574	1615		1868	1583		1805	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	111	895	4	67	1144	85	10	19	52	130	19	104
RTOR Reduction (vph)	0	0	2	0	0	37	0	0	50	0	0	92
Lane Group Flow (vph)	111	895	2	67	1144	48	0	29	2	0	149	12
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	14.5	89.5	89.5	9.6	85.1	85.1		6.7	6.7		17.6	17.6
Effective Green, g (s)	14.5	89.5	89.5	9.6	85.1	85.1		6.7	6.7		17.6	17.6
Actuated g/C Ratio	0.10	0.60	0.60	0.06	0.57	0.57		0.04	0.04		0.12	0.12
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	174	2132	963	115	2027	916		83	70		211	189
v/s Ratio Prot	c0.06	c0.25		0.04	c0.32			c0.02			c0.08	
v/s Ratio Perm			0.00			0.03			0.00			0.01
v/c Ratio	0.64	0.42	0.00	0.58	0.56	0.05		0.35	0.03		0.71	0.06
Uniform Delay, d1	65.2	16.3	12.2	68.3	20.7	14.5		69.5	68.6		63.7	58.9
Progression Factor	1.09	0.53	1.00	1.23	0.38	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	7.1	0.6	0.0	6.6	1.0	0.1		2.5	0.2		10.3	0.1
Delay (s)	78.2	9.2	12.2	90.5	8.9	14.6		72.1	68.7		74.0	59.0
Level of Service	E	A	B	F	A	B		E	E		E	E
Approach Delay (s)		16.8			13.5			69.9			67.8	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			21.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			26.6		
Intersection Capacity Utilization			67.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

12/03/2021

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	40	1002	0	4	1	1205	11	0	0	12	8
Future Volume (Veh/h)	9	40	1002	0	4	1	1205	11	0	0	12	8
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	42	1044	0	0	1	1255	11	0	0	13	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage (veh)												
Upstream signal (ft)			549				429					
pX, platoon unblocked	0.00	0.81			0.00	0.87			0.87	0.87	0.87	0.87
vC, conflicting volume	0	1266			0	1044			1802	2396	522	1876
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	854			0	744			946	1625	142	1030
tC, single (s)	0.0	4.1			0.0	4.1			7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	0.0	2.2			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	93			0	100			100	100	98	95
cM capacity (veh/h)	0	642			0	757			172	84	769	155
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1	SB 2	
Volume Total	42	522	522	0	1	628	628	11	13	8	45	
Volume Left	42	0	0	0	1	0	0	0	0	8	0	
Volume Right	0	0	0	0	0	0	0	11	13	0	45	
cSH	642	1700	1700	1700	757	1700	1700	1700	769	155	803	
Volume to Capacity	0.07	0.31	0.31	0.00	0.00	0.37	0.37	0.01	0.02	0.05	0.06	
Queue Length 95th (ft)	5	0	0	0	0	0	0	0	1	4	4	
Control Delay (s)	11.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0	9.8	29.4	9.8	
Lane LOS	B				A				A	D	A	
Approach Delay (s)	0.4				0.0				9.8	12.7		
Approach LOS									A	B		
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization			56.6%			ICU Level of Service				B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: BP Gas Station/Village Center & Lee Highway

12/03/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	43
Future Volume (Veh/h)	0	43
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.96	0.96
Hourly flow rate (vph)	0	45
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked	0.87	0.81
vC, conflicting volume	2385	628
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1612	64
tC, single (s)	6.5	6.9
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	94
cM capacity (veh/h)	86	803
Direction, Lane #		

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	833	124	87	1042	100	101	34	82	96	27	75
Future Volume (vph)	69	833	124	87	1042	100	101	34	82	96	27	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3539	1454	1805	3574	1568	1715	1761	1599		1829	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3539	1454	1805	3574	1568	1715	1761	1599		1829	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	71	859	128	90	1074	103	104	35	85	99	28	77
RTOR Reduction (vph)	0	0	49	0	0	35	0	0	71	0	0	69
Lane Group Flow (vph)	71	859	79	90	1074	68	69	70	14	0	127	8
Heavy Vehicles (%)	0%	2%	0%	0%	1%	3%	0%	0%	1%	0%	0%	0%
Parking (#/hr)			0									
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	5	2	4	1	6	3	4	4	1	3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	11.2	81.7	93.1	12.8	83.7	99.6	11.4	11.4	24.2		15.9	15.9
Effective Green, g (s)	11.2	81.7	93.1	12.8	83.7	99.6	11.4	11.4	24.2		15.9	15.9
Actuated g/C Ratio	0.07	0.54	0.62	0.09	0.56	0.66	0.08	0.08	0.16		0.11	0.11
Clearance Time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	134	1927	902	154	1994	1041	130	133	257		193	171
v/s Ratio Prot	0.04	0.24	0.01	c0.05	c0.30	0.01	c0.04	0.04	0.00		c0.07	
v/s Ratio Perm			0.05			0.04			0.00			0.01
v/c Ratio	0.53	0.45	0.09	0.58	0.54	0.07	0.53	0.53	0.05		0.66	0.05
Uniform Delay, d1	66.9	20.5	11.4	66.0	20.9	8.9	66.7	66.7	53.2		64.4	60.2
Progression Factor	1.03	0.70	0.24	1.07	0.46	0.81	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.5	0.7	0.0	4.5	0.9	0.0	4.1	3.7	0.1		7.9	0.1
Delay (s)	72.1	15.1	2.8	75.0	10.6	7.2	70.8	70.4	53.3		72.3	60.4
Level of Service	E	B	A	E	B	A	E	E	D		E	E
Approach Delay (s)		17.4			14.9			64.1			67.8	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			23.8				HCM 2000 Level of Service		C			
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)		28.2			
Intersection Capacity Utilization			64.5%				ICU Level of Service		C			
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	852	107	175	948	167	231	121	248	174	110	37
Future Volume (vph)	60	852	107	175	948	167	231	121	248	174	110	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	4.0	6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	61	869	109	179	967	170	236	123	253	178	112	38
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	214	0	0	33
Lane Group Flow (vph)	61	869	109	179	967	75	236	123	39	142	148	5
Heavy Vehicles (%)	0%	2%	1%	2%	1%	1%	0%	2%	1%	1%	1%	0%
Turn Type	Prot	NA	Free	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			Free			6			4			3
Actuated Green, G (s)	13.3	59.2	150.0	20.2	66.3	66.3	23.3	23.3	23.3	17.8	17.8	17.8
Effective Green, g (s)	13.3	59.2	150.0	20.2	66.3	66.3	23.3	23.3	23.3	17.8	17.8	17.8
Actuated g/C Ratio	0.09	0.39	1.00	0.13	0.44	0.44	0.16	0.16	0.16	0.12	0.12	0.12
Clearance Time (s)	6.7	5.7		6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	160	1396	1599	238	1579	706	280	289	248	201	209	191
v/s Ratio Prot	0.03	c0.25		c0.10	0.27		c0.13	0.07		0.08	c0.08	
v/s Ratio Perm			0.07			0.05			0.02			0.00
v/c Ratio	0.38	0.62	0.07	0.75	0.61	0.11	0.84	0.43	0.16	0.71	0.71	0.02
Uniform Delay, d1	64.5	36.4	0.0	62.5	32.0	24.5	61.6	57.3	54.9	63.6	63.6	58.4
Progression Factor	0.73	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.9	0.1	12.6	1.8	0.3	20.0	1.0	0.3	10.8	10.5	0.1
Delay (s)	48.5	25.6	0.1	75.1	33.8	24.8	81.6	58.3	55.2	74.3	74.1	58.5
Level of Service	D	C	A	E	C	C	F	E	E	E	E	E
Approach Delay (s)		24.3			38.3			66.0			72.4	
Approach LOS		C			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			42.4				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			29.5		
Intersection Capacity Utilization			78.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

18: Winchester St & Branch Drive

12/03/2021

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	281	0	0	0
Future Volume (Veh/h)	0	0	281	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	305	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	2					
Median type	None					
Median storage veh						
Upstream signal (ft)	339					
pX, platoon unblocked						
vC, conflicting volume	305	305	305			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	305	305	305			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	687	735	1256			
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	305	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.18	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			18.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Queues

1: Winchester St/Broadview Avenue & Lee Highway

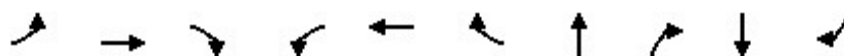
02/16/2022

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	260	770	60	1102	92	113	103	70	118	121	350
v/c Ratio	0.70	0.40	0.48	0.64	0.10	0.65	0.57	0.04	0.66	0.65	0.22
Control Delay	74.5	22.7	99.0	17.4	2.8	82.5	76.2	0.0	80.9	80.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.5	22.7	99.0	17.4	2.8	82.5	76.2	0.0	80.9	80.2	0.3
Queue Length 50th (ft)	128	231	62	341	5	108	98	0	118	122	0
Queue Length 95th (ft)	174	345	m112	255	28	173	159	0	184	188	0
Internal Link Dist (ft)		770		835			259			1381	
Turn Bay Length (ft)	283		128		195	75		85	210		
Base Capacity (vph)	425	1943	217	1718	1025	225	236	1615	264	273	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.40	0.28	0.64	0.09	0.50	0.44	0.04	0.45	0.44	0.22
Intersection Summary											
m Volume for 95th percentile queue is metered by upstream signal.											

Queues

2: Branch Drive & Lee Highway

02/16/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	111	895	4	67	1144	85	29	52	149	104
v/c Ratio	0.64	0.41	0.00	0.51	0.56	0.08	0.30	0.21	0.71	0.31
Control Delay	86.0	9.9	0.0	93.5	9.5	0.2	75.5	2.0	81.1	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	9.9	0.0	93.5	9.5	0.2	75.5	2.0	81.1	2.8
Queue Length 50th (ft)	96	164	0	70	94	0	28	0	143	0
Queue Length 95th (ft)	182	165	m0	122	101	0	63	0	211	3
Internal Link Dist (ft)		835			469		866		979	
Turn Bay Length (ft)	240		330	155		155		75		
Base Capacity (vph)	259	2197	1043	163	2059	1005	204	324	254	368
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	0.43	0.41	0.00	0.41	0.56	0.08	0.14	0.16	0.59	0.28

Intersection Summary

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

Queues

4: Fletcher Drive & Lee Highway

02/16/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	71	859	128	90	1074	103	69	70	85	127	77
v/c Ratio	0.53	0.45	0.13	0.58	0.54	0.10	0.53	0.53	0.26	0.66	0.28
Control Delay	80.8	16.4	0.7	82.2	11.5	1.1	80.7	79.9	7.1	79.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	16.4	0.7	82.2	11.5	1.1	80.7	79.9	7.1	79.8	4.3
Queue Length 50th (ft)	66	133	3	83	182	4	69	70	0	122	0
Queue Length 95th (ft)	m121	238	6	m148	183	m3	123	124	30	186	12
Internal Link Dist (ft)		349			910			1093		912	
Turn Bay Length (ft)	155		255	255		288			75		200
Base Capacity (vph)	244	1928	1092	220	1993	1108	250	257	388	281	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.45	0.12	0.41	0.54	0.09	0.28	0.27	0.22	0.45	0.22
Intersection Summary											
m Volume for 95th percentile queue is metered by upstream signal.											

