TRAFFIC IMPACT STUDY
FOR
RESIDENTIAL DEVELOPMENT ON CAMPBELL ROAD AND SPRING ROAD

SMYRNA, GEORGIA

Prepared for:

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A & R Project # 19-175

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1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed residential development located on Spring Road and Campbell Road in Smyrna, Georgia. The traffic analysis evaluates the current operations compared to the future (Base Year 2022 and Horizon Year 2032) conditions with the traffic generated by the development. The proposed development will consist of 152 townhomes.

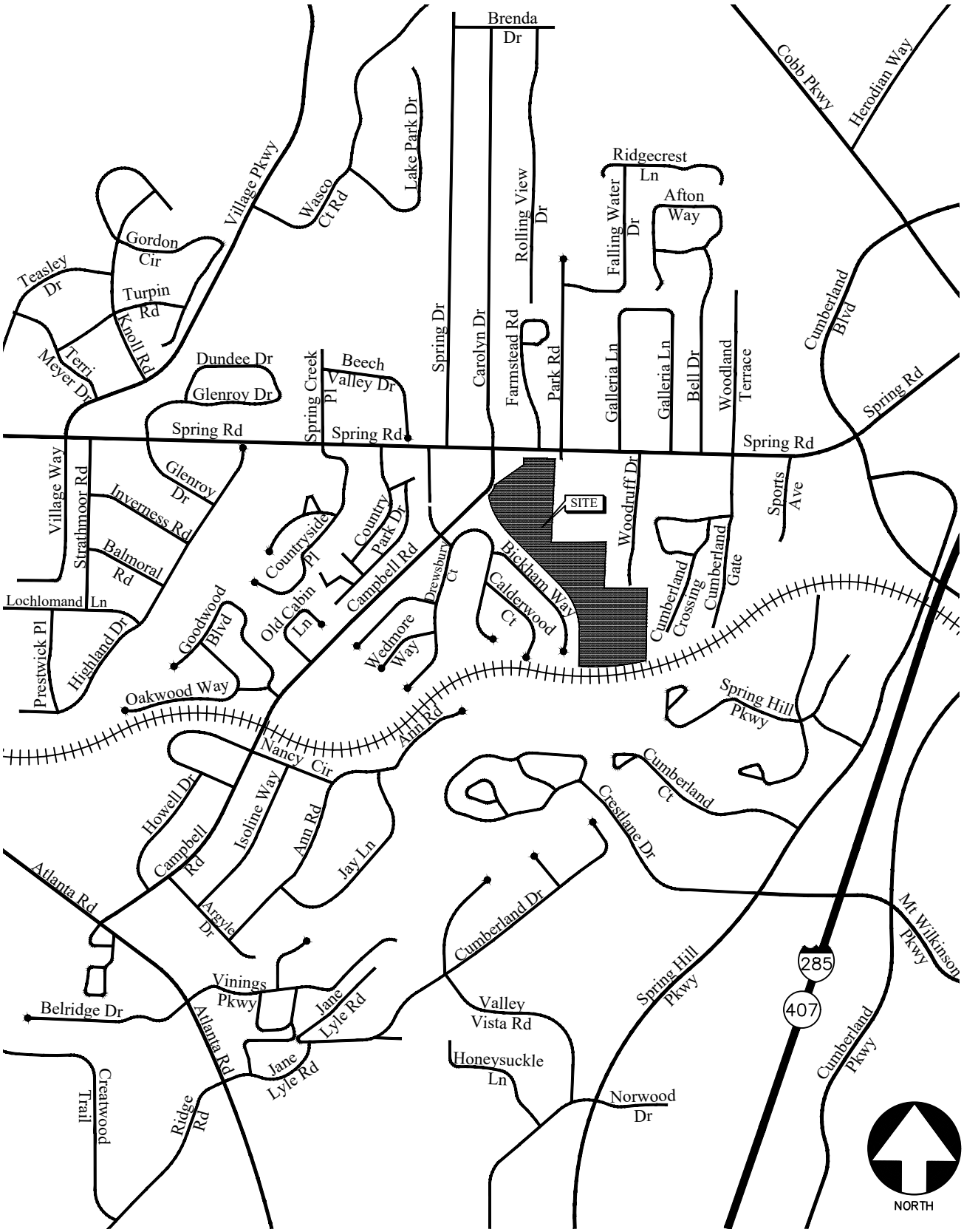
The development proposes access at the following locations. It also proposes an emergency access/pedestrian connection to Woodruff Drive.

- Site Driveway 1: Full-access driveway on Campbell Road
- Site Driveway 2: Right-in/right-out driveway on Spring Road

The AM and PM peak hours have been analyzed in this study. In addition to the site access points, this study includes the evaluation of traffic operations at the intersections of:

1. Spring Road at Village Parkway / Village Way
2. Spring Road at Campbell Road / Carolyn Drive
3. Spring Road at Park Road
4. Spring Road at Cumberland Boulevard
5. Campbell Road at Atlanta Road

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report. The location of the development and the surrounding roadway network is shown in Figure 1.



LOCATION MAP FIGURE 1

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2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

The following is a brief description of each of the roadway facilities located in proximity to the site:

2.1.1 Spring Road

Spring Road is an east-west, four-lane, median-divided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 067-2806) indicate that the daily traffic volume on Spring Road in 2018 was 40,300 vehicles per day west of Cumberland Gate / Woodland Terrace. GDOT classifies Spring Road as an Urban Local roadway.

2.1.2 Atlanta Road

Atlanta Road is a northwest-southeast, five-lane roadway with a two-way left-turn lane and posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID's 067-2049 & 067-2052) indicate that the daily traffic volume on Atlanta Road in 2018 was 29,600 vehicles per day southeast of Creatwood Trail and 23,300 vehicles per day south of Lee Road. GDOT classifies Atlanta Road as an Urban Minor Arterial roadway.

2.1.3 Campbell Road

Campbell Road classified as a Rural Local roadway, is a northeast-southwest, four-lane, undivided roadway with a posted speed limit of 35 mph. GDOT traffic counts (Station ID 067-8806) indicate that the daily traffic volume on Campbell Road in 2018 was 6,580 vehicles per day northeast of Nancy Circle.

2.1.4 Cumberland Boulevard

Cumberland Blvd is a north-south, four-lane, undivided roadway with a posted speed limit of 35 mph.

2.1.5 Village Parkway

Village Parkway is a north-south, two-lane, undivided roadway with a posted speed limit of 35 mph.

2.1.6 Park Road

Park Road is a north-south, two-lane, residential roadway with a posted speed limit of 25 mph.

2.1.7 Carolyn Drive

Carolyn Drive is a north-south, two-lane, residential roadway with a posted speed limit of 25 mph.

2.1.8 Village Way

Village Way is a two-lane, residential roadway without any posted speed limit.

3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

3.1 Unsignalized Intersections

For unsignalized intersections at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross safely, resulting in extremely long total delays and long queues. The level-of-service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections are given in Table 1.

TABLE 1 – LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level-of-service	Average Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual

3.2 Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level-of-service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level-of-service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level-of-service "A" indicates operations with very low controlled delay, while level-of-service "F" describes operations with extremely high average controlled delay. Level-of-service "E" is typically considered to be the limit of acceptable delay, and level-of-service "F" is considered unacceptable by most drivers.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level-of-service	Average Control Delay (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Source: Highway Capacity Manual

4.0 EXISTING 2020 TRAFFIC ANALYSIS

4.1 Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

1. Spring Road at Village Parkway / Village Way
2. Spring Road at Campbell Road / Carolyn Drive
3. Spring Road at Park Road
4. Spring Road at Cumberland Boulevard
5. Campbell Road at Atlanta Road

Turning movement counts were collected during the AM and PM peak hours between 7:00am to 9:00am and 4:00pm to 6:00pm, respectively on Thursday, December 12, 2019 & Wednesday, February 5, 2020. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes and are shown in Figure 2.

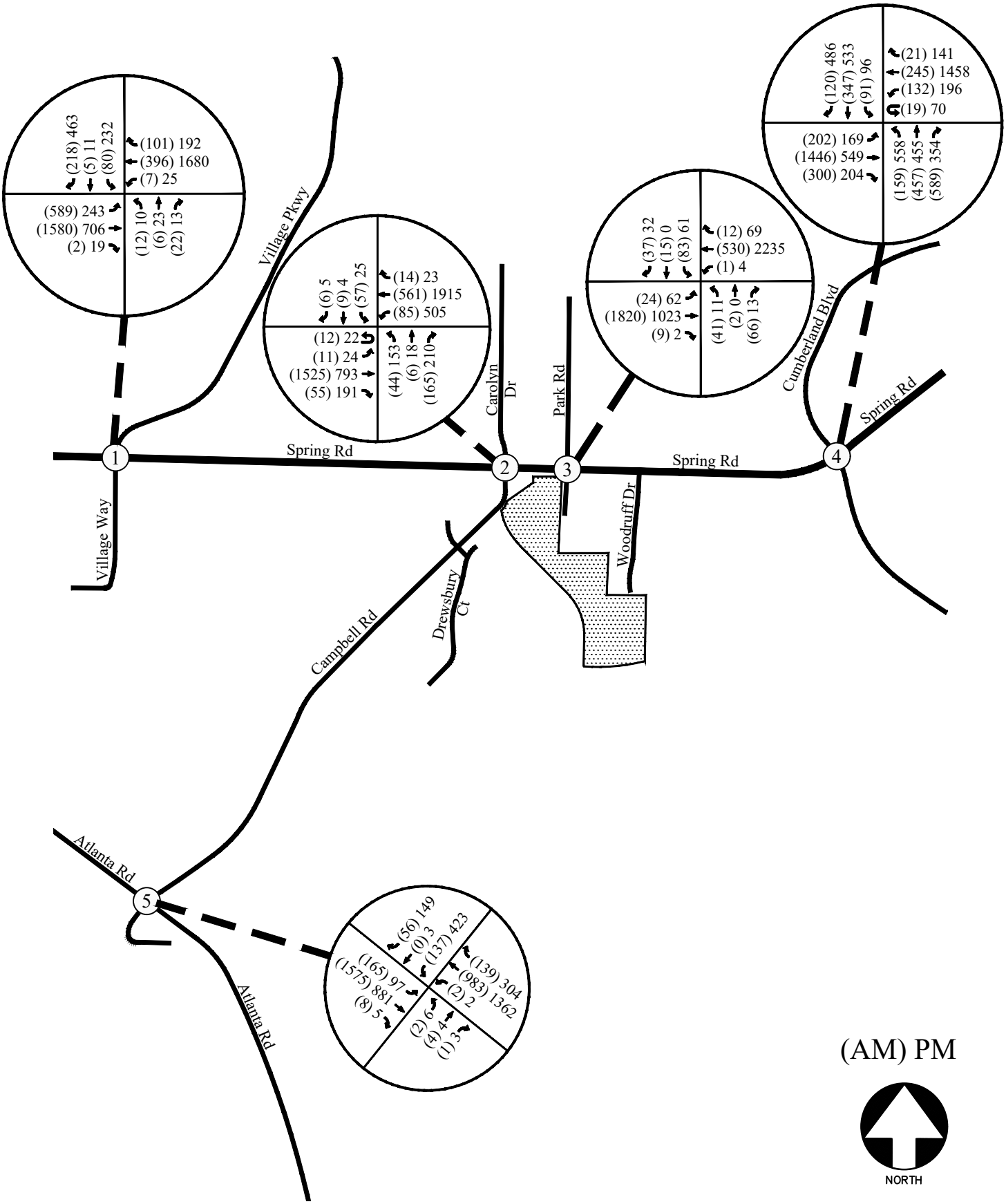
4.2 Existing Traffic Operations

Existing traffic operations at the study intersections were analyzed in accordance with the HCM methodology. The results of the analysis are shown in Table 3. The existing traffic control and lane geometry for the intersections are shown in Figure 3.

TABLE 3 – EXISTING INTERSECTION OPERATIONS				
Intersection		Traffic Control	LOS (Delay)	
			AM Peak Hour	PM Peak Hour
1	**Spring Rd @ Village Pkwy / Village Way**	Signalized	**F (108.8)**	**F (187.9)**
	-Eastbound Approach		A (5.4)	C (21.5)
	-Westbound Approach		A (9.3)	B (17.7)
	-Northbound Approach		F (84.8)	F (87.2)
	-Southbound Approach		F (*)	F (*)
2	**Spring Rd @ Campbell Rd / Carolyn Dr**	Signalized	**C (20.3)**	**C (24.5)**
	-Eastbound Approach		A (10.0)	B (13.0)
	-Westbound Approach		C (21.2)	C (20.2)
	-Northbound Approach		E (77.4)	E (78.2)
	-Southbound Approach		E (70.8)	E (74.3)
3	**Spring Rd @ Park Rd**	Signalized	**A (8.8)**	**B (13.3)**
	-Eastbound Approach		A (1.6)	A (1.9)
	-Westbound Approach		A (6.2)	B (15.5)
	-Northbound Approach		E (66.9)	E (72.1)
	-Southbound Approach		E (71.5)	E (75.7)
4	**Spring Rd @ Cumberland Blvd**	Signalized	**F (87.8)**	**F (95.6)**
	-Eastbound Approach		C (26.9)	C (33.3)
	-Westbound Approach		C (23.1)	D (36.6)
	-Northbound Approach		F (210.0)	F (86.2)
	-Southbound Approach		D (51.8)	F (245.7)
5	**Campbell Rd @ Atlanta Rd**	Signalized	**B (17.7)**	**D (48.8)**
	-Eastbound Approach		B (14.4)	C 23.5
	-Westbound Approach		B (16.4)	D (55.0)
	-Northbound Approach		D (37.8)	C (31.1)
	-Southbound Approach		D (53.3)	E (78.0)

*delay exceeds 300 seconds

The results of existing traffic operations analysis indicate that the intersections of Spring Road at Cumberland Boulevard and Spring Road and Village Parkway are operating at levels-of-service "F" in both AM and PM peak hours. All other study intersections are operating at level of service "D" or better in both the AM and PM peak hours.



EXISTING WEEKDAY PEAK-HOUR VOLUMES FIGURE 2

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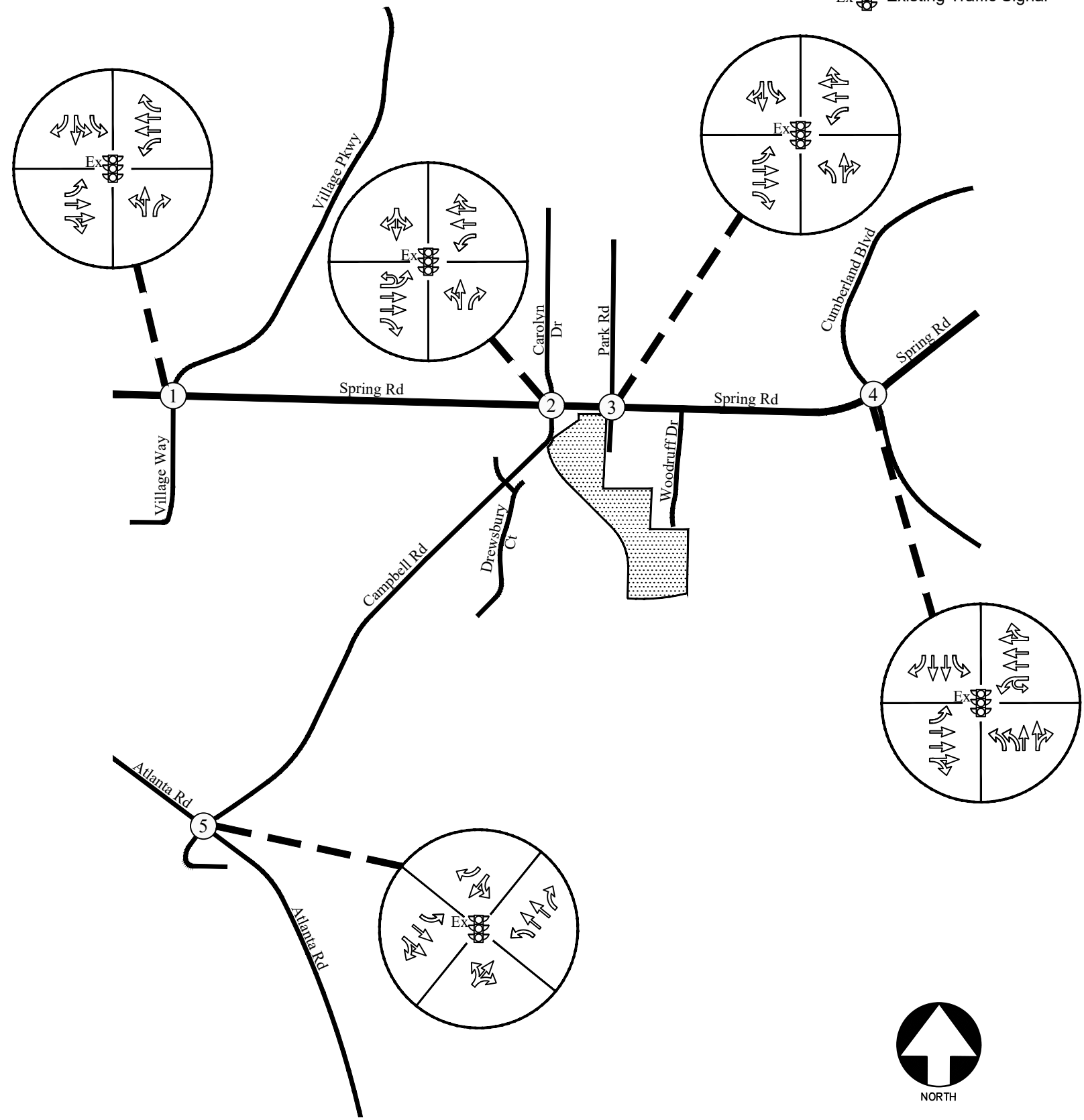


EXISTING TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 3

A&R Engineering Inc.