Queues

5: Blackwell Road & Lee Highway

02/16/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	61	869	109	179	967	170	236	123	253	142	148	38
v/c Ratio	0.35	0.62	0.07	0.75	0.60	0.21	0.84	0.43	0.55	0.71	0.71	0.11
Control Delay	51.0	27.3	0.1	81.5	35.6	4.6	86.6	61.5	10.8	81.8	81.4	0.6
Queue Delay	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 Delay	51.0	27.3	0.1	81.5	35.6	4.6	86.6	61.5	10.8	81.8	81.4	0.6
Queue Length 50th (ft)	60	305	0	171	408	0	222	108	0	143	149	0
Queue Length 95th (ft)	100	424	0	247	491	48	#351	176	81	214	222	0
Internal Link Dist (ft)		910			996			609			979	
Turn Bay Length (ft)	210		150	530		320	350			180		228
Base Capacity (vph)	182	1398	1599	310	1673	839	306	315	481	269	280	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.62	0.07	0.58	0.58	0.20	0.77	0.39	0.53	0.53	0.53	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

02/17/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	804	21	38	704	151	71	52	54	146	82	195
Future Volume (vph)	254	804	21	38	704	151	71	52	54	146	82	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3335	3425		1805	3438	1524	1770	1900	1615	1649	1759	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3335	3425		1805	3438	1524	1770	1900	1615	1649	1759	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	273	865	23	41	757	162	76	56	58	157	88	210
RTOR Reduction (vph)	0	1	0	0	0	69	0	0	0	0	0	0
Lane Group Flow (vph)	273	887	0	41	757	93	76	56	58	121	124	210
Heavy Vehicles (%)	5%	5%	5%	0%	5%	6%	2%	0%	0%	4%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4		4
Permitted Phases						6			Free			Free
Actuated Green, G (s)	16.7	75.7		7.5	65.0	80.7	11.3	11.3	140.0	15.7	15.7	140.0
Effective Green, g (s)	16.7	75.7		7.5	65.0	80.7	11.3	11.3	140.0	15.7	15.7	140.0
Actuated g/C Ratio	0.12	0.54		0.05	0.46	0.58	0.08	0.08	1.00	0.11	0.11	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	397	1851		96	1596	878	142	153	1615	184	197	1583
v/s Ratio Prot	c0.08	c0.26		0.02	0.22	0.01	c0.04	0.03		c0.07	0.07	
v/s Ratio Perm						0.05			0.04			0.13
v/c Ratio	0.69	0.48		0.43	0.47	0.11	0.54	0.37	0.04	0.66	0.63	0.13
Uniform Delay, d1	59.1	19.9		64.2	25.8	13.4	61.8	61.0	0.0	59.6	59.4	0.0
Progression Factor	1.00	1.00		1.18	0.58	2.01	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.9		2.8	0.9	0.1	3.8	1.5	0.0	8.2	6.2	0.2
Delay (s)	64.0	20.8		78.3	16.0	27.0	65.7	62.4	0.0	67.8	65.5	0.2
Level of Service	E	C		E	B	C	E	E	A	E	E	A
Approach Delay (s)		31.0			20.5			44.7			36.0	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.1									
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			140.0									
Intersection Capacity Utilization			58.7%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

02/17/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	957	7	55	850	35	10	12	54	43	15	27
Future Volume (vph)	50	957	7	55	850	35	10	12	54	43	15	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1752	3438	1615	1805	3438	1615		1857	1468		1730	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1752	3438	1615	1805	3438	1615		1857	1468		1730	1495
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	1063	8	61	944	39	11	13	60	48	17	30
RTOR Reduction (vph)	0	0	3	0	0	14	0	0	57	0	0	28
Lane Group Flow (vph)	56	1063	5	61	944	25	0	24	3	0	65	2
Heavy Vehicles (%)	3%	5%	0%	0%	5%	0%	0%	0%	10%	8%	0%	8%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	8.6	88.9	88.9	8.9	89.7	89.7		6.3	6.3		9.3	9.3
Effective Green, g (s)	8.6	88.9	88.9	8.9	89.7	89.7		6.3	6.3		9.3	9.3
Actuated g/C Ratio	0.06	0.64	0.64	0.06	0.64	0.64		0.04	0.04		0.07	0.07
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	107	2183	1025	114	2202	1034		83	66		114	99
v/s Ratio Prot	0.03	c0.31		c0.03	0.27			c0.01			c0.04	
v/s Ratio Perm			0.00			0.02			0.00			0.00
v/c Ratio	0.52	0.49	0.00	0.54	0.43	0.02		0.29	0.04		0.57	0.02
Uniform Delay, d1	63.7	13.5	9.4	63.5	12.5	9.2		64.7	64.0		63.4	61.1
Progression Factor	1.14	0.37	1.00	1.27	0.15	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	4.2	0.7	0.0	4.6	0.6	0.0		1.9	0.3		6.7	0.1
Delay (s)	76.7	5.7	9.4	85.0	2.5	9.2		66.6	64.2		70.1	61.2
Level of Service	E	A	A	F	A	A		E	E		E	E
Approach Delay (s)		9.2			7.5			64.9			67.3	
Approach LOS		A			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			12.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			26.6		
Intersection Capacity Utilization			58.0%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

02/17/2022

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	22	36	998	0	6	3	855	9	0	0	6	10
Future Volume (Veh/h)	22	36	998	0	6	3	855	9	0	0	6	10
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	40	1097	0	0	3	940	10	0	0	7	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage (veh)												
Upstream signal (ft)			549				429					
pX, platoon unblocked	0.00	0.88			0.00	0.84			0.90	0.90	0.84	0.90
vC, conflicting volume	0	950			0	1097			1722	2133	548	1582
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	675			0	735			987	1444	82	831
tC, single (s)	0.0	4.2			0.0	4.1			7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	0.0	2.3			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	95			0	100			100	100	99	95
cM capacity (veh/h)	0	781			0	739			161	113	813	227
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1	SB 2	
Volume Total	40	548	548	0	3	470	470	10	7	11	69	
Volume Left	40	0	0	0	3	0	0	0	0	11	0	
Volume Right	0	0	0	0	0	0	0	10	7	0	69	
cSH	781	1700	1700	1700	739	1700	1700	1700	813	227	794	
Volume to Capacity	0.05	0.32	0.32	0.00	0.00	0.28	0.28	0.01	0.01	0.05	0.09	
Queue Length 95th (ft)	4	0	0	0	0	0	0	0	1	4	7	
Control Delay (s)	9.9	0.0	0.0	0.0	9.9	0.0	0.0	0.0	9.5	21.7	10.0	
Lane LOS	A				A				A	C	A	
Approach Delay (s)	0.3				0.0				9.5	11.6		
Approach LOS									A	B		
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			48.1%			ICU Level of Service				A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

02/17/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	63
Future Volume (Veh/h)	0	63
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.91	0.91
Hourly flow rate (vph)	0	69
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked	0.90	0.88
vC, conflicting volume	2123	470
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1433	131
tC, single (s)	6.5	6.9
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	91
cM capacity (veh/h)	115	794
Direction, Lane #		

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

02/17/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	42	917	61	22	821	38	23	9	21	52	12	27
Future Volume (vph)	42	917	61	22	821	38	23	9	21	52	12	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3438	1553	1719	3438	1615	1715	1650	1455		1740	1429
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3438	1553	1719	3438	1615	1715	1650	1455		1740	1429
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	44	955	64	23	855	40	24	9	22	54	12	28
RTOR Reduction (vph)	0	0	20	0	0	12	0	0	20	0	0	26
Lane Group Flow (vph)	44	955	44	23	855	28	16	17	2	0	67	2
Heavy Vehicles (%)	0%	5%	4%	5%	5%	0%	0%	13%	11%	4%	9%	13%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	5	2	4	1	6	3	4	4	1	3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	7.7	90.1	96.1	6.3	89.1	98.5	6.0	6.0	12.3		9.4	9.4
Effective Green, g (s)	7.7	90.1	96.1	6.3	89.1	98.5	6.0	6.0	12.3		9.4	9.4
Actuated g/C Ratio	0.06	0.64	0.69	0.04	0.64	0.70	0.04	0.04	0.09		0.07	0.07
Clearance Time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	99	2212	1066	77	2188	1136	73	70	127		116	95
v/s Ratio Prot	c0.02	c0.28	0.00	0.01	0.25	0.00	0.01	c0.01	0.00		c0.04	
v/s Ratio Perm			0.03			0.02			0.00			0.00
v/c Ratio	0.44	0.43	0.04	0.30	0.39	0.02	0.22	0.24	0.02		0.58	0.02
Uniform Delay, d1	64.1	12.3	7.1	64.7	12.3	6.3	64.7	64.8	58.3		63.4	61.0
Progression Factor	1.10	0.54	1.68	1.44	0.07	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.9	0.6	0.0	2.0	0.5	0.0	1.5	1.8	0.0		6.8	0.1
Delay (s)	73.1	7.2	11.9	95.0	1.3	6.3	66.3	66.6	58.4		70.2	61.1
Level of Service	E	A	B	F	A	A	E	E	E		E	E
Approach Delay (s)		10.2			3.9			63.2			67.5	
Approach LOS		B			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			11.4			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			28.2			
Intersection Capacity Utilization			57.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

02/17/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	833	109	227	743	136	112	50	184	100	46	16
Future Volume (vph)	48	833	109	227	743	136	112	50	184	100	46	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	4.0	6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1656	3406	1583	1770	3438	1553	1770	1827	1568	1618	1711	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1656	3406	1583	1770	3438	1553	1770	1827	1568	1618	1711	1509
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	53	915	120	249	816	149	123	55	202	110	51	18
RTOR Reduction (vph)	0	0	0	0	0	85	0	0	180	0	0	16
Lane Group Flow (vph)	53	915	120	249	816	64	123	55	22	79	82	2
Heavy Vehicles (%)	9%	6%	2%	2%	5%	4%	2%	4%	3%	6%	2%	7%
Turn Type	Prot	NA	Free	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			Free			6			4			3
Actuated Green, G (s)	23.4	58.5	140.0	24.8	60.1	60.1	15.0	15.0	15.0	12.2	12.2	12.2
Effective Green, g (s)	23.4	58.5	140.0	24.8	60.1	60.1	15.0	15.0	15.0	12.2	12.2	12.2
Actuated g/C Ratio	0.17	0.42	1.00	0.18	0.43	0.43	0.11	0.11	0.11	0.09	0.09	0.09
Clearance Time (s)	6.7	5.7		6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	276	1423	1583	313	1475	666	189	195	168	140	149	131
v/s Ratio Prot	0.03	c0.27		c0.14	0.24		c0.07	0.03		c0.05	0.05	
v/s Ratio Perm			0.08			0.04			0.01			0.00
v/c Ratio	0.19	0.64	0.08	0.80	0.55	0.10	0.65	0.28	0.13	0.56	0.55	0.01
Uniform Delay, d1	50.2	32.4	0.0	55.2	29.9	23.8	60.0	57.5	56.6	61.3	61.3	58.4
Progression Factor	0.75	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	2.1	0.1	13.1	1.5	0.3	7.8	0.8	0.3	5.1	4.3	0.0
Delay (s)	38.0	23.0	0.1	68.2	31.4	24.1	67.8	58.3	56.9	66.5	65.6	58.4
Level of Service	D	C	A	E	C	C	E	E	E	E	E	E
Approach Delay (s)		21.2			38.1			60.6			65.3	
Approach LOS		C			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			36.4			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			29.5			
Intersection Capacity Utilization			66.2%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: Winchester St/Broadview Avenue & Lee Highway

02/17/2022



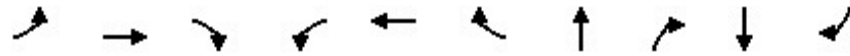
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	273	888	41	757	162	76	56	58	121	124	210
v/c Ratio	0.69	0.47	0.37	0.47	0.18	0.53	0.37	0.04	0.65	0.63	0.13
Control Delay	68.1	22.5	81.9	17.3	3.1	74.5	66.4	0.0	75.3	72.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	22.5	81.9	17.3	3.1	74.5	66.4	0.0	75.3	72.6	0.2
Queue Length 50th (ft)	124	259	39	84	1	68	49	0	112	115	0
Queue Length 95th (ft)	168	392	83	164	39	119	92	0	176	178	0
Internal Link Dist (ft)		770		835			259			1381	
Turn Bay Length (ft)	283		128		195	75		85	210		
Base Capacity (vph)	485	1884	126	1595	1017	236	253	1615	313	334	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.47	0.33	0.47	0.16	0.32	0.22	0.04	0.39	0.37	0.13

Intersection Summary

Queues

2: Branch Drive & Lee Highway

02/17/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	56	1063	8	61	944	39	24	60	65	30
v/c Ratio	0.46	0.46	0.01	0.47	0.41	0.03	0.24	0.30	0.50	0.13
Control Delay	81.1	6.1	0.0	89.3	2.6	0.1	69.0	3.8	74.4	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	6.1	0.0	89.3	2.6	0.1	69.0	3.8	74.4	1.2
Queue Length 50th (ft)	50	116	0	58	37	0	21	0	58	0
Queue Length 95th (ft)	96	129	0	108	50	0	53	0	106	0
Internal Link Dist (ft)		835			469		866		979	
Turn Bay Length (ft)	240		330	155		155		75		
Base Capacity (vph)	195	2315	1132	234	2330	1138	244	304	179	264
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	0.29	0.46	0.01	0.26	0.41	0.03	0.10	0.20	0.36	0.11

Intersection Summary

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

Queues

4: Fletcher Drive & Lee Highway

02/17/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	44	955	64	23	855	40	16	17	22	67	28
v/c Ratio	0.39	0.41	0.06	0.25	0.37	0.03	0.18	0.20	0.08	0.50	0.12
Control Delay	76.9	7.7	0.6	96.5	1.3	0.1	67.8	68.7	0.6	74.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.9	7.7	0.6	96.5	1.3	0.1	67.8	68.7	0.6	74.3	1.1
Queue Length 50th (ft)	42	86	0	22	2	0	14	15	0	60	0
Queue Length 95th (ft)	86	131	7	m42	69	m1	41	43	0	109	0
Internal Link Dist (ft)	349				910		1093		912		
Turn Bay Length (ft)	155	255		255	288		75		200		
Base Capacity (vph)	184	2351	1220	224	2325	1322	207	199	381	224	295
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.41	0.05	0.10	0.37	0.03	0.08	0.09	0.06	0.30	0.09
Intersection Summary											
m Volume for 95th percentile queue is metered by upstream signal.											

Queues

5: Blackwell Road & Lee Highway

02/17/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	53	915	120	249	816	149	123	55	202	79	82	18
v/c Ratio	0.18	0.64	0.08	0.80	0.54	0.19	0.65	0.28	0.58	0.56	0.55	0.06
Control Delay	37.1	25.4	0.1	73.0	34.3	3.9	75.1	59.5	13.9	75.9	74.4	0.4
Queue Delay	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 Delay	37.1	25.4	0.1	73.0	34.3	3.9	75.1	59.5	13.9	75.9	74.4	0.4
Queue Length 50th (ft)	27	224	0	220	330	0	109	47	0	73	76	0
Queue Length 95th (ft)	79	#541	0	300	396	38	171	88	74	128	132	0
Internal Link Dist (ft)		910			996			609			979	
Turn Bay Length (ft)	210		150	530		320	350			180		228
Base Capacity (vph)	301	1422	1583	408	1722	858	245	253	391	217	229	369
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.64	0.08	0.61	0.47	0.17	0.50	0.22	0.52	0.36	0.36	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	804	40	77	1209	101	124	113	77	202	59	384
Future Volume (vph)	286	804	40	77	1209	101	124	113	77	202	59	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	292	820	41	79	1234	103	127	115	79	206	60	392
RTOR Reduction (vph)	0	2	0	0	0	38	0	0	0	0	0	0
Lane Group Flow (vph)	292	859	0	79	1234	65	127	115	79	132	134	392
Heavy Vehicles (%)	1%	1%	3%	0%	1%	0%	0%	0%	0%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases						6			Free			Free
Actuated Green, G (s)	17.0	76.0		11.9	69.4	86.5	15.2	15.2	150.0	17.1	17.1	150.0
Effective Green, g (s)	17.0	76.0		11.9	69.4	86.5	15.2	15.2	150.0	17.1	17.1	150.0
Actuated g/C Ratio	0.11	0.51		0.08	0.46	0.58	0.10	0.10	1.00	0.11	0.11	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	392	1796		143	1653	931	182	192	1615	191	198	1583
v/s Ratio Prot	c0.08	c0.24		0.04	c0.35	0.01	c0.07	0.06		c0.08	0.08	
v/s Ratio Perm						0.03			0.05			0.25
v/c Ratio	0.74	0.48		0.55	0.75	0.07	0.70	0.60	0.05	0.69	0.68	0.25
Uniform Delay, d1	64.4	24.1		66.5	33.1	14.0	65.2	64.5	0.0	63.9	63.8	0.0
Progression Factor	1.00	1.00		1.34	0.42	1.13	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	0.9		3.6	2.5	0.0	11.1	5.0	0.1	10.3	8.8	0.4
Delay (s)	71.9	25.0		92.8	16.4	15.9	76.2	69.4	0.1	74.2	72.6	0.4
Level of Service	E	C		F	B	B	E	E	A	E	E	A
Approach Delay (s)		36.9			20.6			55.1			29.9	
Approach LOS		D			C			E			C	
Intersection Summary												
HCM 2000 Control Delay			30.7									
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			74.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	972	4	73	1243	92	11	20	56	141	20	114
Future Volume (vph)	121	972	4	73	1243	92	11	20	56	141	20	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3574	1615	1805	3574	1615		1868	1583		1805	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3574	1615	1805	3574	1615		1868	1583		1805	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	125	1002	4	75	1281	95	11	21	58	145	21	118
RTOR Reduction (vph)	0	0	2	0	0	43	0	0	55	0	0	103
Lane Group Flow (vph)	125	1002	2	75	1281	52	0	32	3	0	166	15
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		4	4		3	3	
Permitted Phases			6			2			4			3
Actuated Green, G (s)	15.6	86.3	86.3	11.1	82.3	82.3		7.0	7.0		19.0	19.0
Effective Green, g (s)	15.6	86.3	86.3	11.1	82.3	82.3		7.0	7.0		19.0	19.0
Actuated g/C Ratio	0.10	0.58	0.58	0.07	0.55	0.55		0.05	0.05		0.13	0.13
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6		6.6	6.6		7.5	7.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	187	2056	929	133	1960	886		87	73		228	204
v/s Ratio Prot	c0.07	c0.28		0.04	c0.36			c0.02			c0.09	
v/s Ratio Perm			0.00			0.03			0.00			0.01
v/c Ratio	0.67	0.49	0.00	0.56	0.65	0.06		0.37	0.04		0.73	0.07
Uniform Delay, d1	64.7	18.8	13.5	67.1	23.8	15.8		69.4	68.3		63.0	57.7
Progression Factor	1.11	0.51	1.00	1.19	0.36	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	8.0	0.8	0.0	4.6	1.5	0.1		2.6	0.2		11.0	0.2
Delay (s)	79.9	10.4	13.5	84.4	10.1	15.9		72.0	68.5		74.0	57.9
Level of Service	E	B	B	F	B	B		E	E		E	E
Approach Delay (s)		18.1			14.3			69.7			67.3	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			22.5				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			26.6		
Intersection Capacity Utilization			72.8%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

12/03/2021

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	10	45	1122	0	4	1	1350	12	0	0	13	9
Future Volume (Veh/h)	10	45	1122	0	4	1	1350	12	0	0	13	9
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	47	1169	0	0	1	1406	13	0	0	14	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage (veh)												
Upstream signal (ft)			549				429					
pX, platoon unblocked	0.00	0.76			0.00	0.84			0.85	0.85	0.84	0.85
vC, conflicting volume	0	1419			0	1169			2018	2684	584	2100
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	929			0	808			962	1749	108	1060
tC, single (s)	0.0	4.1			0.0	4.1			7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	0.0	2.2			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	92			0	100			100	100	98	94
cM capacity (veh/h)	0	568			0	690			159	67	778	141
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1	SB 2	
Volume Total	47	584	584	0	1	703	703	13	14	9	50	
Volume Left	47	0	0	0	1	0	0	0	0	9	0	
Volume Right	0	0	0	0	0	0	0	13	14	0	50	
cSH	568	1700	1700	1700	690	1700	1700	1700	778	141	833	
Volume to Capacity	0.08	0.34	0.34	0.00	0.00	0.41	0.41	0.01	0.02	0.06	0.06	
Queue Length 95th (ft)	7	0	0	0	0	0	0	0	1	5	5	
Control Delay (s)	11.9	0.0	0.0	0.0	10.2	0.0	0.0	0.0	9.7	32.3	9.6	
Lane LOS	B				B				A	D	A	
Approach Delay (s)	0.5				0.0				9.7	13.1		
Approach LOS									A	B		
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization			60.7%			ICU Level of Service				B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis3: BP Gas Station/Village Center & Lee Highway

12/03/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	48
Future Volume (Veh/h)	0	48
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.96	0.96
Hourly flow rate (vph)	0	50
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked	0.85	0.76
vC, conflicting volume	2671	703
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1734	0
tC, single (s)	6.5	6.9
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	94
cM capacity (veh/h)	69	833
Direction, Lane #		