5.0 PROPOSED DEVELOPMENT

The proposed residential development will be located on Spring Road and Campbell Road in Smyrna, Georgia. The development will consist of 152 townhomes. A site plan is shown in Figure 4.

The development proposes access at the following locations. It also proposes an emergency access/pedestrian connection to Woodruff Drive.

- Site Driveway 1: Full-access driveway on Campbell Road
- Site Driveway 2: Right-in/right-out driveway on Spring Road

5.1 Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Uses: 220 – Multifamily Housing (Low-Rise) The calculated total trip generation for the proposed development is shown in Table 4A.

TABLE 4 A– TRIP GENERATION (PROPOSED DEVELOPMENT)

Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 220 – Multifamily Housing (Low-Rise)	152 Units	16	55	71	54	32	86	1,108

A trip generation comparison was made between the proposed zoning and the current zoning. The trip generation for current zoning was done using the land use "710 – General Office Building" with the rates and equations published in the 10th edition of the ITE Trip Generation report. The trip generation for current zoning and Comparison is given in Table 4B and Table 4C.

TABLE 4 B– TRIP GENERATION (CURRENT ZONING)

Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 710 – General Office Building	6,76,000 sf	569	93	662	112	588	700	6,773

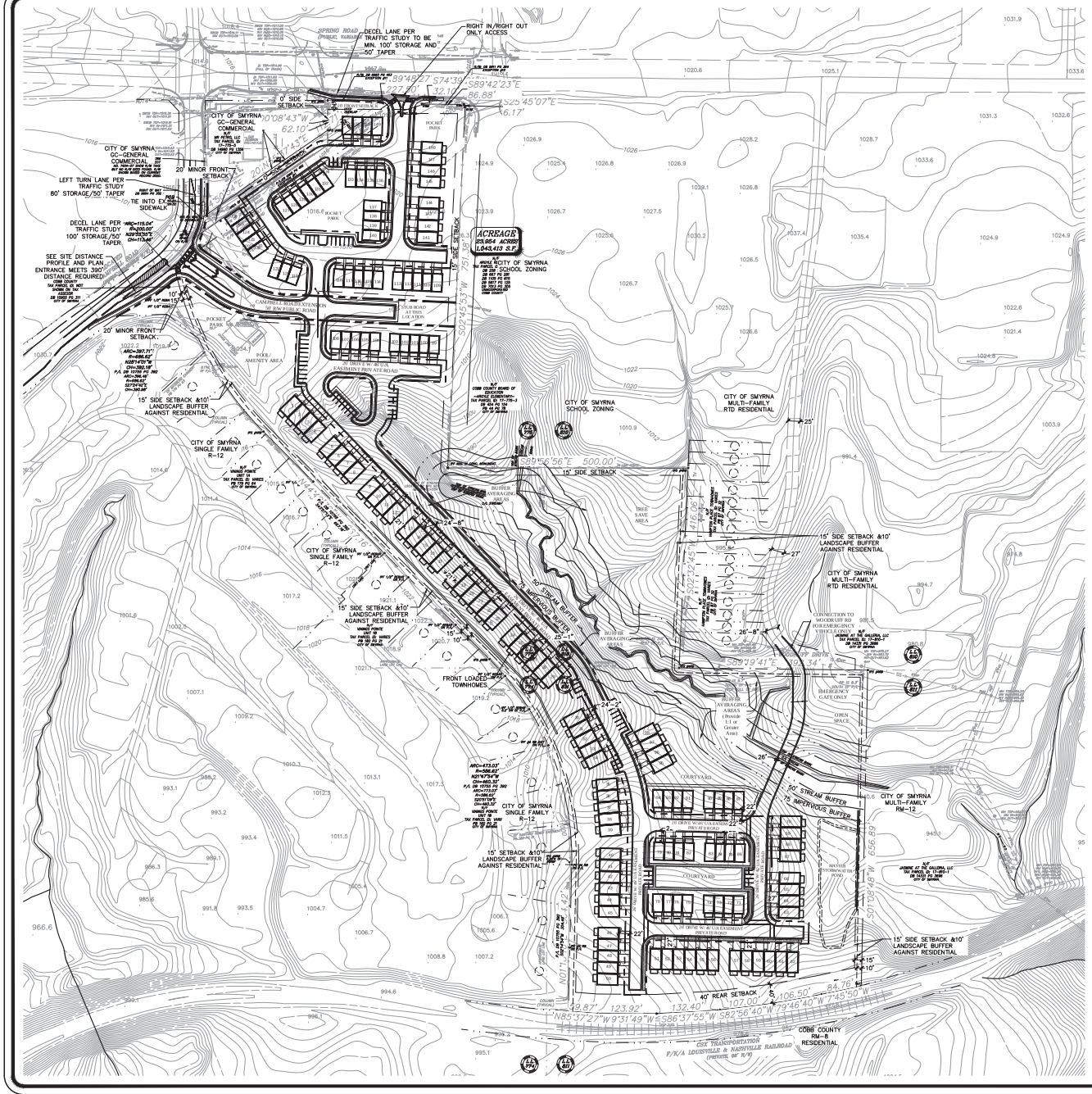
TABLE 4C – TRIP GENERATION COMPARISON

Land Use	AM Peak Hour			PM Peak Hour			24 Hour
	Enter	Exit	Total	Enter	Exit	Total	Two-way
Trip Generation - Proposed Zoning	16	55	71	54	32	86	1,108
Trip Generation - Current Zoning	569	93	662	112	588	700	6,773
Difference (Proposed Zoning - Current Zoning)	***-553***	***-38***	***-591***	***-58***	***-556***	***-614***	***-5,665***
Difference in Percentages	***-97%***	***-41%***	***-89%***	***-52%***	***-95%***	***-88%***	***-84%***

Using the information from Table 4C, the number of new trips generated by multifamily housing land uses is far less than the number of new trips generated under the general office. If the multifamily housing as per the proposed zoning are developed, this development will generate 89% less traffic in the AM peak hour, 88% less traffic in the PM peak hour and 84% less traffic in the 24-hour period compared to the traffic that would be generated by the office development allowed in the existing zoning.

5.2 Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4A, were assigned to the study area intersections based on this distribution. We did not assign any traffic making U-Turn at eastbound Spring Road at Park Road, as we understand that the City may prohibit this U-Turn in future. The outer-leg distribution and the AM and PM peak hour new traffic generated by the site is shown in Figure 5.



SITE LOCATION MAP (NTS)

FEMA MAP (NTS)

SITE DATA:

TOTAL SITE AREA	23.954 ACRES
ZONING	
EXISTING ZONING JURISDICTION	COBB COUNTY
PROPOSED ANNEXATION JURISDICTION	CITY OF SMYRNA
EXISTING ZONING	NRC & O&I
PROPOSED ZONING	MU-C
DATA SUMMARY	
FRONT LOADED TOWNHOMES (24' x 44')	82 UNITS
REAR LOADED TOWNHOMES (20' x 44' & 22' x 44')	70 UNITS
TOTAL TOWNHOME UNITS	152 UNITS
TOTAL SITE DENSITY	6.34 UNITS/AC.
SETBACK SUMMARY	
PROPERTY FRONT SETBACK	20 FEET
MAJOR SIDE YARD SETBACK	20 FEET
SIDE SETBACK	15 FEET
SIDE SETBACK (WESTERN SIDE S SENIOR TRACT)	0 FEET
REAR SETBACK	40 FEET
BUILDING SEPARATIONS	
SIDE TO SIDE	20 FEET
SIDE TO BACK	25 FEET
BACK TO BACK	30 FEET
FRONT TO SIDE	30 FEET
FRONT TO BACK	40 FEET
FRONT TO FRONT	35 FEET
LANDSCAPE BUFFER AGAINST RESIDENTIAL	10 FEET
DEVELOPMENT STANDARDS	
MAX. UNITS PER ROW TOWNHOMES	6 UNITS
AVERAGE MINIMUM HEATED FAR FOR ALL UNITS	.825 SF
MAX BLDG HT	55 FEET (4 STORIES)
MAX IMPERVIOUS AREA (Total Site)	65.0%
PARKING SUMMARY	
TOWNHOME PARKING	
MIN. 2 SPACES PER DWELLING UNIT REQ.	304 SPACES
GUEST PARKING	57 SPACES
(2 GARAGE SP. & 2 DRIVEWAY SP.)	(4 SP/ UNIT)
PARKING PROVIDED	665 SPACES
OPEN SPACE & COVERAGE SUMMARY	
OPEN SPACE PROPOSED	6.48 ACRES
PROPOSED % OF OPEN SPACE ONSITE	27.4 % OPEN

GENERAL NOTES:

1. VARIANCE TO ALLOW 20 FEET SIDE TO SIDE ON TOWNHOMES
2. BUFFER AVERAGING IS ALLOWED TO BE USED SO LONG AS THERE IS AT A MINIMUM OF 1:1 SQUARE FEET ADDED IN OTHER LOCATIONS ALONG STREAM SEGMENT.
3. DRIVEWAYS ARE 22' FROM CURB OR 20' FROM SIDEWALK, 18' MIN. FOR ALLEYWAYS.
4. STREETS ARE PRIVATE WITH 26' ROADS AND 46' ACCESS & UTILITY EASEMENT.
5. CONNECTION TO WOODRUFF DRIVE IS FOR EMERGENCY ACCESS ONLY.
6. ALL STORMWATER WILL MEET CODE FOR CITY OF SMYRNA

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24 HOUR CONTACT:
BRYAN MUSOLF

Campbell Road at Spring Road

A MASTER PLANNED RESIDENTIAL DEVELOPMENT
FOR
INLINE COMMUNITIES
BRYAN MUSOLF
48 ATLANTA STREET
MARIETTA, GEORGIA 30060

UNINCORPORATED COBB COUNTY GEORGIA

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REVISIONS:

NO.	DATE	BY	DESCRIPTION
-1	12/4/2019	PEC	CLIENT COMMENTS
-2	1/7/2020	PEC	REVISED AMENITY
-3	1/24/2020	PEC	SITE REVISIONS-STAFF & COMMUNITY
-4	2/12/2020	PEC	GRADING, POND, WALLS
-5	2/28/2020	PEC	TRAFFIC UDPATES
-6	4/8/2020	PEC	CITY COMMENTS
-7	5/12/2020	PEC	TRAFFIC COORD.
-8	8/12/2020	PEC	REDUCE DENSITY
-9	9/4/2020	PEC	REDUCE DENSITY
			Remove Woodruff Access

REZONING MASTER PLAN

0 50 100 200 300

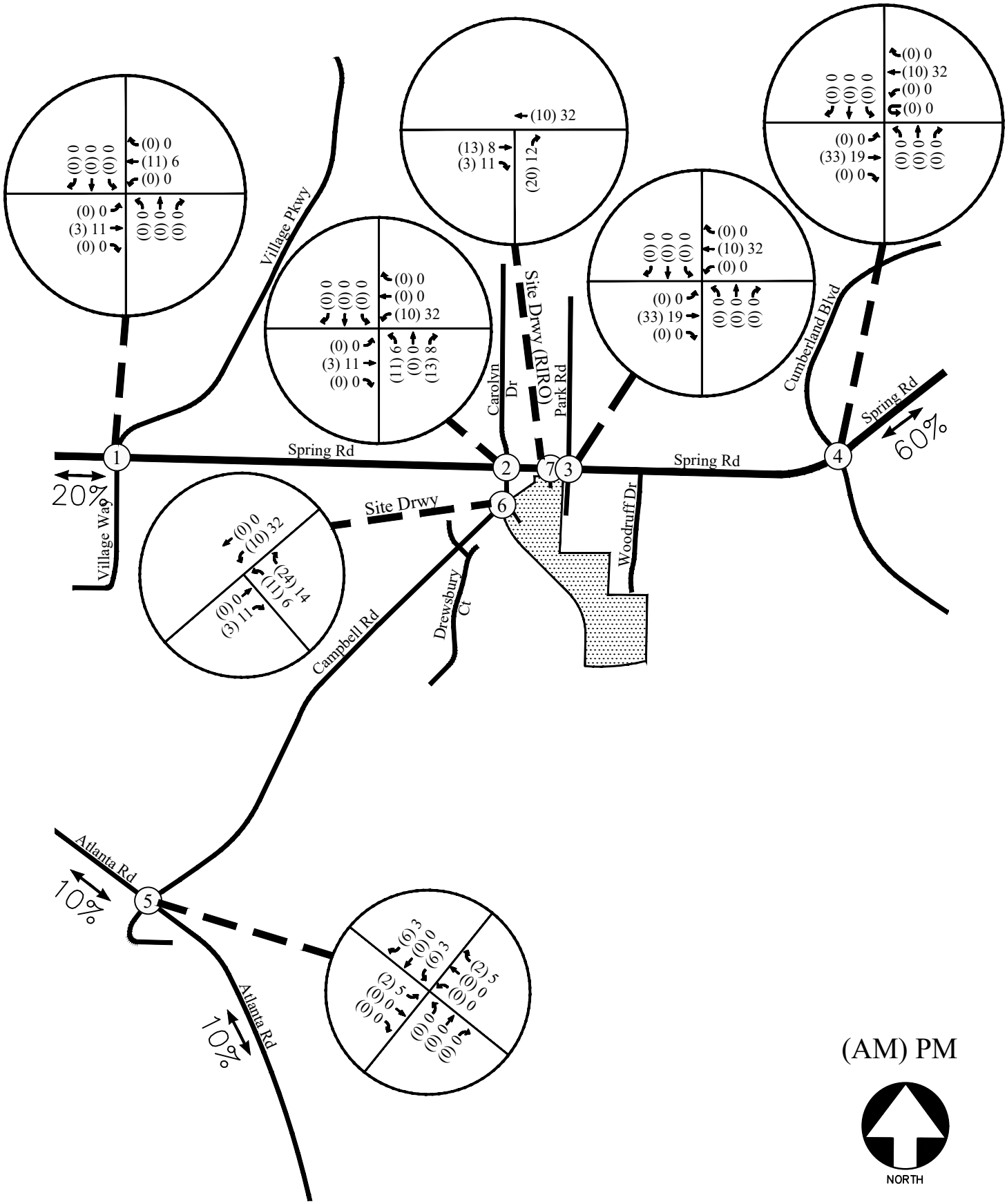
SCALE: 1" = 100'
DATE: FEBRUARY 12, 2020
PROJECT: 17170.00E

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.

GEORGIA REGISTERED No. 34393 PROFESSIONAL ENGINEER KENNETH J. WOOD

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # 00005939 EXP. 10/28/2021

Z1
SHEET



OUTER LEG TRIP DISTRIBUTION & SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 5

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6.0 FUTURE TRAFFIC ANALYSIS

The future traffic operations are analyzed for Base Year 2022 and Horizon Year 2032 for both the "No-Build" and "Build" conditions. This provides a basis of reference for determining the contribution of the site to overall traffic conditions.

6.1 Future "No-Build" Conditions

The "No-Build" (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future "No-Build" volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of through traffic.

6.1.1 Annual Traffic Growth

The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three years revealed growth of approximately 3% in the area. This growth factor was applied to the existing traffic volumes between collector and arterial roadways in order to estimate the future Base Year 2022 traffic volumes prior to the addition of site-generated traffic. The resulting Future "No-Build" 2022 volumes on the roadway are shown in Figure 6. These volumes are further grown at a rate of 1% for 10 years to obtain the future "No-Build" 2032 volumes that are shown in Figure 7.

6.2 Future "Build" Conditions

The "Build" or development conditions include the estimated background traffic from the "No-Build" conditions plus the added traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site were added to base traffic volumes to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 8 for Base Year 2022 and Figure 9 for Horizon Year 2032. These volumes were used to evaluate the "Build" condition. The results of the "No-Build" and "Build" operations analysis are shown in Table 5. Results of improved conditions of the "No-Build" and "Build" operations analysis at the intersections of Spring Road at Cumberland Boulevard and Spring Road at Village Parkway are shown in Table 5A.