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	933	138	97	1167	112	113	38	92	108	30	84
Future Volume (vph)	77	933	138	97	1167	112	113	38	92	108	30	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (prot)	1805	3539	1454	1805	3574	1568	1715	1761	1599		1829	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00		0.96	1.00
Satd. Flow (perm)	1805	3539	1454	1805	3574	1568	1715	1761	1599		1829	1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	79	962	142	100	1203	115	116	39	95	111	31	87
RTOR Reduction (vph)	0	0	56	0	0	38	0	0	79	0	0	77
Lane Group Flow (vph)	79	962	86	100	1203	77	77	78	16	0	142	10
Heavy Vehicles (%)	0%	2%	0%	0%	1%	3%	0%	0%	1%	0%	0%	0%
Parking (#/hr)			0									
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	5	2	4	1	6	3	4	4	1	3	3	
Permitted Phases			2			6			4			3
Actuated Green, G (s)	11.9	79.0	91.1	13.6	81.1	98.2	12.1	12.1	25.7		17.1	17.1
Effective Green, g (s)	11.9	79.0	91.1	13.6	81.1	98.2	12.1	12.1	25.7		17.1	17.1
Actuated g/C Ratio	0.08	0.53	0.61	0.09	0.54	0.65	0.08	0.08	0.17		0.11	0.11
Clearance Time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1	7.1	6.7		8.9	8.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	143	1863	883	163	1932	1026	138	142	273		208	184
v/s Ratio Prot	0.04	0.27	0.01	c0.06	c0.34	0.01	c0.04	0.04	0.01		c0.08	
v/s Ratio Perm			0.05			0.04			0.00			0.01
v/c Ratio	0.55	0.52	0.10	0.61	0.62	0.07	0.56	0.55	0.06		0.68	0.05
Uniform Delay, d1	66.5	23.1	12.3	65.7	23.9	9.4	66.4	66.3	52.0		63.8	59.2
Progression Factor	1.07	0.67	0.18	1.17	0.41	0.16	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.1	0.9	0.0	5.0	1.1	0.0	4.8	4.3	0.1		8.9	0.1
Delay (s)	75.0	16.3	2.3	81.5	10.8	1.5	71.2	70.6	52.1		72.7	59.4
Level of Service	E	B	A	F	B	A	E	E	D		E	E
Approach Delay (s)		18.6			15.1			63.8			67.7	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			24.3									
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			68.7%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Future Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	4.0	6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	973	122	200	1083	191	264	139	284	199	126	42
RTOR Reduction (vph)	0	0	0	0	0	107	0	0	238	0	0	37
Lane Group Flow (vph)	69	973	122	200	1083	84	264	139	46	159	166	5
Heavy Vehicles (%)	0%	2%	1%	2%	1%	1%	0%	2%	1%	1%	1%	0%
Turn Type	Prot	NA	Free	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			Free			6			4			3
Actuated Green, G (s)	11.9	55.6	150.0	21.5	65.4	65.4	24.5	24.5	24.5	18.9	18.9	18.9
Effective Green, g (s)	11.9	55.6	150.0	21.5	65.4	65.4	24.5	24.5	24.5	18.9	18.9	18.9
Actuated g/C Ratio	0.08	0.37	1.00	0.14	0.44	0.44	0.16	0.16	0.16	0.13	0.13	0.13
Clearance Time (s)	6.7	5.7		6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	143	1311	1599	253	1558	697	294	304	261	213	222	203
v/s Ratio Prot	0.04	c0.27		0.11	c0.30		c0.15	0.07		0.09	c0.09	
v/s Ratio Perm			0.08			0.05			0.03			0.00
v/c Ratio	0.48	0.74	0.08	0.79	0.70	0.12	0.90	0.46	0.18	0.75	0.75	0.03
Uniform Delay, d1	66.1	41.0	0.0	62.1	34.2	25.2	61.5	56.7	54.1	63.2	63.2	57.5
Progression Factor	0.75	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	3.4	0.1	15.4	2.6	0.4	27.7	1.1	0.3	13.3	12.9	0.1
Delay (s)	52.1	29.5	0.1	77.4	36.8	25.5	89.2	57.8	54.4	76.5	76.1	57.5
Level of Service	D	C	A	E	D	C	F	E	D	E	E	E
Approach Delay (s)		27.7			40.9			68.5			74.2	
Approach LOS		C			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			45.2			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			29.5			
Intersection Capacity Utilization			84.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: Winchester St/Broadview Avenue & Lee Highway

02/14/2022



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	292	861	79	1234	103	127	115	79	132	134	392
v/c Ratio	0.74	0.48	0.55	0.75	0.11	0.69	0.60	0.05	0.69	0.68	0.25
Control Delay	76.4	26.9	99.1	17.9	2.9	84.1	76.8	0.1	81.7	80.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	26.9	99.1	17.9	2.9	84.1	76.8	0.1	81.7	80.2	0.4
Queue Length 50th (ft)	144	283	82	316	1	122	109	0	132	134	0
Queue Length 95th (ft)	196	411	m128	235	m36	191	174	0	203	203	0
Internal Link Dist (ft)		770		835			268			1381	
Turn Bay Length (ft)	283		128		195	75		85	210		
Base Capacity (vph)	427	1798	217	1653	998	225	236	1615	264	273	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.48	0.36	0.75	0.10	0.56	0.49	0.05	0.50	0.49	0.25

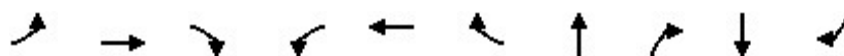
Intersection Summary

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

Queues

2: Branch Drive & Lee Highway

02/14/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	125	1002	4	75	1281	95	32	58	166	118
v/c Ratio	0.66	0.48	0.00	0.56	0.64	0.10	0.32	0.24	0.73	0.34
Control Delay	86.7	10.8	0.0	97.7	10.6	0.2	75.7	2.2	80.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.7	10.8	0.0	97.7	10.6	0.2	75.7	2.2	80.7	4.6
Queue Length 50th (ft)	109	187	0	77	103	0	31	0	159	0
Queue Length 95th (ft)	202	183	m0	m128	216	m0	67	0	231	18
Internal Link Dist (ft)		835			469		256		979	
Turn Bay Length (ft)	240		330	155		155		75		
Base Capacity (vph)	259	2088	997	160	1992	978	204	324	261	374
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	0.48	0.48	0.00	0.47	0.64	0.10	0.16	0.18	0.64	0.32

Intersection Summary

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

Queues

4: Fletcher Drive & Lee Highway

02/14/2022

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	79	962	142	100	1203	115	77	78	95	142	87
v/c Ratio	0.55	0.52	0.14	0.61	0.62	0.11	0.56	0.55	0.27	0.68	0.30
Control Delay	79.9	20.2	0.7	85.8	12.0	0.4	80.9	80.1	6.5	79.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	20.2	0.7	85.8	12.0	0.4	80.9	80.1	6.5	79.8	6.0
Queue Length 50th (ft)	74	160	3	96	168	4	77	78	0	136	0
Queue Length 95th (ft)	m130	308	6	m151	187	m1	133	134	31	202	23
Internal Link Dist (ft)		349			910			1093		912	
Turn Bay Length (ft)	155		255	255		288			75		200
Base Capacity (vph)	244	1864	1072	221	1932	1087	250	257	404	283	350
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.52	0.13	0.45	0.62	0.11	0.31	0.30	0.24	0.50	0.25
Intersection Summary											
m Volume for 95th percentile queue is metered by upstream signal.											

Queues

5: Blackwell Road & Lee Highway

02/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	69	973	122	200	1083	191	264	139	284	159	166	42
v/c Ratio	0.43	0.74	0.08	0.79	0.68	0.23	0.90	0.46	0.57	0.75	0.75	0.12
Control Delay	55.7	30.4	0.1	83.4	37.9	4.3	92.8	61.9	10.5	83.7	83.2	0.7
Queue Delay	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 Delay	55.7	30.4	0.1	83.4	37.9	4.3	92.8	61.9	10.5	83.7	83.2	0.7
Queue Length 50th (ft)	51	352	0	191	487	1	255	124	0	160	167	0
Queue Length 95th (ft)	#132	#596	0	275	547	49	#416	196	86	240	247	0
Internal Link Dist (ft)		910			996			609			979	
Turn Bay Length (ft)	210		150	530		320	350			180		228
Base Capacity (vph)	165	1313	1599	310	1640	836	305	315	506	269	280	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.74	0.08	0.65	0.66	0.23	0.87	0.44	0.56	0.59	0.59	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	804	40	77	1209	101	124	133	77	202	59	384
Future Volume (vph)	286	804	40	77	1209	101	124	133	77	202	59	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	292	820	41	79	1234	103	127	136	79	206	60	392
RTOR Reduction (vph)	0	2	0	0	0	38	0	0	0	0	0	0
Lane Group Flow (vph)	292	859	0	79	1234	65	127	136	79	132	134	392
Heavy Vehicles (%)	1%	1%	3%	0%	1%	0%	0%	0%	0%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases						6			Free			Free
Actuated Green, G (s)	17.0	75.8		11.9	69.2	86.3	15.4	15.4	150.0	17.1	17.1	150.0
Effective Green, g (s)	17.0	75.8		11.9	69.2	86.3	15.4	15.4	150.0	17.1	17.1	150.0
Actuated g/C Ratio	0.11	0.51		0.08	0.46	0.58	0.10	0.10	1.00	0.11	0.11	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	392	1791		143	1648	929	185	195	1615	191	198	1583
v/s Ratio Prot	c0.08	c0.24		0.04	c0.35	0.01	0.07	c0.07		c0.08	0.08	
v/s Ratio Perm						0.03			0.05			0.25
v/c Ratio	0.74	0.48		0.55	0.75	0.07	0.69	0.70	0.05	0.69	0.68	0.25
Uniform Delay, d1	64.4	24.2		66.5	33.2	14.1	65.0	65.0	0.0	63.9	63.8	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	0.9		4.6	3.2	0.0	10.1	10.4	0.1	10.3	8.8	0.4
Delay (s)	71.9	25.1		71.0	36.4	14.1	75.1	75.4	0.1	74.2	72.6	0.4
Level of Service	E	C		E	D	B	E	E	A	E	E	A
Approach Delay (s)		37.0			36.7			57.9			29.9	
Approach LOS		D			D			E			C	
Intersection Summary												
HCM 2000 Control Delay			37.6			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			31.3			
Intersection Capacity Utilization			81.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