TABLE 5 – FUTURE INTERSECTION OPERATIONS									
	Intersection	Future Conditions: LOS (Delay)							
		Base Year 2022				Horizon Year 2032			
		No-Build		Build		No-Build		Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	**Spring Rd @ Village Pkwy**	**F (111.8)**	**F (193.0)**	**F (111.4)**	**F (192.3)**	**F (118.3)**	**F (203.8)**	**F (118.0)**	**F (203.2)**
	-Eastbound Approach	A (6.0)	C (25.6)	A (6.1)	C (25.5)	A (7.9)	D (48.7)	A (8.0)	D (48.7)
	-Westbound Approach	B (10.2)	C (22.1)	B (10.2)	C (22.4)	B (12.0)	C (25.3)	B (12.0)	C (25.3)
	-Northbound Approach	F (85.1)	F (86.6)	F (85.1)	F (86.6)	F (85.8)	F (85.9)	F (85.8)	F (85.9)
	-Southbound Approach	F (*)	F (*)	F (*)	F (*)	F (*)	F (*)	F (*)	F (*)
2	**SpringRd@Campbell Rd**	**C (21.6)**	**D (39.3)**	**C (22.9)**	**D (38.5)**	**C (23.9)**	**D (53.1)**	**C (25.2)**	**E (56.3)**
	-Eastbound Approach	B (11.0)	B (14.6)	B (11.8)	B (14.4)	B (13.3)	B (16.4)	B (14.1)	B (19.3)
	-Westbound Approach	C (22.4)	D (43.0)	C (22.5)	D (41.7)	C (25.1)	E (64.1)	C (26.0)	E (67.7)
	-Northbound Approach	F (82.5)	E (79.0)	F (84.4)	E (79.2)	F (84.2)	E (80.0)	F (84.7)	F (80.4)
	-Southbound Approach	E (70.5)	E (71.9)	E (70.2)	E (73.9)	E (69.9)	E (74.7)	E (69.6)	E (74.6)
3	**Spring Rd @ Park Rd**	**A (9.2)**	**B (16.6)**	**A (9.2)**	**B (17.3)**	**B (10.4)**	**C (29.4)**	**B (10.6)**	**C (31.5)**
	-Eastbound Approach	A (2.1)	A (2.8)	A (2.3)	A (3.0)	A (3.8)	A (5.4)	A (4.2)	A (5.4)
	-Westbound Approach	A (6.6)	C (20.1)	A (6.7)	C (21.2)	A (7.5)	D (38.5)	A (7.5)	D (41.7)
	-Northbound Approach	E (66.1)	E (71.7)	E (66.1)	E (71.7)	E (64.8)	E (70.9)	E (64.8)	E (70.9)
	-Southbound Approach	E (71.0)	E (75.4)	E (71.0)	E (75.4)	E (70.2)	E (74.9)	E (70.2)	E (74.9)
4	**Spring Road @ Cumberland Blvd**	**F (97.8)**	**F (98.6)**	**F (97.2)**	**F (98.5)**	**F (116.7)**	**F (111.0)**	**F (116.1)**	**F (112.0)**
	-Eastbound Approach	C (28.4)	D (38.2)	C (28.7)	D (38.9)	C (31.3)	D (50.7)	C (31.7)	D (50.7)
	-Westbound Approach	C (24.6)	D (41.8)	C (25.0)	D (42.6)	C (29.4)	E (70.2)	C (29.9)	E (74.1)
	-Northbound Approach	F (238.9)	F (95.3)	F (238.9)	F (95.3)	F (292.9)	F (113.2)	F (292.9)	F (113.2)
	-Southbound Approach	D (52.2)	F (236.6)	D (52.2)	F (236.6)	D (53.1)	F (215.3)	D (53.1)	F (215.3)
5	**Campbell @ Atlanta Rd**	**B (18.8)**	**D (54.4)**	**B (19.2)**	**D (54.3)**	**C (21.7)**	**E (67.7)**	**C (22.1)**	**E (68.9)**
	-Eastbound Approach	B (15.6)	C (22.1)	B (15.6)	C (21.4)	B (18.5)	C (22.4)	B (18.5)	C (22.3)
	-Westbound Approach	B (17.1)	D (53.1)	B (17.2)	D (49.4)	B (18.6)	E (71.0)	B (18.7)	E (72.9)
	-Northbound Approach	D (37.8)	C (31.8)	D (37.8)	C (32.0)	D (37.8)	C (32.6)	D (37.8)	C (32.6)
	-Southbound Approach	E (56.9)	F (113.0)	E (59.5)	F (122.0)	E (66.2)	F (138.0)	E (70.3)	F (139.7)
6	**Campbell Rd @ S. Drwy**								
	-Westbound Approach	-	-	B (10.8)	B (12.6)	-	-	B (11.1)	B (13.4)
	-Southbound Left			A (7.9)	A (8.1)			A (8.0)	A (8.2)
7	**Spring Rd @ RIRO Drwy**								
	-Northbound Approach	-	-	D (27.0)	C (15.3)	-	-	D (32.0)	C (16.4)

*Delay exceeds 300 seconds.

6.3 Recommendations for Site Improvements

We recommend installing an 'overlap' phase for the northbound right-turn lane at the intersection of Spring Road at Campbell Road as site improvements.

6.4 Recommendations for System Improvements

In "No-Build" conditions, the intersections of Spring Road and Cumberland Boulevard and Spring Road at Village Parkway continue to operate at levels-of-service "F" in both AM and PM peak hours. In order to improve traffic operations at these intersections, we recommend the following "System Improvements".

Spring Road at Village Parkway:

- Restripe the existing southbound shared 'through and left-turn-lane' into a shared through/right-turn/left-turn-lane.
- Change the signal phasing of the southbound right-turn approaches to 'Protected-Overlap'.

Spring Road at Cumberland Boulevard:

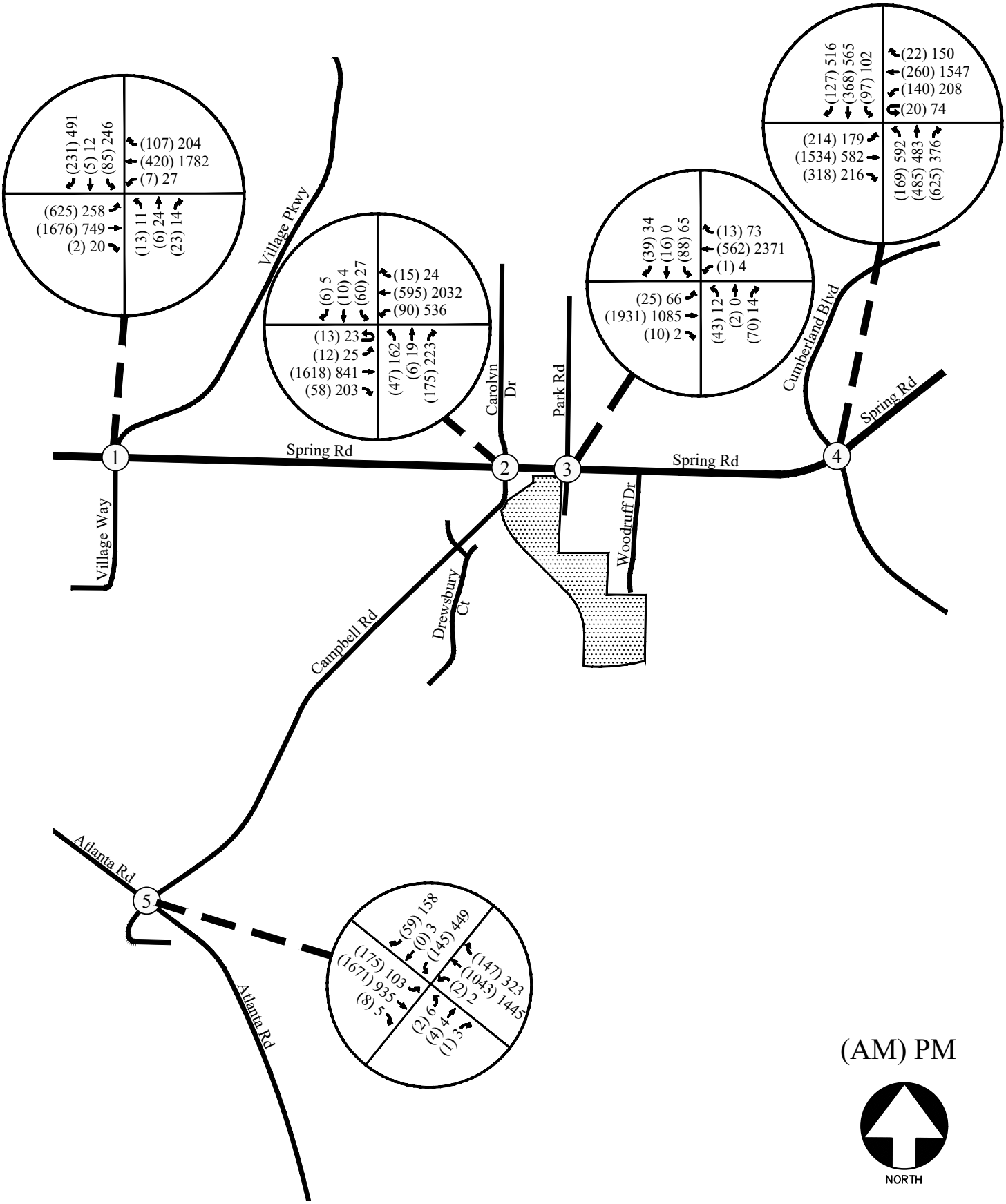
- Construct a dedicated eastbound right-turn lane on Spring Road and connect it to the existing dedicated receiving lane on Cumberland Boulevard to form a free flow right-turn lane movement.
- Change the signal phasing of the southbound right-turn lane to "Protected-Overlap"

TABLE 5 A – FUTURE INTERSECTION OPERATIONS – BUILD IMPROVED

	Intersection	Future Conditions: LOS (Delay)			
		Base Year 2022		Horizon Year 2032	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**Spring Rd @ Village Pkwy**	**B (14.0)**	**D (36.9)**	**B (15.6)**	**D (46.8)**
	-Eastbound Approach	A (6.5)	C (27.5)	A (8.6)	D (50.5)
	-Westbound Approach	B (10.9)	C (26.4)	B (13.0)	C (31.0)
	-Northbound Approach	F (85.1)	F (86.6)	F (85.8)	F (85.9)
	-Southbound Approach	E (64.2)	E (74.8)	E (61.4)	F (81.9)
2	**SpringRd@Campbell Rd**	**C (21.1)**	**D (35.8)**	**C (23.3)**	**E (59.3)**
	-Eastbound Approach	B (11.5)	B (14.3)	B (13.8)	B (17.0)
	-Westbound Approach	C (22.8)	D (40.3)	C (26.0)	E (77.0)
	-Northbound Approach	E (66.7)	E (59.8)	E (66.8)	E (59.0)
	-Southbound Approach	E (70.8)	E (74.5)	E (70.2)	E (74.6)
4	**Spring Road @ Cumberland Blvd**	**E (56.2)**	**E (74.1)**	**E (75.6)**	**F (89.2)**
	-Eastbound Approach	D (50.0)	D (43.9)	D (46.9)	E (58.2)
	-Westbound Approach	D (42.6)	D (47.6)	D (44.5)	E (76.5)
	-Northbound Approach	E (78.2)	E (74.0)	F (141.2)	F (81.9)
	-Southbound Approach	D (37.6)	F (139.0)	D (43.3)	F (139.9)

With the recommended improvements implemented, the traffic operations will improve as follows:

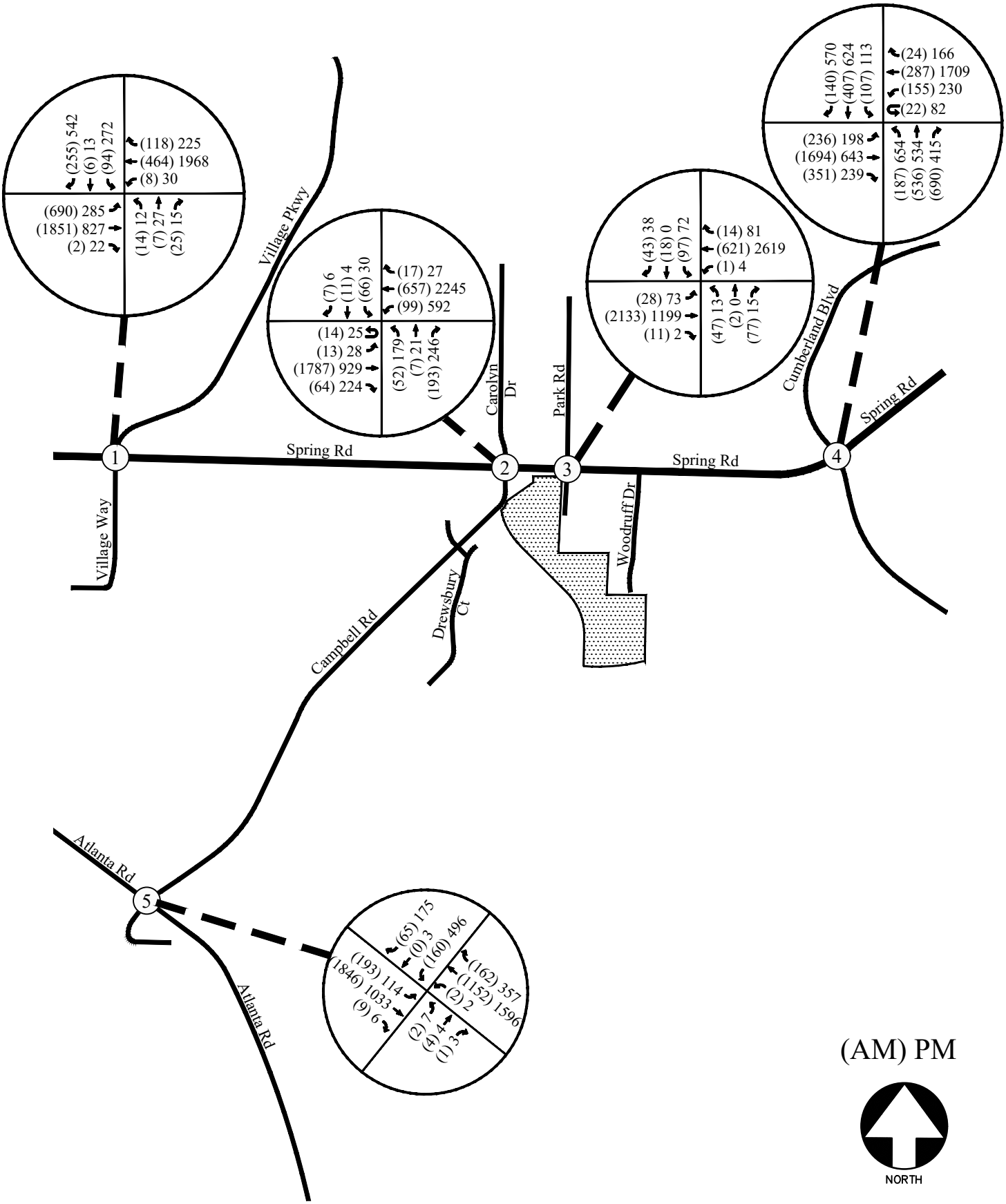
- The intersection of Spring Road at Village Parkway will improve from LOS "F" to LOS "D".
- The northbound approach of Campbell Road at Spring Road intersection will operate at LOS "E", an improvement from LOS "F".
- Intersection of Spring Road at Cumberland Boulevard will operate at LOS "E" in all scenarios except in 2032 Build PM compared to "F" in all scenarios without improvements.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES (2022)

FIGURE 6

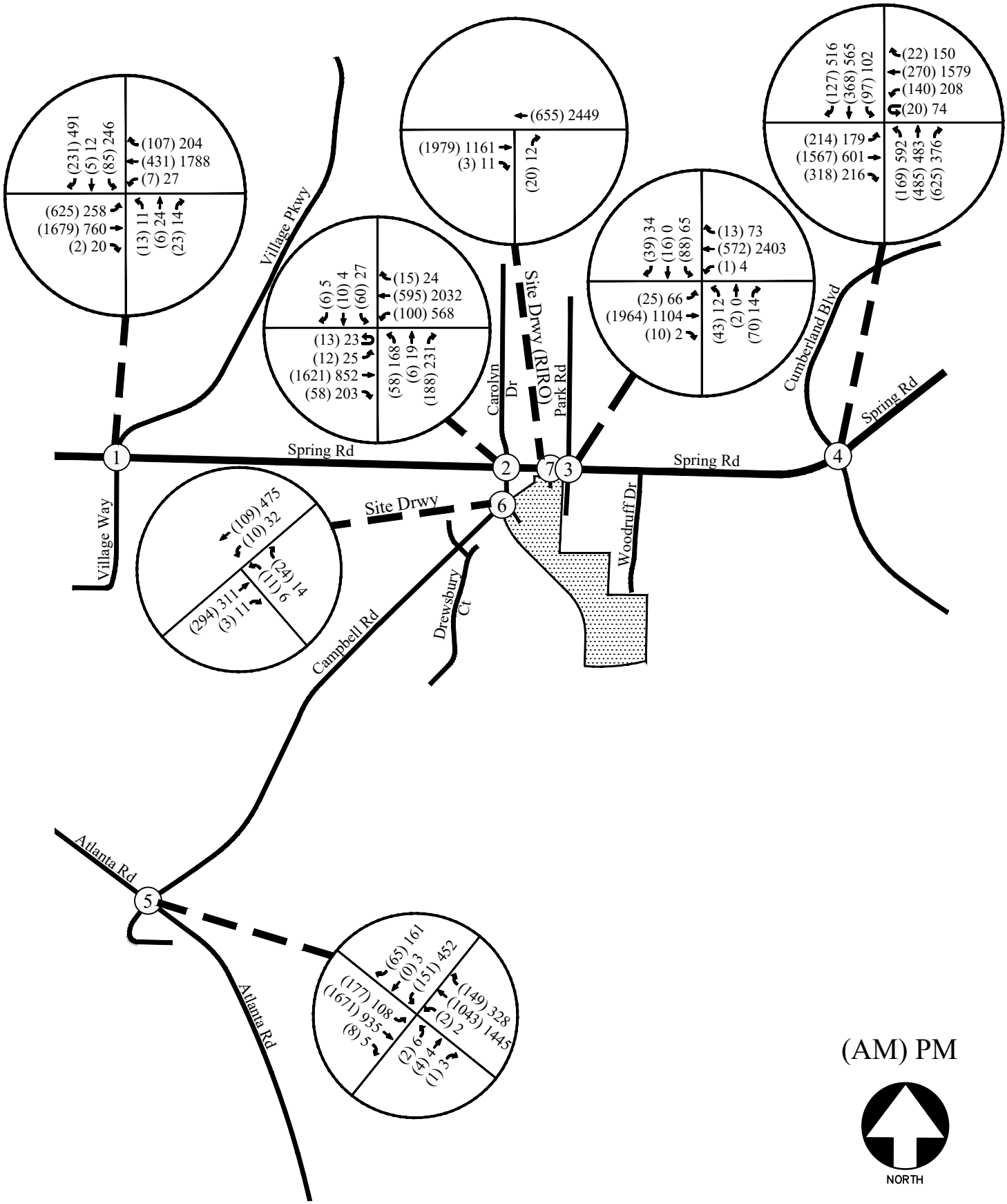
A&R Engineering Inc.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES (2032)

FIGURE 7

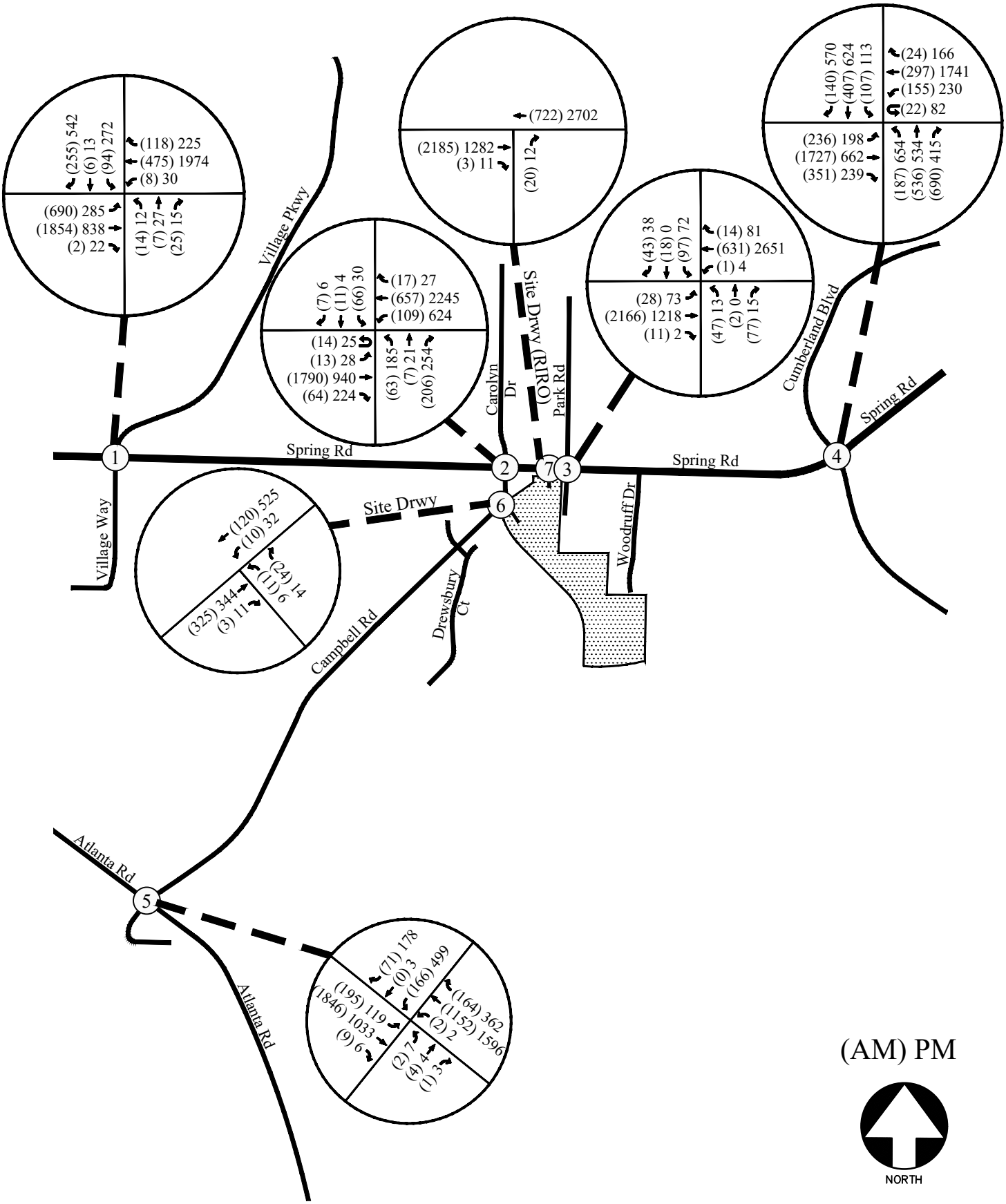
A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES (2022)

FIGURE 8

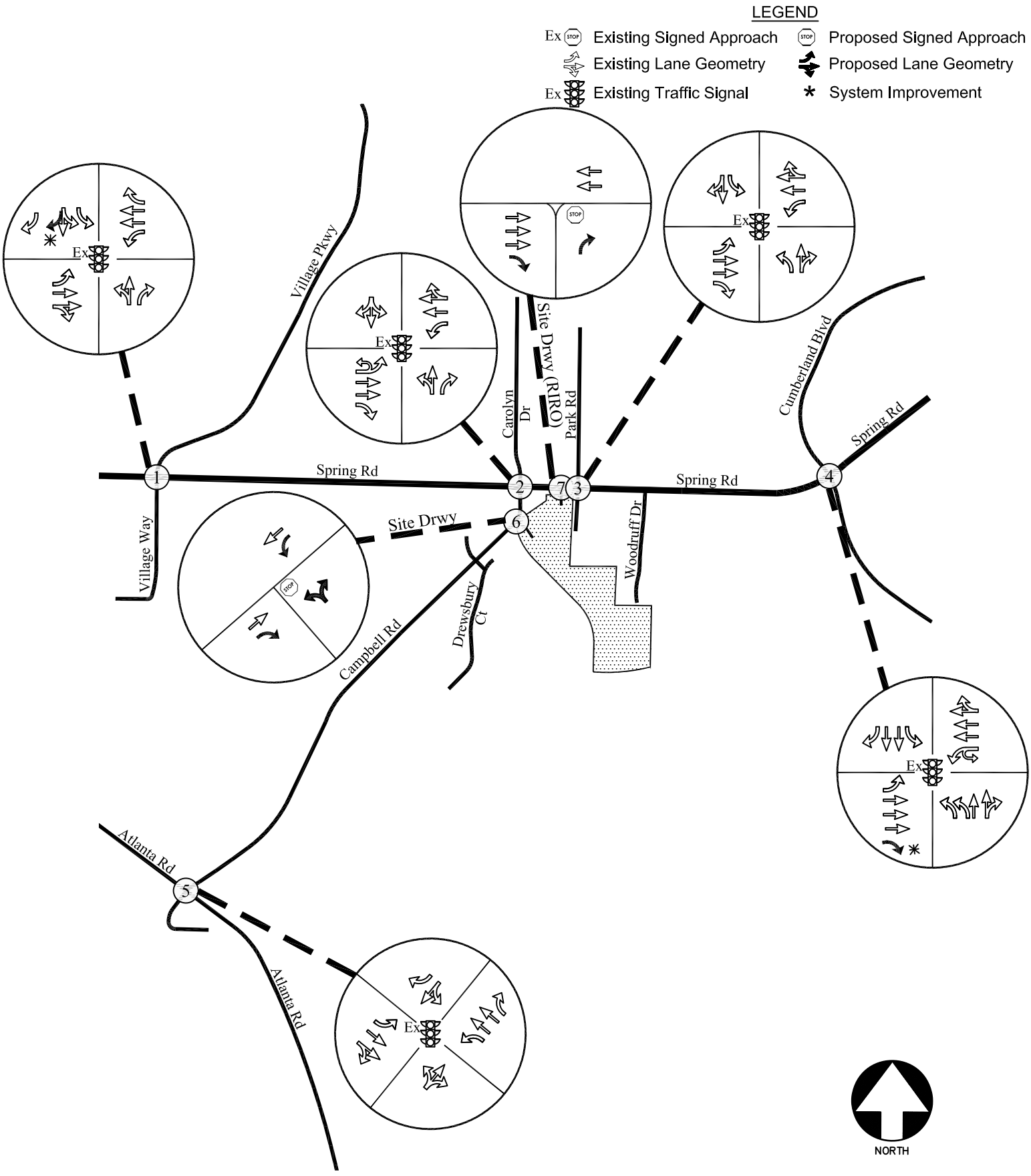
A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES (2032)

FIGURE 9

A&R Engineering Inc.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 10

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the added traffic from the proposed residential development that will be located on Spring Road and Campbell Road in Smyrna, Georgia. The proposed development will consist of 152 townhomes.

The development proposes access at the following locations. It also proposes an emergency access/pedestrian connection to Woodruff Drive.

- Site Driveway 1: Full-access driveway on Campbell Road
- Site Driveway 2: Right-in/right-out driveway on Spring Road

Existing and future operations after completion of the project were analyzed at the intersections of:

1. Spring Road at Village Parkway / Village Way
2. Spring Road at Campbell Road / Carolyn Drive
3. Spring Road at Park Road
4. Spring Road at Cumberland Boulevard
5. Campbell Road at Atlanta Road

The analysis included the evaluation of Future Base Year 2022 and Horizon Year 2032 operations for "No-Build" and "Build" conditions, both of which account for increases in annual growth of through traffic. The results of the analysis are listed below:

7.1 Recommendations for Site Improvements

The following access configuration is recommended for the proposed site driveway intersections.

- Site Driveway 1: Full-access driveway on Campbell Road
    - This driveway is recommended to consist of one entering lane and one exiting lane. The westbound (driveway) approach is recommended to have a shared left / right-turn lane for exiting traffic.
    - The intersection is recommended to be un-signalized with a STOP sign on the westbound approach.
    - A left-turn lane with 80' storage and 50' taper length is recommended to be constructed for entering left-turn movement on southbound Campbell Road.
    - A deceleration lane with 100' storage and 50' taper length is recommended to be constructed for entering traffic.

- Site Driveway 2: Right-in/right-out driveway on Spring Road
    - This driveway is recommended to consist of one entering lane and one exiting lane. The northbound (driveway) approach is recommended to have only one right-turn lane for exiting traffic.
    - The intersection is recommended to be un-signalized with a STOP sign on the northbound approach.

- A short eastbound deceleration lane with approximately 100' storage and 50' taper length or whatever length that can be accommodated after the gas station driveway, is recommended to be constructed on Spring Road for entering right-turn movements.

Spring Road at Campbell Road:
We recommend installing an 'overlap' phase for the northbound right-turn lane at the intersection of Spring Road at Campbell Road as site improvements.

7.2 Recommendations for System Improvements

In "No-Build" conditions, the intersections of Spring Road and Cumberland Boulevard and Spring Road at Village Parkway continue to operate at levels-of-service "F" in both AM and PM peak hours. In order to improve traffic operations at these intersections, we recommend the following "System Improvements".

Spring Road at Village Parkway:

- Restripe the existing southbound shared 'through and left-turn-lane' into a shared through/right-turn/left-turn-lane.
- Change the signal phasing of the southbound right-turn approaches to 'Protected-Overlap'.

Spring Road at Cumberland Boulevard:

- Construct a dedicated eastbound right-turn lane on Spring Road and connect it to the existing dedicated receiving lane on Cumberland Boulevard to form a free flow right-turn lane movement.
- Change the signal phasing of the southbound right-turn lane to "Protected-Overlap"

In addition, we understand that the City has plans to construct a parallel road south of Spring Road through our client's property as a 'Neighborhood Greenway' as part of the 'Core Area Recommendations for Spring Road Gateway' as per City's Regional Planning document of 2016. The planned connected radial street grid including the planned 'neighborhood greenways' north of Spring Road will reduce traffic congestion at the intersection of Spring Road at Cumberland Boulevard. An excerpt from the City's planning document showing the connected radial grid is attached.

A comparative analysis of trips generated by current zoning and proposed zoning shown in Table 4-C above indicates that daily trips generated by the proposed zoning is less than 89% less traffic in the AM peak hour, 88% less traffic in the PM peak hour and 84% less traffic in the 24-hour period of the trips generated by current zoning. The impact of the site generated trips on traffic operations is not significant as shown by the results of the "No-Build" and "Build" conditions' analysis.

Appendix

EXISTING INTERSECTION TRAFFIC COUNTS

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA
Campbell Rd @ Atlanta Rd
7-9 am | 4-6 pm

File Name : 20190318
Site Code : 20190318
Start Date : 12/12/2019
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Campbell Rd Northbound				Campbell Rd Southbound				Atlanta Rd Eastbound				Atlanta Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	1	3	26	0	4	30	38	354	1	393	0	146	38	184	610
07:15 AM	0	0	0	0	33	0	7	40	24	362	1	387	0	213	31	244	671
07:30 AM	1	0	0	1	32	0	7	39	37	391	1	429	0	291	31	322	791
07:45 AM	1	2	0	3	39	0	15	54	39	413	2	454	0	260	26	286	797
Total	4	2	1	7	130	0	33	163	138	1520	5	1663	0	910	126	1036	2869
08:00 AM	0	0	0	0	38	0	18	56	47	410	0	457	1	240	46	287	800
08:15 AM	0	2	1	3	28	0	16	44	42	361	5	408	1	192	36	229	684
08:30 AM	0	1	0	1	37	0	2	39	33	329	0	362	0	170	41	211	613
08:45 AM	0	0	1	1	32	0	9	41	95	372	0	467	1	210	73	284	793
Total	0	3	2	5	135	0	45	180	217	1472	5	1694	3	812	196	1011	2890
*** BREAK ***																	
04:00 PM	2	1	2	5	56	2	10	68	34	225	2	261	0	277	62	339	673
04:15 PM	0	0	1	1	69	1	21	91	27	252	2	281	0	333	76	409	782
04:30 PM	3	3	2	8	75	0	34	109	34	241	0	275	8	315	50	373	765
04:45 PM	1	0	0	1	75	1	29	105	26	192	1	219	1	278	60	339	664
Total	6	4	5	15	275	4	94	373	121	910	5	1036	9	1203	248	1460	2884
05:00 PM	2	1	1	4	101	1	41	143	20	210	1	231	0	347	63	410	788
05:15 PM	0	1	0	1	137	2	48	187	19	217	4	240	1	326	65	392	820
05:30 PM	3	1	1	5	89	0	27	116	19	237	0	256	1	363	90	454	831
05:45 PM	1	1	1	3	96	0	33	129	39	217	0	256	0	326	86	412	800
Total	6	4	3	13	423	3	149	575	97	881	5	983	2	1362	304	1668	3239
Grand Total	16	13	11	40	963	7	321	1291	573	4783	20	5376	14	4287	874	5175	11882
Apprch %	40	32.5	27.5		74.6	0.5	24.9		10.7	89	0.4		0.3	82.8	16.9		
Total %	0.1	0.1	0.1	0.3	8.1	0.1	2.7	10.9	4.8	40.3	0.2	45.2	0.1	36.1	7.4	43.6	