12/03/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	121	972	4	73	1243	92	11	0	56	141	0	133	
Future Volume (vph)	121	972	4	73	1243	92	11	0	56	141	0	133	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6	6.6		6.6	7.5		5.7	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00		0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	
Satd. Flow (prot)	1805	3574	1615	1805	3574	1615	1805		1583	1787		1615	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	
Satd. Flow (perm)	1805	3574	1615	1805	3574	1615	1805		1583	1787		1615	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	125	1002	4	75	1281	95	11	0	58	145	0	137	
RTOR Reduction (vph)	0	0	1	0	0	37	0	0	51	0	0	48	
Lane Group Flow (vph)	125	1002	3	75	1281	58	11	0	7	145	0	89	
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	2%	1%	0%	0%	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot		Perm	Prot		Perm	
Protected Phases	1	6		5	2		4			8			
Permitted Phases			6			2			4			6	
Actuated Green, G (s)	14.1	82.2	82.2	9.3	77.9	77.9	16.4		16.4	15.5		82.2	
Effective Green, g (s)	14.1	82.2	82.2	9.3	77.9	77.9	16.4		16.4	15.5		82.2	
Actuated g/C Ratio	0.11	0.65	0.65	0.07	0.61	0.61	0.13		0.13	0.12		0.65	
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6	6.6		6.6	7.5		5.7	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	200	2313	1045	132	2192	990	233		204	218		1045	
v/s Ratio Prot	c0.07	c0.28		0.04	c0.36		0.01			c0.08			
v/s Ratio Perm			0.00			0.04			0.00			0.05	
v/c Ratio	0.62	0.43	0.00	0.57	0.58	0.06	0.05		0.04	0.67		0.08	
Uniform Delay, d1	53.9	11.0	7.9	56.9	14.8	9.8	48.5		48.4	53.3		8.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	6.0	0.6	0.0	5.5	1.1	0.1	0.1		0.1	7.4		0.2	
Delay (s)	59.9	11.6	7.9	62.4	15.9	10.0	48.5		48.5	60.7		8.5	
Level of Service	E	B	A	E	B	A	D		D	E		A	
Approach Delay (s)		16.9			18.0			48.5			35.4		
Approach LOS		B			B			D			D		
Intersection Summary													
HCM 2000 Control Delay			19.9									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			127.0							20.0		Sum of lost time (s)	
Intersection Capacity Utilization			65.1%							C		ICU Level of Service	
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↶↷	↰	↰	↶↷	↰	↰		↰	↰		↰
Traffic Volume (vph)	77	933	138	97	1167	112	154	0	92	138	0	84
Future Volume (vph)	77	933	138	97	1167	112	154	0	92	138	0	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1		7.1	8.9		8.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00
Satd. Flow (prot)	1805	3539	1454	1805	3574	1568	1805		1599	1805		1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00
Satd. Flow (perm)	1805	3539	1454	1805	3574	1568	1805		1599	1805		1615
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	79	962	142	100	1203	115	159	0	95	142	0	87
RTOR Reduction (vph)	0	0	31	0	0	25	0	0	83	0	0	77
Lane Group Flow (vph)	79	962	111	100	1203	90	159	0	12	142	0	10
Heavy Vehicles (%)	0%	2%	0%	0%	1%	3%	0%	0%	1%	0%	0%	0%
Parking (#/hr)			0									
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		4			8		
Permitted Phases			2			6			4			8
Actuated Green, G (s)	11.9	98.2	117.1	13.6	100.3	117.4	18.9		18.9	17.1		17.1
Effective Green, g (s)	11.9	98.2	117.1	13.6	100.3	117.4	18.9		18.9	17.1		17.1
Actuated g/C Ratio	0.08	0.65	0.78	0.09	0.67	0.78	0.13		0.13	0.11		0.11
Clearance Time (s)	6.7	5.5	7.1	6.7	5.1	8.9	7.1		7.1	8.9		8.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	143	2316	1135	163	2389	1227	227		201	205		184
v/s Ratio Prot	0.04	0.27	0.01	c0.06	c0.34	0.01	c0.09			0.08		
v/s Ratio Perm			0.06			0.05			0.01			0.01
v/c Ratio	0.55	0.42	0.10	0.61	0.50	0.07	0.70		0.06	0.69		0.05
Uniform Delay, d1	66.5	12.3	3.9	65.7	12.4	3.8	62.8		57.7	63.9		59.2
Progression Factor	1.00	1.00	1.00	1.05	0.38	0.79	1.00		1.00	1.00		1.00
Incremental Delay, d2	4.6	0.6	0.0	5.0	0.6	0.0	9.4		0.1	9.7		0.1
Delay (s)	71.0	12.8	3.9	74.1	5.3	3.0	72.2		57.8	73.6		59.4
Level of Service	E	B	A	E	A	A	E		E	E		E
Approach Delay (s)		15.7			9.9			66.8			68.2	
Approach LOS		B			A			E			E	
Intersection Summary												
HCM 2000 Control Delay			21.1									
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			62.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Future Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	4.0	6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1698	1766	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	973	122	200	1083	191	264	139	284	199	126	42
RTOR Reduction (vph)	0	0	0	0	0	107	0	0	238	0	0	37
Lane Group Flow (vph)	69	973	122	200	1083	84	264	139	46	159	166	5
Heavy Vehicles (%)	0%	2%	1%	2%	1%	1%	0%	2%	1%	1%	1%	0%
Turn Type	Prot	NA	Free	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			Free			6			4			3
Actuated Green, G (s)	11.9	55.6	150.0	21.5	65.4	65.4	24.5	24.5	24.5	18.9	18.9	18.9
Effective Green, g (s)	11.9	55.6	150.0	21.5	65.4	65.4	24.5	24.5	24.5	18.9	18.9	18.9
Actuated g/C Ratio	0.08	0.37	1.00	0.14	0.44	0.44	0.16	0.16	0.16	0.13	0.13	0.13
Clearance Time (s)	6.7	5.7		6.7	5.5	5.5	8.9	8.9	8.9	8.2	8.2	8.2
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	143	1311	1599	253	1558	697	294	304	261	213	222	203
v/s Ratio Prot	0.04	c0.27		0.11	c0.30		c0.15	0.07		0.09	c0.09	
v/s Ratio Perm			0.08			0.05			0.03			0.00
v/c Ratio	0.48	0.74	0.08	0.79	0.70	0.12	0.90	0.46	0.18	0.75	0.75	0.03
Uniform Delay, d1	66.1	41.0	0.0	62.1	34.2	25.2	61.5	56.7	54.1	63.2	63.2	57.5
Progression Factor	0.91	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	3.6	0.1	15.4	2.6	0.4	27.7	1.1	0.3	13.3	12.9	0.1
Delay (s)	62.8	40.2	0.1	77.4	36.8	25.5	89.2	57.8	54.4	76.5	76.1	57.5
Level of Service	E	D	A	E	D	C	F	E	D	E	E	E
Approach Delay (s)		37.3			40.9			68.5			74.2	
Approach LOS		D			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			48.2			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			29.5			
Intersection Capacity Utilization			84.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Winchester St/Broadview Avenue & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	286	804	40	77	1209	101	124	113	77	202	59	384
Future Volume (vph)	286	804	40	77	1209	101	124	113	77	202	59	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3	4.0	9.4	9.4	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	3467	3545		1805	3574	1615	1805	1900	1615	1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	292	820	41	79	1234	103	127	115	79	206	60	392
RTOR Reduction (vph)	0	2	0	0	0	38	0	0	0	0	0	0
Lane Group Flow (vph)	292	859	0	79	1234	65	127	115	79	132	134	392
Heavy Vehicles (%)	1%	1%	3%	0%	1%	0%	0%	0%	0%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	Free	Split	NA	Free
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases						6			Free			Free
Actuated Green, G (s)	17.0	76.0		11.9	69.4	86.5	15.2	15.2	150.0	17.1	17.1	150.0
Effective Green, g (s)	17.0	76.0		11.9	69.4	86.5	15.2	15.2	150.0	17.1	17.1	150.0
Actuated g/C Ratio	0.11	0.51		0.08	0.46	0.58	0.10	0.10	1.00	0.11	0.11	1.00
Clearance Time (s)	7.8	5.2		6.9	5.8	9.4	8.3	8.3		9.4	9.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	392	1796		143	1653	931	182	192	1615	191	198	1583
v/s Ratio Prot	c0.08	c0.24		0.04	c0.35	0.01	c0.07	0.06		c0.08	0.08	
v/s Ratio Perm						0.03			0.05			0.25
v/c Ratio	0.74	0.48		0.55	0.75	0.07	0.70	0.60	0.05	0.69	0.68	0.25
Uniform Delay, d1	64.4	24.1		66.5	33.1	14.0	65.2	64.5	0.0	63.9	63.8	0.0
Progression Factor	1.00	1.00		1.27	0.54	1.30	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	0.9		3.7	2.6	0.0	11.1	5.0	0.1	10.3	8.8	0.4
Delay (s)	71.9	25.0		87.8	20.5	18.3	76.2	69.4	0.1	74.2	72.6	0.4
Level of Service	E	C		F	C	B	E	E	A	E	E	A
Approach Delay (s)		36.9			24.1			55.1			29.9	
Approach LOS		D			C			E			C	
Intersection Summary												
HCM 2000 Control Delay			32.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			31.3		
Intersection Capacity Utilization			74.6%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Branch Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	972	4	73	1243	92	11	20	56	141	20	114
Future Volume (vph)	121	972	4	73	1243	92	11	20	56	141	20	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.4	5.7	5.7	6.8	5.6	5.6	4.5	6.6		7.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.87	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1615	1805	3574	1615	1805	1666		1787	1658	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.73	1.00		0.71	1.00	
Satd. Flow (perm)	1805	3574	1615	1805	3574	1615	1382	1666		1327	1658	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	125	1002	4	75	1281	95	11	21	58	145	21	118
RTOR Reduction (vph)	0	0	2	0	0	41	0	55	0	0	97	0
Lane Group Flow (vph)	125	1002	2	75	1281	54	11	24	0	145	42	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	2%	1%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	15.4	88.3	88.3	11.2	84.6	84.6	8.2	8.2		26.3	26.3	
Effective Green, g (s)	15.4	88.3	88.3	11.2	84.6	84.6	8.2	8.2		26.3	26.3	
Actuated g/C Ratio	0.10	0.59	0.59	0.07	0.56	0.56	0.05	0.05		0.18	0.18	
Clearance Time (s)	6.4	5.7	5.7	6.8	5.6	5.6	4.5	6.6		7.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	185	2103	950	134	2015	910	83	91		280	290	
v/s Ratio Prot	c0.07	c0.28		0.04	c0.36		0.00	c0.01		c0.05	0.03	
v/s Ratio Perm			0.00			0.03	0.00			c0.04		
v/c Ratio	0.68	0.48	0.00	0.56	0.64	0.06	0.13	0.27		0.52	0.14	
Uniform Delay, d1	64.9	17.6	12.7	67.0	22.2	14.7	67.4	68.0		55.8	52.3	
Progression Factor	1.16	0.46	1.00	1.19	0.40	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	0.7	0.0	4.3	1.3	0.1	0.7	1.6		1.6	0.2	
Delay (s)	84.0	8.9	12.7	84.2	10.2	14.9	68.2	69.6		57.4	52.6	
Level of Service	F	A	B	F	B	B	E	E		E	D	
Approach Delay (s)		17.2			14.3			69.4			55.0	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			21.0			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				26.6		
Intersection Capacity Utilization			69.3%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