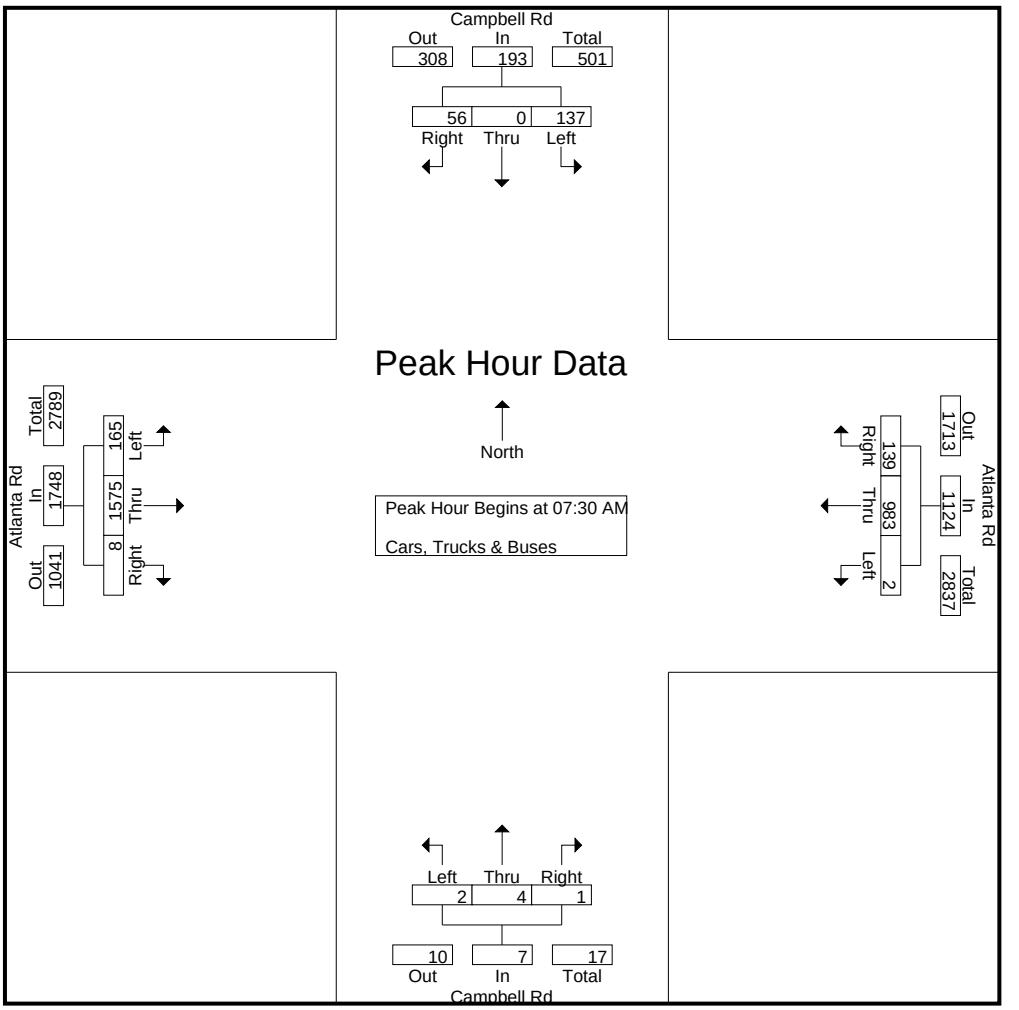
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC DATA
Campbell Rd @ Atlanta Rd
7-9 am | 4-6 pm

File Name : 20190318
Site Code : 20190318
Start Date : 12/12/2019
Page No : 2

	Campbell Rd Northbound				Campbell Rd Southbound				Atlanta Rd Eastbound				Atlanta Rd Westbound				
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 07:30 AM																	
07:30 AM	**1**	0	0	1	32	0	7	39	37	391	1	429	0	**291**	31	**322**	791
07:45 AM	1	**2**	0	**3**	**39**	0	15	54	39	**413**	2	454	0	260	26	286	797
08:00 AM	0	0	0	0	38	0	**18**	**56**	**47**	410	0	**457**	**1**	240	**46**	287	**800**
08:15 AM	0	2	**1**	3	28	0	16	44	42	361	**5**	408	1	192	36	229	684
Total Volume	2	4	1	7	137	0	56	193	165	1575	8	1748	2	983	139	1124	3072
% App. Total	28.6	57.1	14.3		71	0	29		9.4	90.1	0.5		0.2	87.5	12.4		
PHF	.500	.500	.250	.583	.878	.000	.778	.862	.878	.953	.400	.956	.500	.845	.755	.873	.960



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2160 Kingston Court, Suite 'O',
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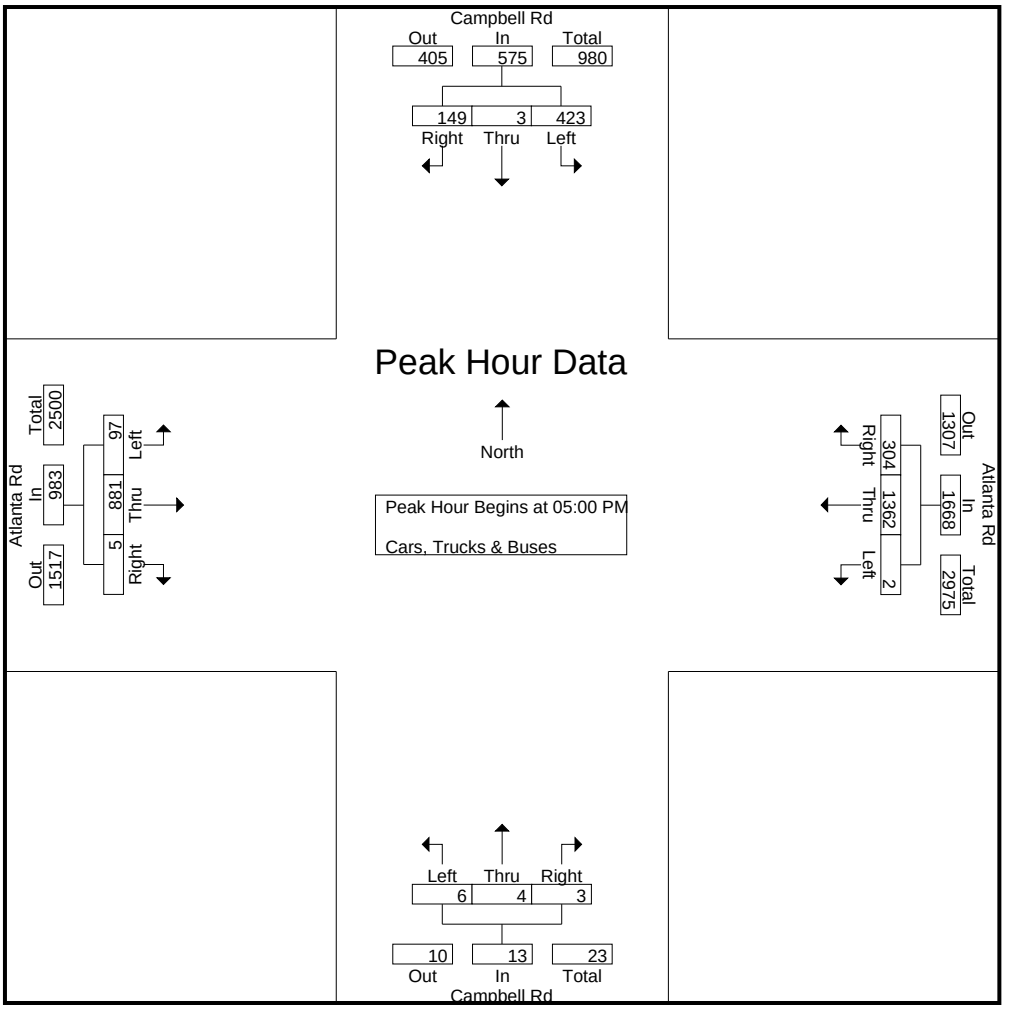
TMC DATA
Campbell Rd @ Atlanta Rd
7-9 am | 4-6 pm

File Name : 20190318
Site Code : 20190318
Start Date : 12/12/2019
Page No : 3

	Campbell Rd Northbound				Campbell Rd Southbound				Atlanta Rd Eastbound				Atlanta Rd Westbound				
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 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	**1**	**1**	4	101	1	41	143	20	210	1	231	0	347	63	410	788
05:15 PM	0	1	0	1	**137**	**2**	**48**	**187**	19	217	**4**	240	**1**	326	65	392	820
05:30 PM	**3**	1	1	**5**	89	0	27	116	19	**237**	0	**256**	1	**363**	**90**	**454**	**831**
05:45 PM	1	1	1	3	96	0	33	129	**39**	217	0	256	0	326	86	412	800
Total Volume	6	4	3	13	423	3	149	575	97	881	5	983	2	1362	304	1668	3239
% App. Total	46.2	30.8	23.1		73.6	0.5	25.9		9.9	89.6	0.5		0.1	81.7	18.2		
PHF	.500	1.00	.750	.650	.772	.375	.776	.769	.622	.929	.313	.960	.500	.938	.844	.919	.974



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Campbell Rd / Carolyn Dr
7-9 am | 4-6 pm

File Name : 20190320
Site Code : 20190320
Start Date : 12/12/2019
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Campbell Rd Northbound				Carolyn Dr Southbound				Spring Rd Eastbound					Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	2	72	80	13	1	2	16	2	427	10	2	441	12	86	1	99	636
07:15 AM	6	1	51	58	19	2	2	23	2	398	10	2	412	11	80	1	92	585
07:30 AM	4	1	22	27	17	2	4	23	2	438	13	8	461	16	127	4	147	658
07:45 AM	13	1	54	68	15	3	0	18	3	304	12	2	321	24	178	3	205	612
Total	29	5	199	233	64	8	8	80	9	1567	45	14	1635	63	471	9	543	2491
08:00 AM	14	0	45	59	11	1	1	13	4	406	16	1	427	21	130	0	151	650
08:15 AM	13	4	44	61	14	3	1	18	2	377	14	1	394	24	126	7	157	630
08:30 AM	18	0	52	70	12	3	0	15	2	312	25	2	341	40	120	3	163	589
08:45 AM	15	1	43	59	9	2	4	15	3	320	11	2	336	39	135	2	176	586
Total	60	5	184	249	46	9	6	61	11	1415	66	6	1498	124	511	12	647	2455
*** BREAK ***																		
04:00 PM	26	3	46	75	6	5	1	12	7	176	14	3	200	86	421	7	514	801
04:15 PM	29	2	55	86	3	2	3	8	2	175	36	4	217	109	467	3	579	890
04:30 PM	42	5	60	107	5	0	2	7	6	195	46	8	255	107	536	7	650	1019
04:45 PM	41	2	57	100	9	3	1	13	5	209	36	6	256	124	415	3	542	911
Total	138	12	218	368	23	10	7	40	20	755	132	21	928	426	1839	20	2285	3621
05:00 PM	33	10	51	94	7	1	1	9	8	192	62	4	266	144	475	5	624	993
05:15 PM	37	1	42	80	4	0	1	5	5	197	47	4	253	130	489	8	627	965
05:30 PM	40	3	40	83	8	1	4	13	2	180	48	4	234	95	393	6	494	824
05:45 PM	32	2	56	90	3	3	4	10	3	209	57	6	275	120	503	6	629	1004
Total	142	16	189	347	22	5	10	37	18	778	214	18	1028	489	1860	25	2374	3786
Grand Total	369	38	790	1197	155	32	31	218	58	4515	457	59	5089	1102	4681	66	5849	12353
Apprch %	30.8	3.2	66		71.1	14.7	14.2		1.1	88.7	9	1.2		18.8	80	1.1		
Total %	3	0.3	6.4	9.7	1.3	0.3	0.3	1.8	0.5	36.5	3.7	0.5	41.2	8.9	37.9	0.5	47.3	

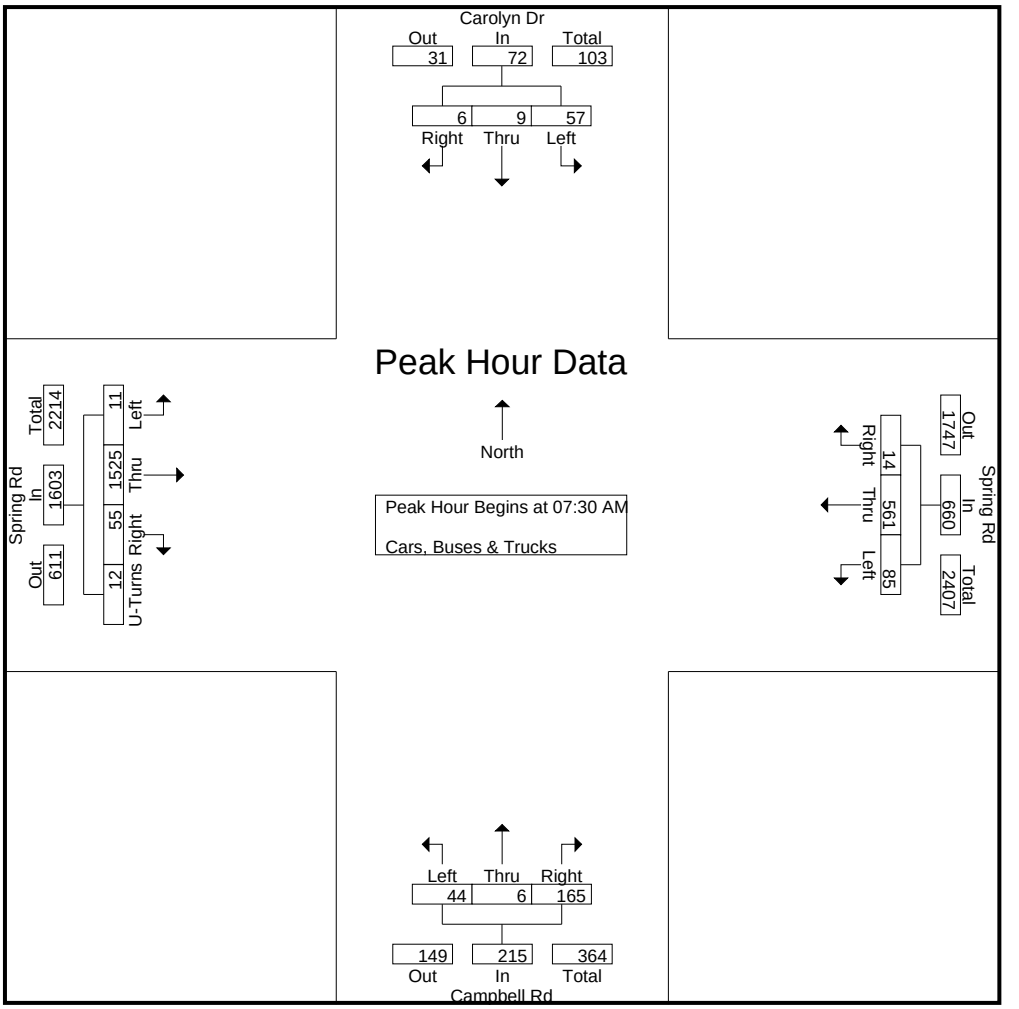
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Campbell Rd / Carolyn Dr
7-9 am | 4-6 pm

File Name : 20190320
Site Code : 20190320
Start Date : 12/12/2019
Page No : 2

	Campbell Rd Northbound				Carolyn Dr Southbound				Spring Rd Eastbound					Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turns	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 07:30 AM																		
07:30 AM	4	1	22	27	**17**	2	**4**	**23**	2	**438**	13	**8**	**461**	16	127	4	147	**658**
07:45 AM	13	1	**54**	**68**	15	**3**	0	18	3	304	12	2	321	**24**	**178**	3	**205**	612
08:00 AM	**14**	0	45	59	11	1	1	13	**4**	406	**16**	1	427	21	130	0	151	650
08:15 AM	13	**4**	44	61	14	3	1	18	2	377	14	1	394	24	126	**7**	157	630
Total Volume	44	6	165	215	57	9	6	72	11	1525	55	12	1603	85	561	14	660	2550
% App. Total	20.5	2.8	76.7		79.2	12.5	8.3		0.7	95.1	3.4	0.7		12.9	85	2.1		
PHF	.786	.375	.764	.790	.838	.750	.375	.783	.688	.870	.859	.375	.869	.885	.788	.500	.805	.969



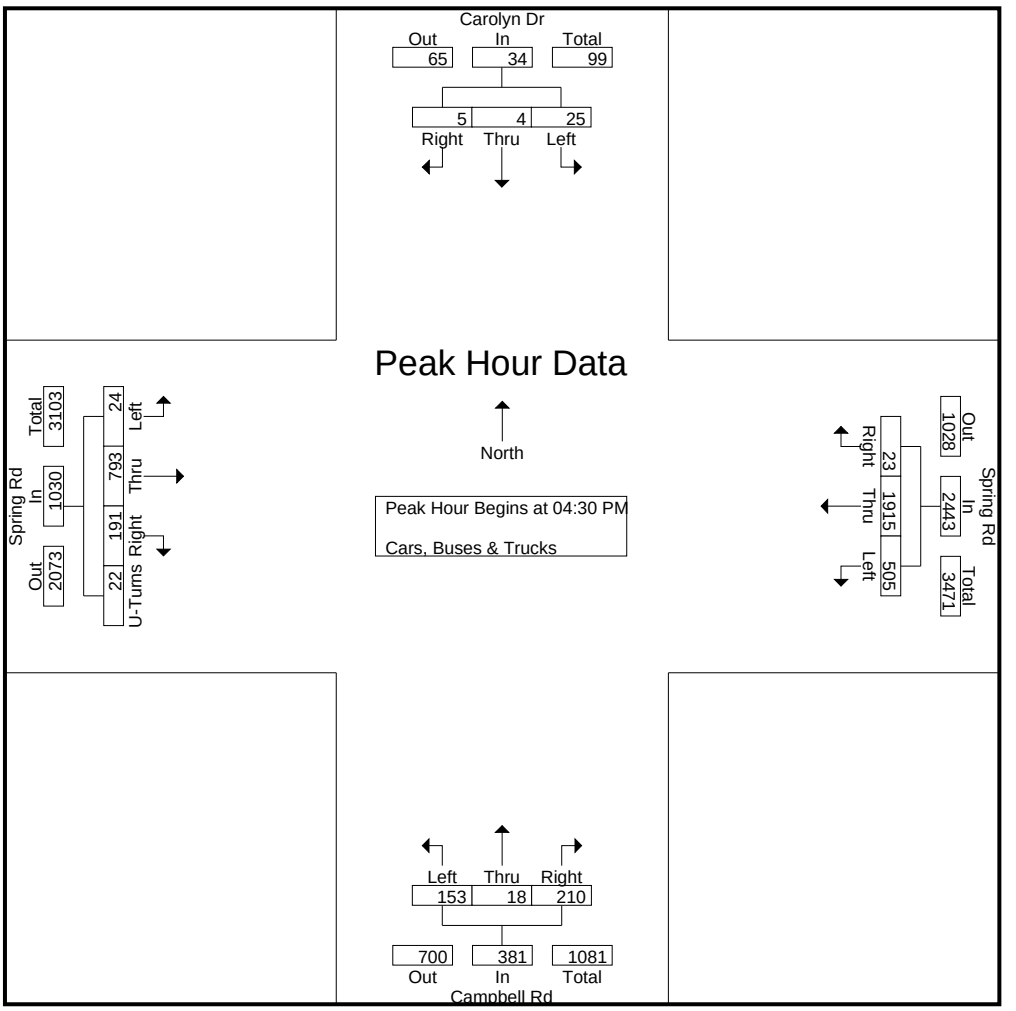
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Campbell Rd / Carolyn Dr
7-9 am | 4-6 pm

File Name : 20190320
Site Code : 20190320
Start Date : 12/12/2019
Page No : 3

	Campbell Rd Northbound				Carolyn Dr Southbound				Spring Rd Eastbound					Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turns	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	**42**	5	**60**	**107**	5	0	**2**	7	6	195	46	**8**	255	107	**536**	7	**650**	**1019**
04:45 PM	41	2	57	100	**9**	**3**	1	**13**	5	**209**	36	6	256	124	415	3	542	911
05:00 PM	33	**10**	51	94	7	1	1	9	**8**	192	**62**	4	**266**	**144**	475	5	624	993
05:15 PM	37	1	42	80	4	0	1	5	5	197	47	4	253	130	489	**8**	627	965
Total Volume	153	18	210	381	25	4	5	34	24	793	191	22	1030	505	1915	23	2443	3888
% App. Total	40.2	4.7	55.1		73.5	11.8	14.7		2.3	77	18.5	2.1		20.7	78.4	0.9		
PHF	.911	.450	.875	.890	.694	.333	.625	.654	.750	.949	.770	.688	.968	.877	.893	.719	.940	.954



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Park Rd / Argyle Elementary School Drwy
7-9 am | 4-6 pm

File Name : 20190321
Site Code : 20190321
Start Date : 12/12/2019
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Argyle Elementary School Drwy Northbound				Park Rd Southbound				Spring Rd Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	2	2	19	0	8	27	1	522	7	530	2	91	3	96	655
07:15 AM	4	1	8	13	9	0	5	14	6	468	4	478	2	79	2	83	588
07:30 AM	13	1	15	29	20	3	4	27	6	514	4	524	0	127	0	127	707
07:45 AM	18	0	27	45	24	9	9	42	7	413	4	424	0	152	5	157	668
Total	35	2	52	89	72	12	26	110	20	1917	19	1956	4	449	10	463	2618
08:00 AM	9	1	24	34	21	3	15	39	6	420	0	426	1	128	1	130	629
08:15 AM	1	0	0	1	18	0	9	27	5	473	1	479	0	123	6	129	636
08:30 AM	0	0	0	0	26	1	8	35	9	363	0	372	0	163	4	167	574
08:45 AM	0	0	0	0	12	0	8	20	8	398	1	407	0	132	6	138	565
Total	10	1	24	35	77	4	40	121	28	1654	2	1684	1	546	17	564	2404
*** BREAK ***																	
04:00 PM	1	2	3	6	15	0	5	20	11	216	2	229	1	542	15	558	813
04:15 PM	0	0	2	2	13	0	9	22	10	192	1	203	0	565	23	588	815
04:30 PM	2	1	1	4	11	0	7	18	13	261	1	275	1	584	16	601	898
04:45 PM	2	1	1	4	9	0	7	16	17	250	0	267	2	519	15	536	823
Total	5	4	7	16	48	0	28	76	51	919	4	974	4	2210	69	2283	3349
05:00 PM	0	0	1	1	12	0	5	17	14	257	1	272	1	622	14	637	927
05:15 PM	3	0	4	7	17	0	12	29	18	233	1	252	2	542	19	563	851
05:30 PM	5	0	3	8	16	0	7	23	15	298	0	313	0	496	15	511	855
05:45 PM	3	0	5	8	16	0	8	24	15	235	0	250	1	575	21	597	879
Total	11	0	13	24	61	0	32	93	62	1023	2	1087	4	2235	69	2308	3512
Grand Total	61	7	96	164	258	16	126	400	161	5513	27	5701	13	5440	165	5618	11883
Apprch %	37.2	4.3	58.5		64.5	4	31.5		2.8	96.7	0.5		0.2	96.8	2.9		
Total %	0.5	0.1	0.8	1.4	2.2	0.1	1.1	3.4	1.4	46.4	0.2	48	0.1	45.8	1.4	47.3	

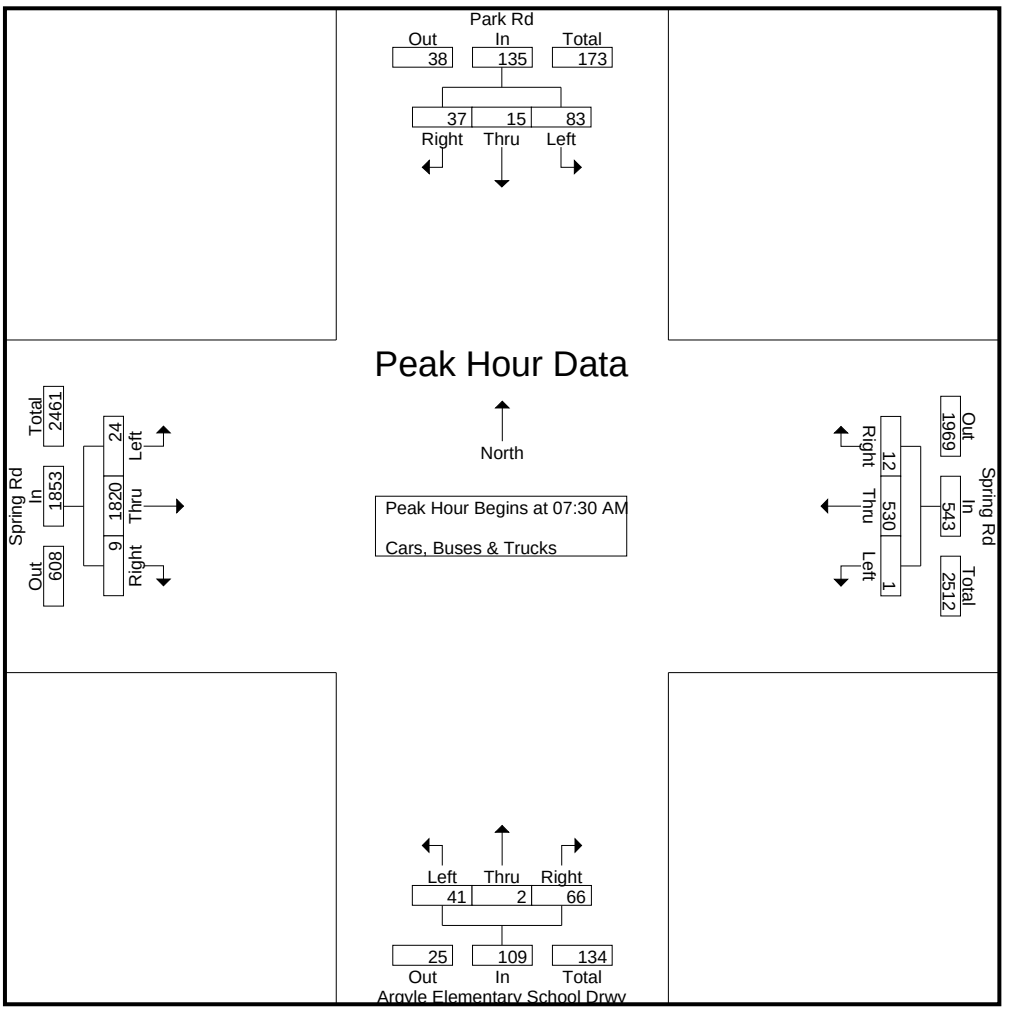
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Park Rd / Argyle Elementary School Drwy
7-9 am | 4-6 pm

File Name : 20190321
Site Code : 20190321
Start Date : 12/12/2019
Page No : 2

	Argyle Elementary School Drwy Northbound				Park Rd Southbound				Spring Rd Eastbound				Spring Rd Westbound				
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 07:30 AM																	
07:30 AM	13	**1**	15	29	20	3	4	27	6	**514**	**4**	**524**	0	127	0	127	**707**
07:45 AM	**18**	0	**27**	**45**	**24**	**9**	9	**42**	**7**	413	4	424	0	**152**	5	**157**	668
08:00 AM	9	1	24	34	21	3	**15**	39	6	420	0	426	**1**	128	1	130	629
08:15 AM	1	0	0	1	18	0	9	27	5	473	1	479	0	123	**6**	129	636
Total Volume	41	2	66	109	83	15	37	135	24	1820	9	1853	1	530	12	543	2640
% App. Total	37.6	1.8	60.6		61.5	11.1	27.4		1.3	98.2	0.5		0.2	97.6	2.2		
PHF	.569	.500	.611	.606	.865	.417	.617	.804	.857	.885	.563	.884	.250	.872	.500	.865	.934



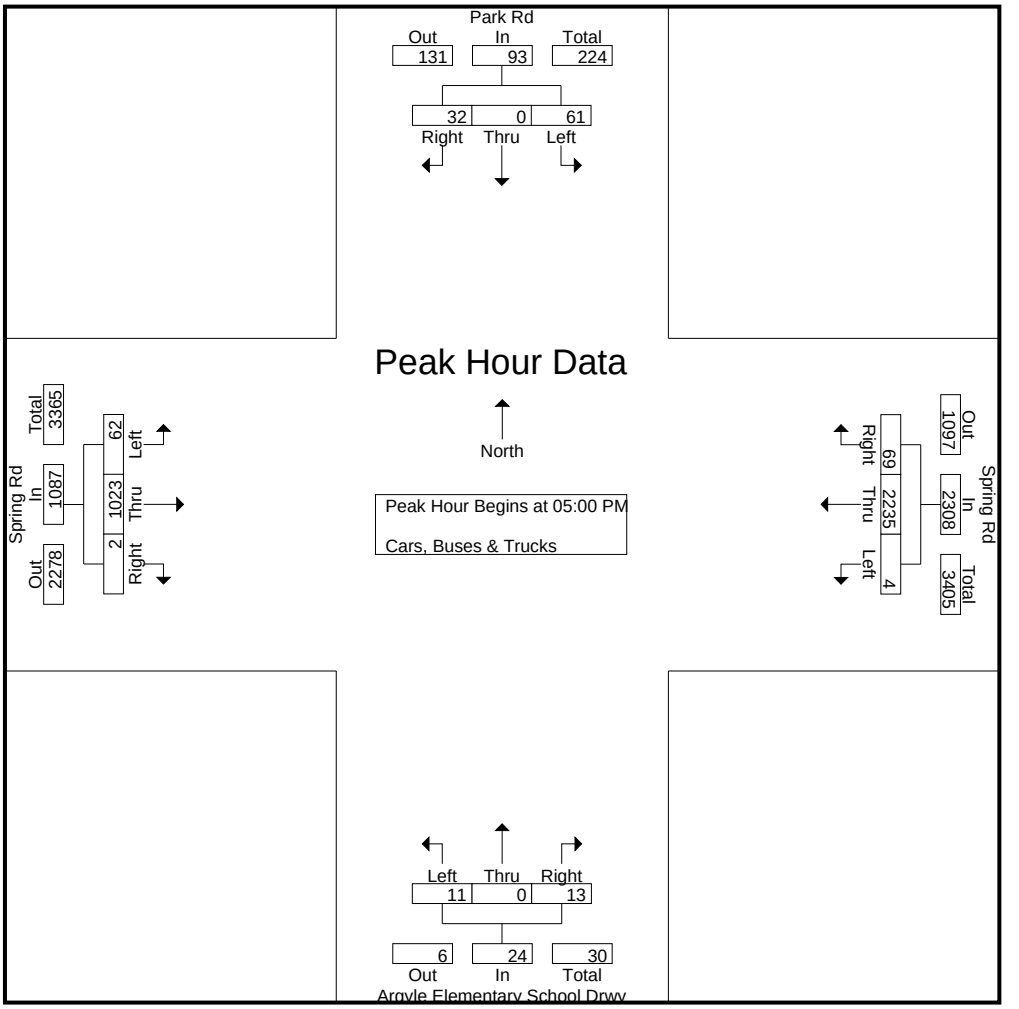
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Park Rd / Argyle Elementary School Drwy
7-9 am | 4-6 pm

File Name : 20190321
Site Code : 20190321
Start Date : 12/12/2019
Page No : 3

	Argyle Elementary School Drwy Northbound				Park Rd Southbound				Spring Rd Eastbound				Spring Rd Westbound				
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 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	1	1	12	0	5	17	14	257	**1**	272	1	**622**	14	**637**	**927**
05:15 PM	3	0	4	7	**17**	0	**12**	**29**	**18**	233	1	252	**2**	542	19	563	851
05:30 PM	**5**	0	3	**8**	16	0	7	23	15	**298**	0	**313**	0	496	15	511	855
05:45 PM	3	0	**5**	8	16	0	8	24	15	235	0	250	1	575	**21**	597	879
Total Volume	11	0	13	24	61	0	32	93	62	1023	2	1087	4	2235	69	2308	3512
% App. Total	45.8	0	54.2		65.6	0	34.4		5.7	94.1	0.2		0.2	96.8	3		
PHF	.550	.000	.650	.750	.897	.000	.667	.802	.861	.858	.500	.868	.500	.898	.821	.906	.947



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cumberland Blvd @ Spring Rd
7-9 am | 4-6 pm

File Name : 20200025
Site Code : 20200025
Start Date : 2/5/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Cumberland Blvd Northbound				Cumberland Blvd Southbound				Spring Rd Eastbound				Spring Rd Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	35	55	160	250	23	71	24	118	51	325	33	409	18	41	3	3	65	842
07:15 AM	39	92	155	286	23	65	33	121	41	452	70	563	17	60	1	3	81	1051
07:30 AM	36	123	121	280	15	86	31	132	62	378	68	508	27	55	9	6	97	1017
07:45 AM	46	134	175	355	31	109	31	171	50	297	86	433	28	52	4	5	89	1048
Total	156	404	611	1171	92	331	119	542	204	1452	257	1913	90	208	17	17	332	3958
08:00 AM	38	108	138	284	22	87	25	134	49	319	76	444	60	78	7	5	150	1012
08:15 AM	36	90	129	255	24	140	25	189	41	324	68	433	54	63	7	9	133	1010
08:30 AM	38	108	100	246	20	157	35	212	46	319	68	433	56	91	10	7	164	1055
08:45 AM	44	98	123	265	17	84	32	133	48	262	55	365	40	90	5	7	142	905
Total	156	404	490	1050	83	468	117	668	184	1224	267	1675	210	322	29	28	589	3982
*** BREAK ***																		
04:00 PM	183	111	84	378	21	104	135	260	31	115	48	194	46	337	13	11	407	1239
04:15 PM	146	76	112	334	24	86	104	214	50	169	36	255	43	386	9	15	453	1256
04:30 PM	147	147	84	378	14	124	128	266	36	105	58	199	38	308	15	20	381	1224
04:45 PM	125	97	85	307	26	122	114	262	45	122	52	219	55	333	106	16	510	1298
Total	601	431	365	1397	85	436	481	1002	162	511	194	867	182	1364	143	62	1751	5017
05:00 PM	161	148	90	399	21	118	118	257	42	143	54	239	39	421	10	18	488	1383
05:15 PM	125	105	87	317	17	170	136	323	41	155	43	239	46	407	8	13	474	1353
05:30 PM	147	105	92	344	32	123	118	273	41	129	55	225	56	297	17	23	393	1235
05:45 PM	146	86	88	320	16	105	90	211	36	147	41	224	36	402	13	22	473	1228
Total	579	444	357	1380	86	516	462	1064	160	574	193	927	177	1527	48	76	1828	5199
Grand Total	1492	1683	1823	4998	346	1751	1179	3276	710	3761	911	5382	659	3421	237	183	4500	18156
Apprch %	29.9	33.7	36.5		10.6	53.4	36		13.2	69.9	16.9		14.6	76	5.3	4.1		
Total %	8.2	9.3	10	27.5	1.9	9.6	6.5	18	3.9	20.7	5	29.6	3.6	18.8	1.3	1	24.8	