3: BP Gas Station/Village Center & Lee Highway

12/03/2021

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	10	45	1122	0	4	1	1350	12	0	0	13	9
Future Volume (Veh/h)	10	45	1122	0	4	1	1350	12	0	0	13	9
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	47	1169	0	0	1	1406	13	0	0	14	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage (veh)												
Upstream signal (ft)			549				429					
pX, platoon unblocked	0.00	0.78			0.00	0.84			0.86	0.86	0.84	0.86
vC, conflicting volume	0	1419			0	1169			2018	2684	584	2100
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	970			0	821			1019	1795	126	1115
tC, single (s)	0.0	4.1			0.0	4.1			7.5	6.5	6.9	7.5
tC, 2 stage (s)												
tF (s)	0.0	2.2			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	92			0	100			100	100	98	93
cM capacity (veh/h)	0	560			0	686			146	64	763	130
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1	SB 2	
Volume Total	47	584	584	0	1	703	703	13	14	9	50	
Volume Left	47	0	0	0	1	0	0	0	0	9	0	
Volume Right	0	0	0	0	0	0	0	13	14	0	50	
cSH	560	1700	1700	1700	686	1700	1700	1700	763	130	790	
Volume to Capacity	0.08	0.34	0.34	0.00	0.00	0.41	0.41	0.01	0.02	0.07	0.06	
Queue Length 95th (ft)	7	0	0	0	0	0	0	0	1	6	5	
Control Delay (s)	12.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	9.8	34.8	9.9	
Lane LOS	B				B				A	D	A	
Approach Delay (s)	0.5				0.0				9.8	13.7		
Approach LOS									A	B		
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			60.7%			ICU Level of Service				B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 3: BP Gas Station/Village Center & Lee Highway

12/03/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	0	48
Future Volume (Veh/h)	0	48
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.96	0.96
Hourly flow rate (vph)	0	50
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked	0.86	0.78
vC, conflicting volume	2671	703
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1780	50
tC, single (s)	6.5	6.9
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	94
cM capacity (veh/h)	65	790
Direction, Lane #		

HCM Signalized Intersection Capacity Analysis

4: Fletcher Drive & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	933	138	97	1167	112	113	38	92	108	30	84
Future Volume (vph)	77	933	138	97	1167	112	113	38	92	108	30	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.5	5.5	6.7	5.1	8.9	7.1	7.1		8.9	8.9	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3539	1454	1805	3574	1568	3502	1686		1805	1690	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	
Satd. Flow (perm)	1805	3539	1454	1805	3574	1568	3502	1686		1900	1690	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	79	962	142	100	1203	115	116	39	95	111	31	87
RTOR Reduction (vph)	0	0	63	0	0	39	0	62	0	0	72	0
Lane Group Flow (vph)	79	962	79	100	1203	76	116	72	0	111	46	0
Heavy Vehicles (%)	0%	2%	0%	0%	1%	3%	0%	0%	1%	0%	0%	0%
Parking (#/hr)			0									
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		pm+pt	NA	
Protected Phases	5	2		1	6	3	7	4		3	8	
Permitted Phases			2			6				8		
Actuated Green, G (s)	11.9	83.5	83.5	13.6	85.6	98.5	10.3	11.8		14.4	14.4	
Effective Green, g (s)	11.9	83.5	83.5	13.6	85.6	98.5	10.3	11.8		14.4	14.4	
Actuated g/C Ratio	0.08	0.56	0.56	0.09	0.57	0.66	0.07	0.08		0.10	0.10	
Clearance Time (s)	6.7	5.5	5.5	6.7	5.1	8.9	7.1	7.1		8.9	8.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	143	1970	809	163	2039	1029	240	132		182	162	
v/s Ratio Prot	0.04	0.27		c0.06	c0.34	0.01	0.03	c0.04		0.05	0.03	
v/s Ratio Perm			0.05			0.04				c0.01		
v/c Ratio	0.55	0.49	0.10	0.61	0.59	0.07	0.48	0.55		0.61	0.28	
Uniform Delay, d1	66.5	20.2	15.6	65.7	20.8	9.3	67.3	66.5		63.6	63.0	
Progression Factor	1.06	0.53	0.06	1.24	0.34	0.15	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	0.8	0.2	5.7	1.1	0.0	1.5	4.6		5.7	1.0	
Delay (s)	74.9	11.6	1.1	86.9	8.1	1.4	68.8	71.1		69.2	64.0	
Level of Service	E	B	A	F	A	A	E	E		E	E	
Approach Delay (s)		14.6			13.1			70.0			66.5	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			22.3									
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			74.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Blackwell Road & Lee Highway

12/03/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Future Volume (vph)	68	954	120	196	1061	187	259	136	278	195	123	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	5.7	8.9	6.7	5.5	8.2	8.9	8.9	6.7	8.2	8.2	8.2
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3539	1599	1770	3574	1599	1805	1863	1599	1787	1881	1615
Flt Permitted	0.95	1.00	1.00	0.13	1.00	1.00	0.59	1.00	1.00	0.56	1.00	1.00
Satd. Flow (perm)	1805	3539	1599	251	3574	1599	1124	1863	1599	1054	1881	1615
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	973	122	200	1083	191	264	139	284	199	126	42
RTOR Reduction (vph)	0	0	36	0	0	73	0	0	109	0	0	38
Lane Group Flow (vph)	69	973	86	200	1083	118	264	139	175	199	126	4
Heavy Vehicles (%)	0%	2%	1%	2%	1%	1%	0%	2%	1%	1%	1%	0%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	
Permitted Phases			2	6		6	4		4	8		8
Actuated Green, G (s)	12.2	71.4	88.5	77.1	77.1	92.4	33.2	16.1	33.8	29.6	14.3	14.3
Effective Green, g (s)	12.2	71.4	88.5	77.1	77.1	92.4	33.2	16.1	33.8	29.6	14.3	14.3
Actuated g/C Ratio	0.08	0.48	0.59	0.51	0.51	0.62	0.22	0.11	0.23	0.20	0.10	0.10
Clearance Time (s)	6.7	5.7	8.9	6.7	5.5	8.2	8.9	8.9	6.7	8.2	8.2	8.2
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
Lane Grp Cap (vph)	146	1684	943	308	1837	1072	326	199	360	282	179	153
v/s Ratio Prot	0.04	c0.27	0.01	0.08	c0.30	0.01	c0.09	0.07	0.06	0.07	0.07	
v/s Ratio Perm			0.04	c0.26		0.06	c0.09		0.05	0.07		0.00
v/c Ratio	0.47	0.58	0.09	0.65	0.59	0.11	0.81	0.70	0.49	0.71	0.70	0.03
Uniform Delay, d1	65.8	28.4	13.3	25.4	25.4	11.9	55.0	64.6	50.5	56.6	65.8	61.5
Progression Factor	0.72	0.54	0.58	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	1.3	0.0	4.7	1.4	0.0	13.8	10.2	1.0	7.8	11.9	0.1
Delay (s)	49.5	16.6	7.8	30.1	26.8	11.9	68.8	74.8	51.6	64.4	77.7	61.6
Level of Service	D	B	A	C	C	B	E	E	D	E	E	E
Approach Delay (s)		17.7			25.3			62.9			68.6	
Approach LOS		B			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			34.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			29.5			
Intersection Capacity Utilization			82.6%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Blackwell Road & Lee Highway

10/14/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑	↑		↑	↑	↑	↑	↑
Traffic Volume (vph)	0	852	107	175	948	167	0	181	248	174	110	37
Future Volume (vph)	0	852	107	175	948	167	0	181	248	174	110	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7	4.0	6.7	5.5	5.5		8.9	6.7	8.9	8.9	8.9
Lane Util. Factor		0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3574	1599	1787	3574	1599		1881	1599	1787	1881	1599
Flt Permitted		1.00	1.00	0.16	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3574	1599	308	3574	1599		1881	1599	1787	1881	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.97	0.97	0.97	0.89	0.89	0.89
Adj. Flow (vph)	0	926	116	192	1042	184	0	187	256	196	124	42
RTOR Reduction (vph)	0	0	0	0	0	95	0	0	112	0	0	37
Lane Group Flow (vph)	0	926	116	192	1042	89	0	187	144	196	124	5
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type		NA	Free	pm+pt	NA	Perm		NA	pm+ov	Prot	NA	Perm
Protected Phases		2		1	6			4	1	3	4	
Permitted Phases			Free	6		6			4			4
Actuated Green, G (s)		29.1	90.0	43.6	43.6	43.6		10.9	18.5	12.2	10.9	10.9
Effective Green, g (s)		29.1	90.0	43.6	43.6	43.6		10.9	18.5	12.2	10.9	10.9
Actuated g/C Ratio		0.32	1.00	0.48	0.48	0.48		0.12	0.21	0.14	0.12	0.12
Clearance Time (s)		5.7		6.7	5.5	5.5		8.9	6.7	8.9	8.9	8.9
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		1155	1599	274	1731	774		227	328	242	227	193
v/s Ratio Prot		c0.26		0.06	c0.29			c0.10	0.04	c0.11	0.07	
v/s Ratio Perm			0.07	0.28		0.06			0.05			0.00
v/c Ratio		0.80	0.07	0.70	0.60	0.12		0.82	0.44	0.81	0.55	0.03
Uniform Delay, d1		27.8	0.0	29.5	16.9	12.7		38.6	31.2	37.8	37.2	34.9
Progression Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.9	0.1	7.8	1.6	0.3		20.9	0.9	17.8	2.7	0.1
Delay (s)		33.7	0.1	37.3	18.4	13.0		59.5	32.2	55.6	39.9	34.9
Level of Service		C	A	D	B	B		E	C	E	D	C
Approach Delay (s)		30.0			20.3			43.7			47.8	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM 2000 Control Delay			29.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			30.2		
Intersection Capacity Utilization			77.6%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

2: Blackwell Park Lane & Lee Highway

10/14/2021

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑	↘↘	
Traffic Volume (veh/h)	959	60	0	985	231	0
Future Volume (Veh/h)	959	60	0	985	231	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	0.97
Hourly flow rate (vph)	1042	65	0	1071	238	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				350		
pX, platoon unblocked					0.79	
vC, conflicting volume			1042		1578	521
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1042		1189	521
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		0	100
cM capacity (veh/h)			663		143	505
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	521	521	65	536	536	238
Volume Left	0	0	0	0	0	238
Volume Right	0	0	65	0	0	0
cSH	1700	1700	1700	1700	1700	143
Volume to Capacity	0.31	0.31	0.04	0.32	0.32	1.66
Queue Length 95th (ft)	0	0	0	0	0	427
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	382.0
Lane LOS						F
Approach Delay (s)	0.0			0.0	382.0	
Approach LOS						F
Intersection Summary						
Average Delay			37.6			
Intersection Capacity Utilization			46.7%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