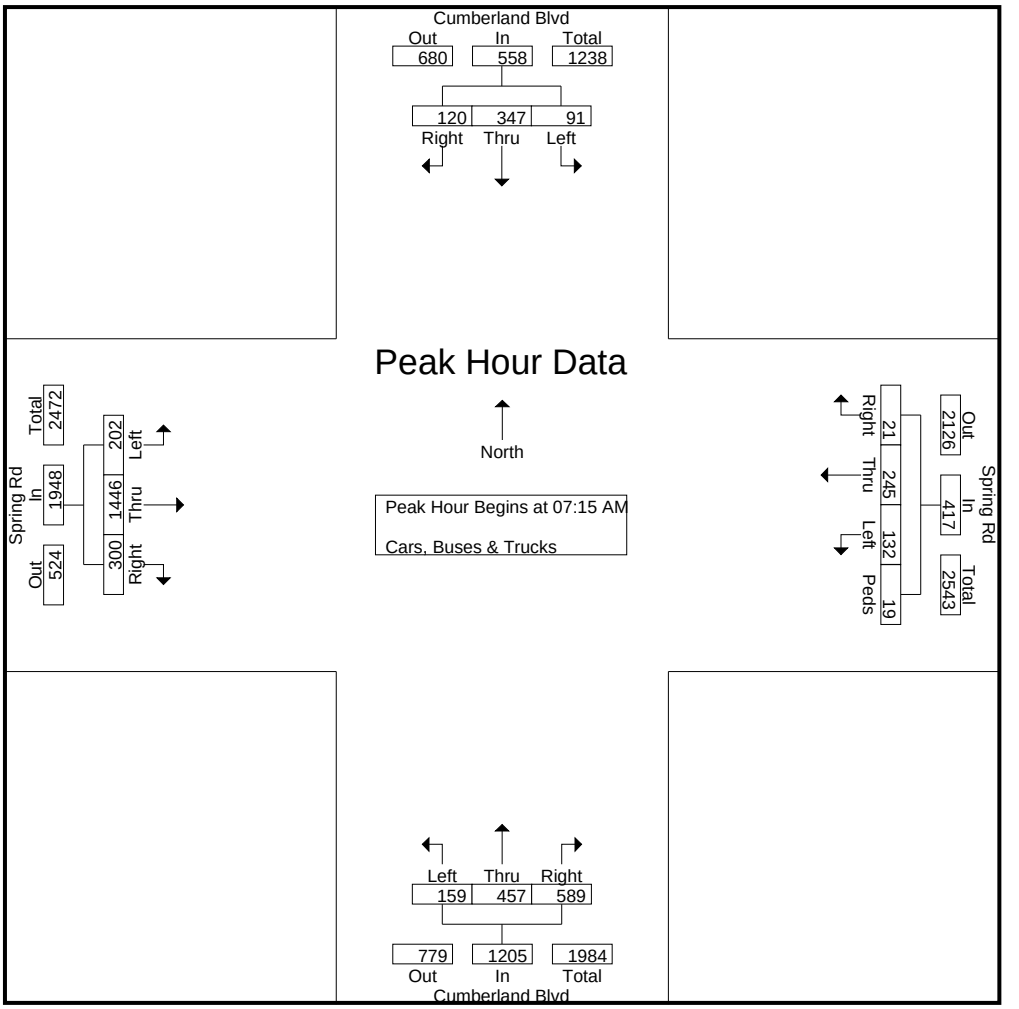
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cumberland Blvd @ Spring Rd
7-9 am | 4-6 pm

File Name : 20200025
Site Code : 20200025
Start Date : 2/5/2020
Page No : 2

	Cumberland Blvd Northbound				Cumberland Blvd Southbound				Spring Rd Eastbound				Spring Rd Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	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 07:15 AM																		
07:15 AM	39	92	155	286	23	65	**33**	121	41	**452**	70	**563**	17	60	1	3	81	**1051**
07:30 AM	36	123	121	280	15	86	31	132	**62**	378	68	508	27	55	**9**	**6**	97	1017
07:45 AM	**46**	**134**	**175**	**355**	**31**	**109**	31	**171**	50	297	**86**	433	28	52	4	5	89	1048
08:00 AM	38	108	138	284	22	87	25	134	49	319	76	444	**60**	**78**	7	5	**150**	1012
Total Volume	159	457	589	1205	91	347	120	558	202	1446	300	1948	132	245	21	19	417	4128
% App. Total	13.2	37.9	48.9		16.3	62.2	21.5		10.4	74.2	15.4		31.7	58.8	5	4.6		
PHF	.864	.853	.841	.849	.734	.796	.909	.816	.815	.800	.872	.865	.550	.785	.583	.792	.695	.982



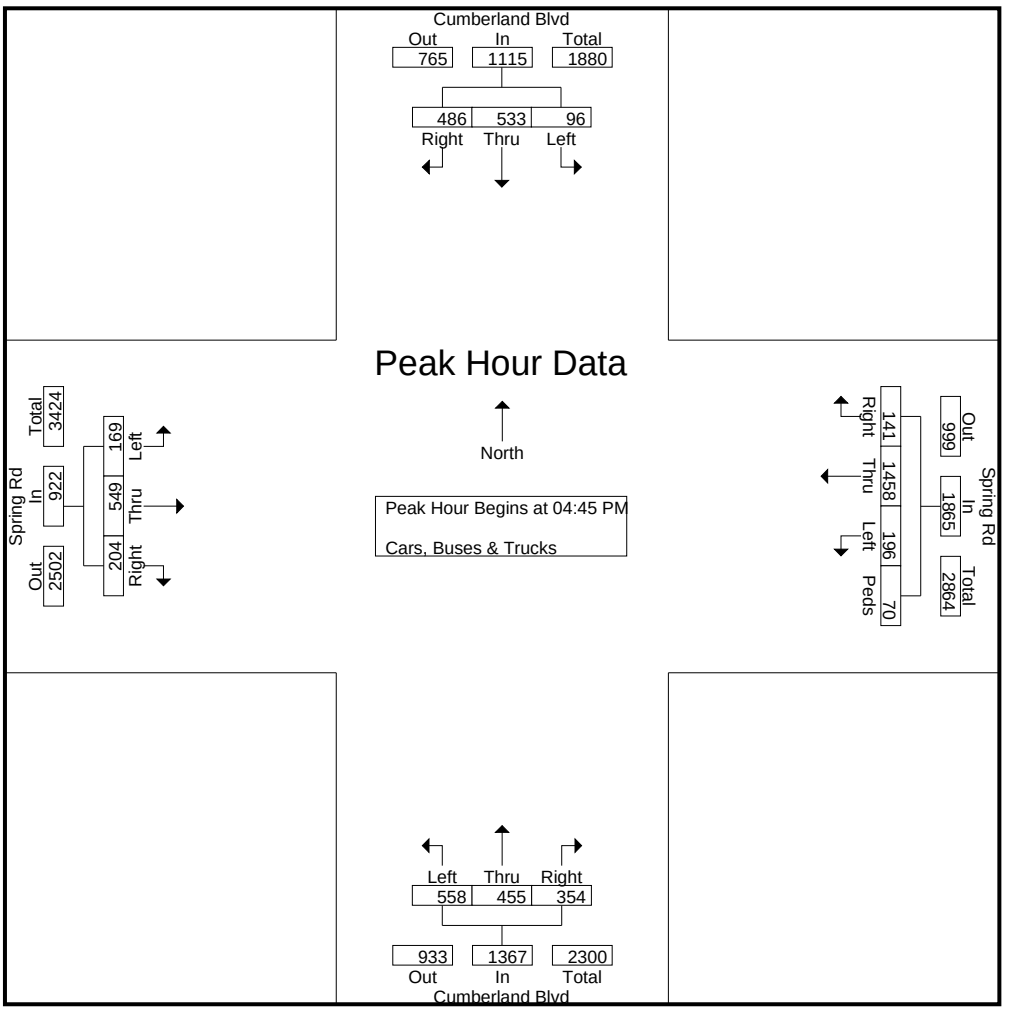
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Cumberland Blvd @ Spring Rd
7-9 am | 4-6 pm

File Name : 20200025
Site Code : 20200025
Start Date : 2/5/2020
Page No : 3

	Cumberland Blvd Northbound				Cumberland Blvd Southbound				Spring Rd Eastbound				Spring Rd Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
04:45 PM	125	97	85	307	26	122	114	262	**45**	122	52	219	55	333	**106**	16	**510**	1298
05:00 PM	**161**	**148**	90	**399**	21	118	118	257	42	143	54	**239**	39	**421**	10	18	488	**1383**
05:15 PM	125	105	87	317	17	**170**	**136**	**323**	41	**155**	43	239	46	407	8	13	474	1353
05:30 PM	147	105	**92**	344	**32**	123	118	273	41	129	**55**	225	**56**	297	17	**23**	393	1235
Total Volume	558	455	354	1367	96	533	486	1115	169	549	204	922	196	1458	141	70	1865	5269
% App. Total	40.8	33.3	25.9		8.6	47.8	43.6		18.3	59.5	22.1		10.5	78.2	7.6	3.8		
PHF	.866	.769	.962	.857	.750	.784	.893	.863	.939	.885	.927	.964	.875	.866	.333	.761	.914	.952



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Village Pkwy / Village way
7-9 am | 4-6 pm

File Name : 20200026
Site Code : 20200026
Start Date : 2/5/2020
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Village Way Northbound				Village Pkwy Southbound				Spring Rd Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	2	5	11	18	1	51	70	108	460	0	568	1	88	15	104	753
07:15 AM	4	0	7	11	18	1	43	62	142	408	1	551	1	103	28	132	756
07:30 AM	3	1	7	11	24	0	62	86	169	378	1	548	0	90	28	118	763
07:45 AM	1	3	3	7	20	3	62	85	170	334	0	504	5	115	30	150	746
Total	12	6	22	40	80	5	218	303	589	1580	2	2171	7	396	101	504	3018
08:00 AM	3	1	9	13	22	1	39	62	165	353	0	518	2	104	37	143	736
08:15 AM	1	3	4	8	17	0	42	59	159	332	2	493	1	99	34	134	694
08:30 AM	2	1	7	10	18	0	45	63	160	307	1	468	2	116	47	165	706
08:45 AM	1	1	4	6	24	1	55	80	117	257	0	374	3	105	27	135	595
Total	7	6	24	37	81	2	181	264	601	1249	3	1853	8	424	145	577	2731
*** BREAK ***																	
04:00 PM	2	0	4	6	36	3	97	136	49	161	5	215	4	383	36	423	780
04:15 PM	3	4	6	13	25	1	112	138	55	177	0	232	2	433	35	470	853
04:30 PM	0	2	5	7	39	1	117	157	59	174	3	236	3	467	60	530	930
04:45 PM	1	2	1	4	48	1	121	170	50	162	1	213	1	418	29	448	835
Total	6	8	16	30	148	6	447	601	213	674	9	896	10	1701	160	1871	3398
05:00 PM	1	3	0	4	39	4	113	156	79	151	3	233	4	434	43	481	874
05:15 PM	1	4	1	6	73	3	119	195	53	183	4	240	5	447	46	498	939
05:30 PM	2	10	8	20	51	2	125	178	56	189	8	253	13	390	56	459	910
05:45 PM	6	6	4	16	69	2	106	177	55	183	4	242	3	409	47	459	894
Total	10	23	13	46	232	11	463	706	243	706	19	968	25	1680	192	1897	3617
Grand Total	35	43	75	153	541	24	1309	1874	1646	4209	33	5888	50	4201	598	4849	12764
Apprch %	22.9	28.1	49		28.9	1.3	69.9		28	71.5	0.6		1	86.6	12.3		
Total %	0.3	0.3	0.6	1.2	4.2	0.2	10.3	14.7	12.9	33	0.3	46.1	0.4	32.9	4.7	38	

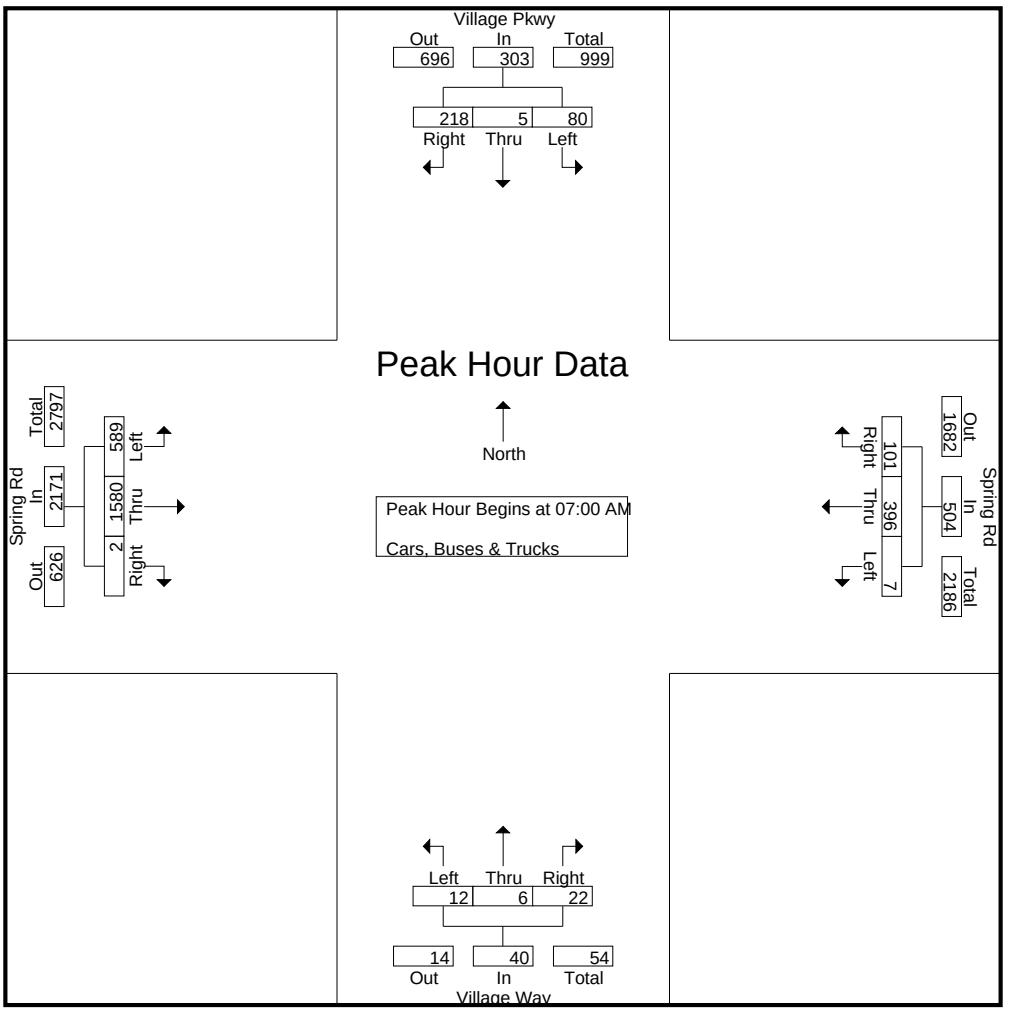
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Village Pkwy / Village way
7-9 am | 4-6 pm

File Name : 20200026
Site Code : 20200026
Start Date : 2/5/2020
Page No : 2

	Village Way Northbound				Village Pkwy Southbound				Spring Rd Eastbound				Spring Rd Westbound				
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	**4**	2	5	**11**	18	1	51	70	108	**460**	0	**568**	1	88	15	104	753
07:15 AM	4	0	**7**	11	18	1	43	62	142	408	**1**	551	1	103	28	132	756
07:30 AM	3	1	7	11	**24**	0	**62**	**86**	169	378	1	548	0	90	28	118	**763**
07:45 AM	1	**3**	3	7	20	**3**	62	85	**170**	334	0	504	**5**	**115**	**30**	**150**	746
Total Volume	12	6	22	40	80	5	218	303	589	1580	2	2171	7	396	101	504	3018
% App. Total	30	15	55		26.4	1.7	71.9		27.1	72.8	0.1		1.4	78.6	20		
PHF	.750	.500	.786	.909	.833	.417	.879	.881	.866	.859	.500	.956	.350	.861	.842	.840	.989