3: Blackwell Road & Blackwell Park Lane

10/14/2021

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	0	231	369	392	0
Future Volume (Veh/h)	60	0	231	369	392	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.92	0.92
Hourly flow rate (vph)	65	0	238	380	426	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					714	
pX, platoon unblocked						
vC, conflicting volume	1092	213	426			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1092	213	426			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	61	100	79			
cM capacity (veh/h)	168	795	1137			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	65	238	190	190	213	213
Volume Left	65	238	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	168	1137	1700	1700	1700	1700
Volume to Capacity	0.39	0.21	0.11	0.11	0.13	0.13
Queue Length 95th (ft)	42	20	0	0	0	0
Control Delay (s)	39.4	9.0	0.0	0.0	0.0	0.0
Lane LOS	E	A				
Approach Delay (s)	39.4	3.5			0.0	
Approach LOS	E					
Intersection Summary						
Average Delay			4.2			
Intersection Capacity Utilization			37.0%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

1: Blackwell Road & Lee Highway

10/14/2021



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	926	116	192	1042	184	187	256	196	124	42
v/c Ratio	0.80	0.07	0.71	0.60	0.21	0.82	0.54	0.81	0.55	0.11
Control Delay	34.6	0.1	43.5	18.8	2.7	67.7	11.4	64.1	46.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	0.1	43.5	18.8	2.7	67.7	11.4	64.1	46.9	0.6
Queue Length 50th (ft)	254	0	62	217	0	105	30	110	67	0
Queue Length 95th (ft)	332	0	#119	281	33	#215	68	#220	122	0
Internal Link Dist (ft)	270			996		634			979	
Turn Bay Length (ft)		150	530		320			180		228
Base Capacity (vph)	1160	1599	284	1746	875	231	487	247	231	391
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	0.80	0.07	0.68	0.60	0.21	0.81	0.53	0.79	0.54	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Appendix C:

VJuST Reports

VDOT Junction Screening Tool

Results Worksheet



General Information	
Project Title:	Lee Hwy at Broadview Ave / Winchester St - PM Peak
EW Facility:	Lee Hwy
NS Facility:	Broadview Ave / Winchester St
Date:	August 30, 2021

Volumes (veh/hr)	U-Turn / Left	Through	Right
Eastbound	255	718	36
Westbound	59	1080	90
Northbound	111	101	69
Southbound	181	53	343

General Instructions: All intersection and interchange configurations have a default assumption of one exclusive lane per movement. No results shall be interpreted until the user has verified the lane configurations on each worksheet.

Intersection Results

		Congestion			Pedestrian		Safety		Notes	
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points						
Conventional	-	0.68		48	Existing Configuration					
Roundabout	-	0.69		8	Hybrid Roundabout					

*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.

Interchange Results					
		Congestion		Pedestrian	Safety
Type	Dir	Maximum V/C	Accommodation Compared to Traditional Diamond	Weighted Total Conflict Points	Notes

Information	
Congestion	The maximum v/c ratio represents the worst v/c of all zones that make up an intersection.
Pedestrian	Compares the potential of each design to accommodate pedestrians based on safety, wayfinding, and delay. Potential is qualitatively defined as better (+), similar (blank cell), or worse (-) than a conventional intersection or traditional diamond interchange.
Safety	Weighted Total = (2 x Crossing Conflicts) + Merging Conflicts + Diverging Conflicts

VDOT Junction Screening Tool

Results Worksheet



General Information	
Project Title:	Lee Hwy at Branch Drive - PM Peak
EW Facility:	Lee Hwy
NS Facility:	Branch Drive
Date:	August 5, 2021

Volumes (veh/hr)	U-Turn / Left	Through	Right
Eastbound	108	868	4
Westbound	65	1110	82
Northbound	10	18	50
Southbound	126	18	101

General Instructions: All intersection and interchange configurations have a default assumption of one exclusive lane per movement. No results shall be interpreted until the user has verified the lane configurations on each worksheet.

Intersection Results

		Congestion			Pedestrian		Safety		Notes	
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points						
Conventional	-	0.55		48						
Restricted Crossing U-Turn	-	0.51		20						
Thru-Cut	-	0.51		28						

*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.

VDOT Junction Screening Tool

Results Worksheet



General Information	
Project Title:	Lee Hwy at Village Center / BP - PM Peak
EW Facility:	Lee Hwy
NS Facility:	Village Center / BP Gas Station
Date:	August 31, 2021

Volumes (veh/hr)	U-Turn / Left	Through	Right
Eastbound	49	1002	0
Westbound	5	1205	11
Northbound	0	0	12
Southbound	8	0	43

General Instructions: All intersection and interchange configurations have a default assumption of one exclusive lane per movement. No results shall be interpreted until the user has verified the lane configurations on each worksheet.

Intersection Results

		Congestion			Pedestrian		Safety		Notes	
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points						
Median U-Turn	-	0.42	+	20					on has to be signalized, although it is anticipated t	
Restricted Crossing U-Turn	-	0.39		20					1 Lane; NB & SB 1 Lane approaches; EB & WB sam	
Thru-Cut	-	0.42		28					& SB 2 LTs and 1 RT Lane; EB & WB same as existi	
Two-Way Stop Control	-	0.33		48					Existing Configuration	

*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.

VDOT Junction Screening Tool

Results Worksheet



General Information	
Project Title:	Lee Hwy at Fletcher Drive - PM Peak
EW Facility:	Lee Hwy
NS Facility:	Fletcher Drive
Date:	August 30, 2021

Volumes (veh/hr)	U-Turn / Left	Through	Right
Eastbound	69	833	124
Westbound	87	1042	100
Northbound	101	34	82
Southbound	96	27	75

General Instructions: All intersection and interchange configurations have a default assumption of one exclusive lane per movement. No results shall be interpreted until the user has verified the lane configurations on each worksheet.

Intersection Results

		Congestion		Pedestrian	Safety	Notes
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points		
Conventional	-	0.46		48		Split Phase Removal
Thru-Cut	-	0.47		28		s for NBL; remaining approaches same as Existing,
Roundabout	-	0.53		8		Hybrid Roundabout

*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.

VDOT Junction Screening Tool

Results Worksheet



General Information	
Project Title:	Lee Hwy at Blackwell Road - PM Peak
EW Facility:	Lee Hwy
NS Facility:	Blackwell Road
Date:	August 31, 2021

Volumes (veh/hr)	U-Turn / Left	Through	Right
Eastbound	60	852	107
Westbound	175	948	167
Northbound	231	121	248
Southbound	174	110	37

General Instructions: All intersection and interchange configurations have a default assumption of one exclusive lane per movement. No results shall be interpreted until the user has verified the lane configurations on each worksheet.

Intersection Results

		Congestion			Pedestrian		Safety		Notes	
Type	Dir	Maximum V/C	Accommodation Compared to Conventional	Weighted Total Conflict Points						
Conventional	-	0.63		48					Remove Split Phase by making SB L-T-R	
Median U-Turn	-	0.65	+	20					Lanes; EB U-Turn 1 Lane; NB & SB both 1 Thru Lane	
Partial Median U-Turn	-	0.74	+	28					SB existing configurations maintained; EB & WB same as existing	
Quadrant Roadway	N-W	0.59		40						
	S-W	0.56		40						
Restricted Crossing U-Turn	-	0.57		20					1 Lane; NB & SB 2 Lane approaches; EB & WB same as existing	
Thru-Cut	-	0.67		28					& SB 2 LTs and 1 RT Lane; EB & WB same as existing	
Roundabout	-	0.79		8					Full Two-Lane Roundabout	

*The continuous green-T is the only three-legged innovative intersection in this tool. To compare the continuous green-T to other innovative intersections, conflicts corresponding with the fourth leg must be removed. This has been done for the conventional intersection. Conflict point diagrams for three-legged and four-legged conventional intersections have been provided on the conventional intersection worksheet for reference.

Appendix D:

SIDRA Reports

MOVEMENT SUMMARY

 **Site: 101 [2045 AM]**

US 211 & Fletcher Dr
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Fletcher Dr												
3	L2	24	0.0	0.085	8.4	LOS A	0.3	9.0	0.59	0.68	0.59	28.7
8	T1	9	13.0	0.085	3.9	LOS A	0.3	9.0	0.59	0.68	0.59	23.4
18	R2	22	11.0	0.085	4.8	LOS A	0.3	9.0	0.59	0.68	0.59	27.7
Approach		55	6.6	0.085	6.2	LOS A	0.3	9.0	0.59	0.68	0.59	27.3
East: Lee Highway												
1	L2	23	5.0	0.334	10.5	LOS B	1.9	49.2	0.23	0.40	0.23	31.6
6	T1	855	5.0	0.334	4.1	LOS A	1.9	49.9	0.22	0.39	0.22	37.5
16	R2	40	0.0	0.334	4.1	LOS A	1.9	49.9	0.22	0.38	0.22	29.7
Approach		918	4.8	0.334	4.3	LOS A	1.9	49.9	0.22	0.39	0.22	37.0
North: Fletcher Dr												
7	L2	54	4.0	0.137	8.2	LOS A	0.5	14.2	0.56	0.69	0.56	28.6
4	T1	13	9.0	0.137	3.2	LOS A	0.5	14.2	0.56	0.69	0.56	23.3
14	R2	28	13.0	0.137	4.5	LOS A	0.5	14.2	0.56	0.69	0.56	27.6
Approach		95	7.3	0.137	6.4	LOS A	0.5	14.2	0.56	0.69	0.56	27.5
West: Lee Highway												
5u	U	2	0.0	0.393	13.0	LOS B	2.4	63.4	0.28	0.43	0.28	38.6
5	L2	42	0.0	0.393	10.5	LOS B	2.4	63.4	0.28	0.43	0.28	31.4
2	T1	955	5.0	0.393	4.3	LOS A	2.5	64.9	0.27	0.41	0.27	37.3
12	R2	64	4.0	0.393	4.2	LOS A	2.5	64.9	0.27	0.40	0.27	29.5
Approach		1063	4.7	0.393	4.5	LOS A	2.5	64.9	0.27	0.41	0.27	36.5
All Vehicles		2130	4.9	0.393	4.5	LOS A	2.5	64.9	0.27	0.42	0.27	35.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if $v/c > 1$ irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2045 PM]**

US 211 & Fletcher Dr
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Fletcher Dr												
3	L2	116	0.0	0.402	10.3	LOS B	2.2	54.0	0.74	0.87	0.83	28.2
8	T1	39	0.0	0.402	5.0	LOS A	2.2	54.0	0.74	0.87	0.83	23.0
18	R2	95	1.0	0.402	6.1	LOS A	2.2	54.0	0.74	0.87	0.83	27.4
Approach		251	0.4	0.402	7.9	LOS A	2.2	54.0	0.74	0.87	0.83	26.9
East: Lee Highway												
1u	U	9	0.0	0.566	14.2	LOS B	4.3	107.7	0.52	0.56	0.52	37.4
1	L2	91	0.0	0.566	11.7	LOS B	4.3	107.7	0.52	0.56	0.52	30.7
6	T1	1203	1.0	0.566	5.3	LOS A	4.5	113.1	0.50	0.53	0.50	36.4
16	R2	115	3.0	0.566	5.2	LOS A	4.5	113.1	0.50	0.51	0.50	29.0
Approach		1419	1.1	0.566	5.7	LOS A	4.5	113.1	0.50	0.53	0.50	35.3
North: Fletcher Dr												
7	L2	111	0.0	0.415	11.4	LOS B	2.3	57.8	0.79	0.92	0.91	27.8
4	T1	31	0.0	0.415	6.2	LOS A	2.3	57.8	0.79	0.92	0.91	22.7
14	R2	87	0.0	0.415	7.3	LOS A	2.3	57.8	0.79	0.92	0.91	27.0
Approach		229	0.0	0.415	9.2	LOS A	2.3	57.8	0.79	0.92	0.91	26.7
West: Lee Highway												
5u	U	3	0.0	0.477	14.0	LOS B	3.2	80.4	0.47	0.55	0.47	37.6
5	L2	76	0.0	0.477	11.5	LOS B	3.2	80.4	0.47	0.55	0.47	30.8
2	T1	962	2.0	0.477	5.2	LOS A	3.3	84.0	0.46	0.52	0.46	36.6
12	R2	142	0.0	0.477	5.0	LOS A	3.3	84.0	0.45	0.50	0.45	29.1
Approach		1184	1.6	0.477	5.6	LOS A	3.3	84.0	0.46	0.52	0.46	35.1
All Vehicles		3081	1.2	0.566	6.1	LOS A	4.5	113.1	0.53	0.58	0.54	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2045 AM w/ SB Right Lane]**

US 211 & Broadview
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Winchester Ave												
3	L2	76	2.0	0.371	10.7	LOS B	1.7	44.0	0.75	0.86	0.84	28.2
8	T1	56	0.0	0.371	5.3	LOS A	1.7	44.0	0.75	0.86	0.84	27.1
18	R2	58	0.0	0.371	6.4	LOS A	1.7	44.0	0.75	0.86	0.84	27.4
Approach		190	0.8	0.371	7.8	LOS A	1.7	44.0	0.75	0.86	0.84	27.6
East: Lee Highway												
1u	U	11	0.0	0.462	15.1	LOS B	2.8	71.7	0.58	0.65	0.58	37.3
1	L2	30	0.0	0.462	12.6	LOS B	2.8	71.7	0.58	0.65	0.58	30.5
6	T1	757	5.0	0.462	6.3	LOS A	2.9	76.5	0.57	0.63	0.57	36.2
16	R2	162	6.0	0.462	6.1	LOS A	2.9	76.5	0.56	0.60	0.56	33.6
Approach		960	5.0	0.462	6.6	LOS A	2.9	76.5	0.57	0.62	0.57	35.5
North: BroadViewAve												
7	L2	157	4.0	0.297	11.4	LOS B	1.5	37.5	0.66	0.77	0.66	32.9
4	T1	88	0.0	0.297	5.3	LOS A	1.5	37.5	0.66	0.77	0.66	26.2
14	R2	210	2.0	0.285	6.3	LOS A	1.4	34.3	0.66	0.79	0.66	33.3
Approach		455	2.3	0.297	7.9	LOS A	1.5	37.5	0.66	0.78	0.66	31.5
West: Lee Highway												
5u	U	6	0.0	0.509	14.4	LOS B	3.9	100.6	0.64	0.66	0.64	36.1
5	L2	267	5.0	0.509	12.1	LOS B	3.9	100.6	0.64	0.66	0.64	33.8
2	T1	865	5.0	0.509	5.5	LOS A	4.0	104.6	0.63	0.57	0.63	35.7
12	R2	23	5.0	0.509	5.5	LOS A	4.0	104.6	0.62	0.53	0.62	28.7
Approach		1160	5.0	0.509	7.1	LOS A	4.0	104.6	0.63	0.59	0.63	35.1
All Vehicles		2766	4.2	0.509	7.1	LOS A	4.0	104.6	0.62	0.65	0.63	34.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2045 PM w/ SB Right Lane]**

US 211 & Broadview
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Winchester Ave												
3	L2	127	0.0	0.625	13.6	LOS B	3.8	95.0	0.83	1.02	1.14	27.3
8	T1	115	0.0	0.625	8.4	LOS A	3.8	95.0	0.83	1.02	1.14	26.2
18	R2	79	0.0	0.625	9.4	LOS A	3.8	95.0	0.83	1.02	1.14	26.5
Approach		320	0.0	0.625	10.7	LOS B	3.8	95.0	0.83	1.02	1.14	26.7
East: Lee Highway												
1u	U	15	0.0	0.701	19.5	LOS B	7.1	179.3	0.74	0.89	0.99	35.3
1	L2	53	0.0	0.701	17.0	LOS B	7.1	179.3	0.74	0.89	0.99	29.2
6	T1	1234	1.0	0.701	10.1	LOS B	7.6	192.2	0.73	0.86	0.96	34.7
16	R2	103	0.0	0.701	9.5	LOS A	7.6	192.2	0.73	0.83	0.93	32.5
Approach		1405	0.9	0.701	10.4	LOS B	7.6	192.2	0.73	0.86	0.96	34.3
North: BroadViewAve												
7	L2	205	2.0	0.546	16.2	LOS B	3.2	82.2	0.84	1.01	1.06	30.8
4	T1	60	0.0	0.546	10.1	LOS B	3.2	82.2	0.84	1.01	1.06	24.9
14	R2	392	2.0	0.644	10.8	LOS B	4.7	118.2	0.89	1.05	1.19	31.3
Approach		657	1.8	0.644	12.4	LOS B	4.7	118.2	0.87	1.03	1.14	30.4
West: Lee Highway												
5u	U	6	0.0	0.507	14.7	LOS B	3.9	98.5	0.68	0.68	0.68	35.9
5	L2	286	1.0	0.507	12.2	LOS B	3.9	98.5	0.68	0.68	0.68	33.7
2	T1	820	1.0	0.507	5.6	LOS A	4.1	103.4	0.67	0.58	0.67	35.6
12	R2	41	3.0	0.507	5.6	LOS A	4.1	103.4	0.66	0.54	0.66	28.6
Approach		1153	1.1	0.507	7.3	LOS A	4.1	103.4	0.67	0.61	0.67	34.8
All Vehicles		3536	1.0	0.701	9.8	LOS A	7.6	192.2	0.75	0.82	0.92	32.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2045 AM w/ NB&SB Right Lane]**

US 211 & Blackwell Dr
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Blackwell Rd												
3	L2	122	2.0	0.272	12.2	LOS B	1.2	30.2	0.63	0.82	0.63	32.6
8	T1	54	4.0	0.272	6.5	LOS A	1.2	30.2	0.63	0.82	0.63	26.0
18	R2	200	3.0	0.269	6.4	LOS A	1.2	31.3	0.63	0.78	0.63	33.3
Approach		376	2.8	0.272	8.3	LOS A	1.2	31.3	0.63	0.80	0.63	31.7
East: Lee Highway												
1u	U	7	0.0	0.499	14.0	LOS B	3.9	100.4	0.58	0.61	0.58	36.5
1	L2	247	2.0	0.499	11.6	LOS B	3.9	100.4	0.58	0.61	0.58	34.2
6	T1	808	5.0	0.499	5.2	LOS A	4.0	104.2	0.57	0.55	0.57	35.9
16	R2	148	4.0	0.499	5.1	LOS A	4.0	104.2	0.56	0.51	0.56	28.9
Approach		1209	4.2	0.499	6.6	LOS A	4.0	104.2	0.57	0.56	0.57	34.5
North: Blackwell Rd												
7	L2	109	6.0	0.235	8.8	LOS A	1.1	27.9	0.70	0.76	0.70	28.2
4	T1	50	2.0	0.235	3.3	LOS A	1.1	27.9	0.70	0.76	0.70	27.2
14	R2	17	7.0	0.047	7.2	LOS A	0.2	4.5	0.67	0.74	0.67	27.5
Approach		176	5.0	0.235	7.1	LOS A	1.1	27.9	0.70	0.76	0.70	27.8
West: Lee Highway												
5u	U	11	0.0	0.519	15.7	LOS B	3.5	90.6	0.60	0.69	0.64	37.1
5	L2	41	9.0	0.519	13.7	LOS B	3.5	90.6	0.60	0.69	0.64	30.4
2	T1	905	6.0	0.519	6.8	LOS A	3.5	92.1	0.59	0.66	0.61	36.0
12	R2	118	2.0	0.519	6.2	LOS A	3.5	92.1	0.58	0.63	0.59	33.5
Approach		1076	5.6	0.519	7.1	LOS A	3.5	92.1	0.59	0.66	0.61	35.5
All Vehicles		2837	4.6	0.519	7.0	LOS A	4.0	104.2	0.59	0.64	0.60	34.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 101 [2045 PM w/ NB&SB Right Lane]**

US 211 & Blackwell Dr
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Blackwell Rd												
3	L2	264	0.0	0.590	14.6	LOS B	3.8	95.3	0.78	0.98	0.99	31.8
8	T1	139	2.0	0.590	8.8	LOS A	3.8	95.3	0.78	0.98	0.99	25.4
18	R2	284	1.0	0.511	9.6	LOS A	2.8	70.1	0.77	0.92	0.93	31.8
Approach		687	0.8	0.590	11.4	LOS B	3.8	95.3	0.78	0.96	0.97	30.2
East: Lee Highway												
1u	U	8	0.0	0.727	19.7	LOS B	9.4	236.5	0.93	0.98	1.20	34.6
1	L2	192	2.0	0.727	17.4	LOS B	9.4	236.5	0.93	0.98	1.20	32.5
6	T1	1083	1.0	0.727	10.2	LOS B	9.8	248.0	0.93	0.94	1.17	34.3
16	R2	191	1.0	0.727	9.7	LOS A	9.8	248.0	0.92	0.91	1.15	27.9
Approach		1473	1.1	0.727	11.2	LOS B	9.8	248.0	0.93	0.94	1.17	33.1
North: Blackwell Rd												
7	L2	199	1.0	0.647	14.7	LOS B	4.6	116.8	0.92	1.11	1.26	26.6
4	T1	126	1.0	0.647	9.5	LOS A	4.6	116.8	0.92	1.11	1.26	25.6
14	R2	42	0.0	0.138	8.4	LOS A	0.6	14.8	0.79	0.83	0.79	27.2
Approach		366	0.9	0.647	12.2	LOS B	4.6	116.8	0.91	1.08	1.20	26.3
West: Lee Highway												
5u	U	15	0.0	0.603	17.7	LOS B	5.0	127.7	0.71	0.83	0.85	36.2
5	L2	54	0.0	0.603	15.2	LOS B	5.0	127.7	0.71	0.83	0.85	29.8
2	T1	973	2.0	0.603	8.5	LOS A	5.4	135.9	0.70	0.79	0.82	35.4
12	R2	122	1.0	0.603	8.0	LOS A	5.4	135.9	0.70	0.76	0.80	33.1
Approach		1165	1.8	0.603	8.9	LOS A	5.4	135.9	0.70	0.79	0.82	34.9
All Vehicles		3692	1.2	0.727	10.6	LOS B	9.8	248.0	0.83	0.91	1.03	32.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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