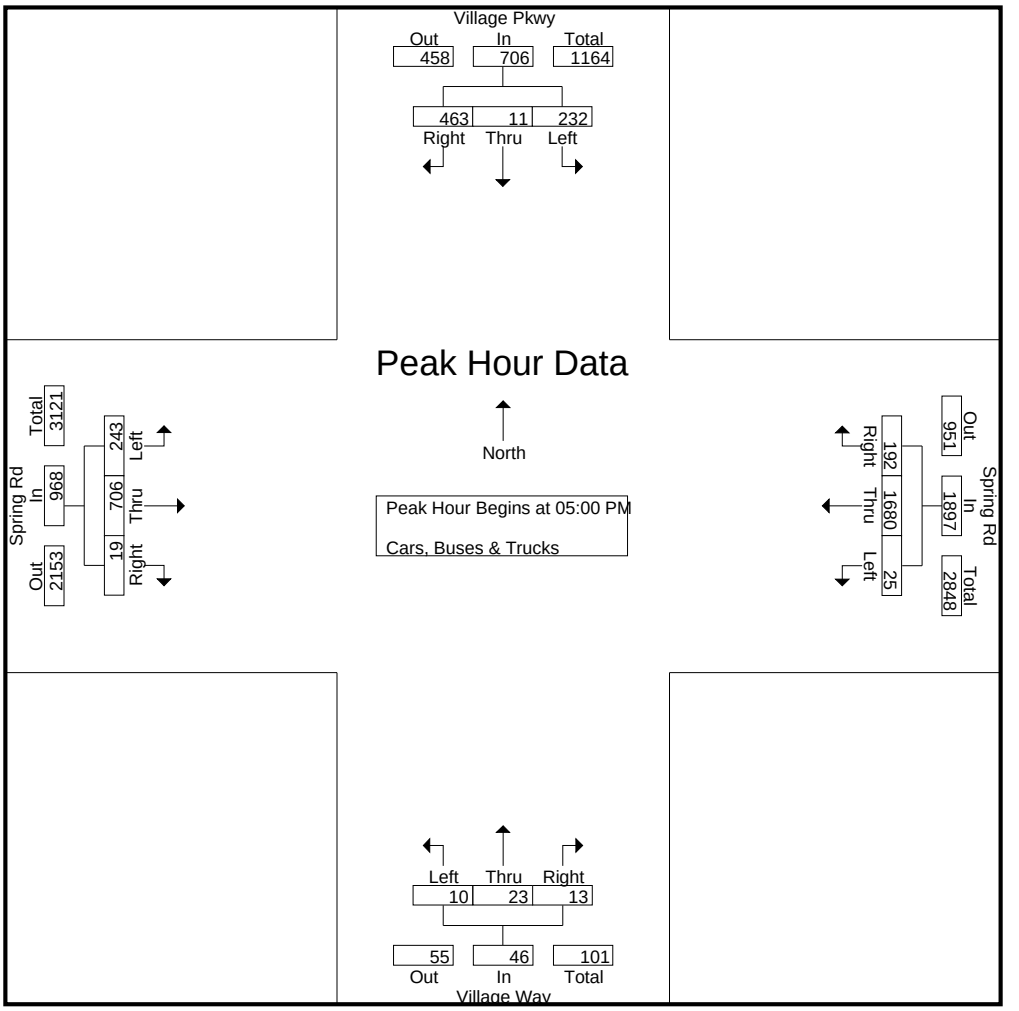
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O',
Marietta, GA 30067

TMC Data
Spring Rd @ Village Pkwy / Village way
7-9 am | 4-6 pm

File Name : 20200026
Site Code : 20200026
Start Date : 2/5/2020
Page No : 3

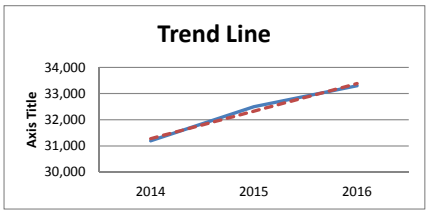
	Village Way Northbound				Village Pkwy Southbound				Spring Rd Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	3	0	4	39	**4**	113	156	**79**	151	3	233	4	434	43	481	874
05:15 PM	1	4	1	6	**73**	3	119	**195**	53	183	4	240	5	**447**	46	**498**	**939**
05:30 PM	2	**10**	**8**	**20**	51	2	**125**	178	56	**189**	**8**	**253**	**13**	390	**56**	459	910
05:45 PM	**6**	6	4	16	69	2	106	177	55	183	4	242	3	409	47	459	894
Total Volume	10	23	13	46	232	11	463	706	243	706	19	968	25	1680	192	1897	3617
% App. Total	21.7	50	28.3		32.9	1.6	65.6		25.1	72.9	2		1.3	88.6	10.1		
PHF	.417	.575	.406	.575	.795	.688	.926	.905	.769	.934	.594	.957	.481	.940	.857	.952	.963



LINEAR REGRESSION OF DAILY TRAFFIC

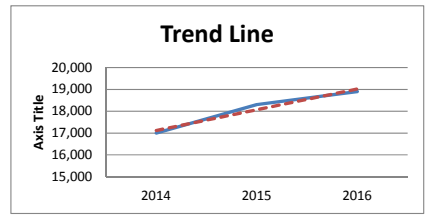
Location	Growth Rate	R Squared	Station ID	Route	2014	2015	2016	
Spring Rd (West of Cumberland	3.3%	0.98	0672806	178200	31,200	32,500	33,300	urban - Local
Cumberland Blvd (North of Spri	5.4%	0.96	0673015	202600	17,000	18,300	18,900	urban - Minor Arterial
Carolyn Dr (South of Barbara Lr	3.1%	0.96	0678693	512819	960	1,000	1,020	
Cobb Pkwy (South of Plumtree	2.3%	0.94	0672143	000300	38,200	39,500	40,000	urban - Principal Arteri
Cobb Pkwy (North of Cumberla	3.3%	1.00	0672145	000300	21,000	21,700	22,400	urban - Principal Arteri
Weighted Average	**3.3%**	0.97	Sum of Count Stations =		108,360	113,000	115,620	

Location	Traffic Counter	RCLINK	2014	2015	2016	
Spring Rd (West of Cumberland Gate)	0672806	178200	31,200	32,500	33,300	Sum X
						Sum Y
						Sum XY
						Sum X^2
						Count
						a
						b
						Mean Y
						SS_{tot}
						SS_{res}
						R^2



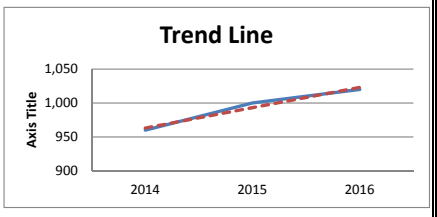
Growth Rate	3.3%	Intercept	-2,083,417	Slope	1,050.00
Trend Line			31,283	32,333	33,383

Location	Traffic Counter	RCLINK	2014	2015	2016	
Cumberland Blvd (North of Spring Hill Pkwy)	0673015	202600	17,000	18,300	18,900	Sum X
						Sum Y
						Sum XY
						Sum X^2
						Count
						a
						b
						Mean Y
						SS_{tot}
						SS_{res}
						R^2



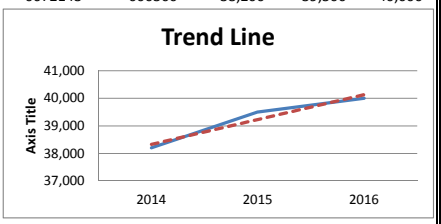
Growth Rate	5.4%	Intercept	-1,896,183	Slope	950.00
Trend Line			17,117	18,067	19,017

Location	Traffic Counter	RCLINK	2014	2015	2016	
Carolyn Dr (South of Barbara Ln)	0678693	512819	960	1,000	1,020	Sum X
						Sum Y
						Sum XY
						Sum X^2
						Count
						a
						b
						Mean Y
						SS_{tot}
						SS_{res}
						R^2



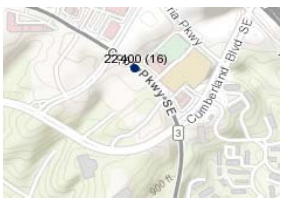
Growth Rate	3.1%	Intercept	-59,457	Slope	30.00
Trend Line			963	993	1,023

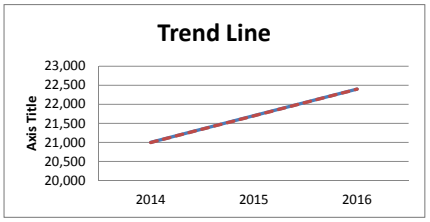
Location	Traffic Counter	RCLINK	2014	2015	2016	
Cobb Pkwy (South of Plumtree Pkwy)	0672143	000300	38,200	39,500	40,000	Sum X
						Sum Y
						Sum XY
						Sum X^2
						Count
						a
						b
						Mean Y
						SS_{tot}
						SS_{res}
						R^2



Growth Rate	2.3%	Intercept	-1,774,267	Slope	900.00
Trend Line			38,333	39,233	40,133

Location	Traffic Counter	RCLINK	2014	2015	2016	
Cobb Pkwy (North of Cumberland Blvd)	0672145	000300	21,000	21,700	22,400	Sum X
						Sum Y
						Sum XY
						Sum X^2
						Count
						a
						b
						Mean Y
						SS_{tot}
						SS_{res}
						R^2





Growth Rate	3.3%	Intercept	-1,388,800	Slope	700.00
Trend Line			21,000	21,700	22,400

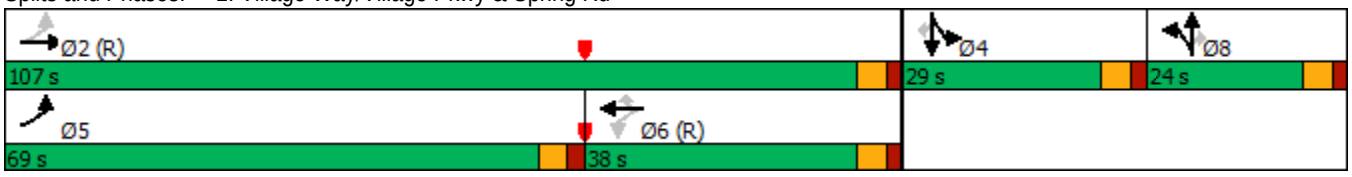
EXISTING INTERSECTION ANALYSIS

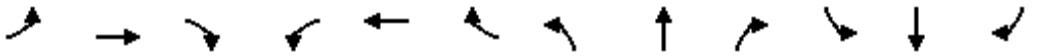
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	589	1580	7	396	101	6	22	80	5	218
Future Volume (vph)	589	1580	7	396	101	6	22	80	5	218
Lane Group Flow (vph)	595	1598	7	400	102	18	22	43	43	220
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	69.0	107.0	38.0	38.0	38.0	24.0	24.0	29.0	29.0	29.0
Total Split (%)	43.1%	66.9%	23.8%	23.8%	23.8%	15.0%	15.0%	18.1%	18.1%	18.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.69	0.56	0.04	0.19	0.11	0.22	0.14	0.41	0.41	0.72
Control Delay	10.2	7.5	25.7	18.1	9.6	79.3	1.8	82.3	82.0	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	7.5	25.7	18.1	9.6	79.3	1.8	82.3	82.0	21.9
Queue Length 50th (ft)	169	288	3	101	0	19	0	46	46	0
Queue Length 95th (ft)	293	437	17	189	61	47	0	90	90	86
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	1057	2840	171	2075	966	208	264	246	248	420
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	0.56	0.56	0.04	0.19	0.11	0.09	0.08	0.17	0.17	0.52

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	589	1580	2	7	396	101	12	6	22	80	5	218
Future Volume (veh/h)	589	1580	2	7	396	101	12	6	22	80	5	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	595	1596	2	7	400	102	12	6	22	85	0	220
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	833	3039	4	261	2412	1076	31	16	41	129	0	58
Arrive On Green	0.12	0.83	0.83	0.68	0.68	0.68	0.03	0.03	0.03	0.04	0.00	0.04
Sat Flow, veh/h	1781	3642	5	318	3554	1585	1207	603	1585	3563	0	1585
Grp Volume(v), veh/h	595	779	819	7	400	102	18	0	22	85	0	220
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	318	1777	1585	1810	0	1585	1781	0	1585
Q Serve(g_s), s	15.0	20.6	20.7	1.2	6.5	3.5	1.6	0.0	2.2	3.8	0.0	5.8
Cycle Q Clear(g_c), s	15.0	20.6	20.7	1.2	6.5	3.5	1.6	0.0	2.2	3.8	0.0	5.8
Prop In Lane	1.00		0.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	833	1483	1560	261	2412	1076	47	0	41	129	0	58
V/C Ratio(X)	0.71	0.53	0.53	0.03	0.17	0.09	0.38	0.00	0.53	0.66	0.00	3.82
Avail Cap(c_a), veh/h	1324	1483	1560	261	2412	1076	209	0	183	523	0	233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.9	3.9	3.9	8.4	9.3	8.8	76.7	0.0	77.0	76.1	0.0	77.1
Incr Delay (d2), s/veh	1.2	1.3	1.3	0.2	0.1	0.2	5.0	0.0	10.3	5.6	0.0	1307.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	9.7	10.1	0.2	4.4	2.2	1.4	0.0	1.8	3.3	0.0	36.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	5.2	5.2	8.6	9.4	9.0	81.7	0.0	87.3	81.7	0.0	1384.2
LnGrp LOS	A	A	A	A	A	A	F	A	F	F	A	F
Approach Vol, veh/h		2193			509			40			305	
Approach Delay, s/veh		5.4			9.3			84.8			1021.2	
Approach LOS		A			A			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		139.0		11.3	24.9	114.1		9.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		101.5		23.5	63.5	32.5		18.5				
Max Q Clear Time (g_c+I1), s		22.7		5.8	17.0	8.5		3.6				
Green Ext Time (p_c), s		62.0		0.0	2.4	5.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	108.8	
HCM 6th LOS	F	

Notes

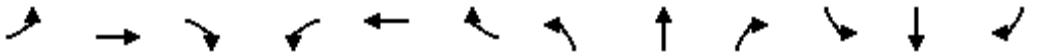
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	23	1525	55	85	561	44	6	165	57	9
Future Volume (vph)	23	1525	55	85	561	44	6	165	57	9
Lane Group Flow (vph)	24	1572	57	88	592	0	51	170	0	74
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	39.5	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	24.7%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.04	0.58	0.05	0.34	0.21		0.43	0.67		0.63
Control Delay	4.8	19.1	3.3	6.4	1.9		78.8	33.2		89.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	4.8	19.1	3.3	6.4	1.9		78.8	33.2		89.1
Queue Length 50th (ft)	7	556	3	2	40		52	42		73
Queue Length 95th (ft)	m12	840	m24	11	81		96	123		127
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	666	2707	1232	337	2840		297	437		290
Starvation Cap Reductn	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.04	0.58	0.05	0.26	0.21		0.17	0.39		0.26

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1525	55	85	561	14	44	6	165	57	9	6
Future Volume (veh/h)	23	1525	55	85	561	14	44	6	165	57	9	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	1572	57	88	578	14	45	6	170	59	9	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	597	2644	1179	267	2675	65	202	24	194	135	20	10
Arrive On Green	0.02	0.74	0.74	0.01	0.25	0.25	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3546	86	1306	200	1585	777	163	83
Grp Volume(v), veh/h	24	1572	57	88	289	303	51	0	170	74	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1855	1506	0	1585	1022	0	0
Q Serve(g_s), s	0.5	32.5	1.5	1.8	20.7	20.7	0.0	0.0	16.9	8.1	0.0	0.0
Cycle Q Clear(g_c), s	0.5	32.5	1.5	1.8	20.7	20.7	4.8	0.0	16.9	12.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.88		1.00	0.80		0.08
Lane Grp Cap(c), veh/h	597	2644	1179	267	1340	1399	226	0	194	165	0	0
V/C Ratio(X)	0.04	0.59	0.05	0.33	0.22	0.22	0.23	0.00	0.88	0.45	0.00	0.00
Avail Cap(c_a), veh/h	617	2644	1179	380	1340	1399	357	0	337	282	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.7	9.4	5.4	9.1	22.5	22.5	63.7	0.0	69.1	68.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.1	0.7	0.4	0.4	0.5	0.0	12.3	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	16.3	0.9	1.3	15.2	15.8	3.5	0.0	12.0	5.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.7	10.2	5.5	9.8	22.9	22.9	64.2	0.0	81.3	70.8	0.0	0.0
LnGrp LOS	A	B	A	A	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1653			680			221			74	
Approach Delay, s/veh		10.0			21.2			77.4			70.8	
Approach LOS		A			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	124.6		25.0	8.8	126.2		25.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	3.8	34.5		14.8	2.5	22.7		18.9				
Green Ext Time (p_c), s	0.1	55.7		0.2	0.0	22.2		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		20.3
HCM 6th LOS		C

Notes

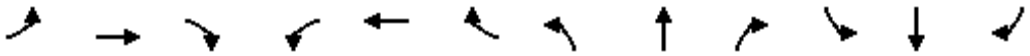
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	24	1820	9	1	530	41	2	83	15
Future Volume (vph)	24	1820	9	1	530	41	2	83	15
Lane Group Flow (vph)	26	1957	10	1	583	44	73	89	56
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.04	0.68	0.01	0.01	0.21	0.33	0.33	0.70	0.27
Control Delay	1.2	4.2	0.0	3.0	2.8	71.3	18.8	95.0	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.2	4.2	0.0	3.0	2.8	71.3	18.8	95.0	28.5
Queue Length 50th (ft)	1	48	0	0	31	44	5	92	15
Queue Length 95th (ft)	m3	173	m0	m1	63	84	55	151	60
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)	100		100	190				50	
Base Capacity (vph)	673	2890	1303	165	2789	259	363	246	354
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.68	0.01	0.01	0.21	0.17	0.20	0.36	0.16

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1820	9	1	530	12	41	2	66	83	15	37
Future Volume (veh/h)	24	1820	9	1	530	12	41	2	66	83	15	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	1957	10	1	570	13	44	2	71	89	16	40
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	670	2746	1225	215	2673	61	169	5	190	152	58	146
Arrive On Green	0.04	1.00	1.00	0.00	0.75	0.75	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3552	81	1348	44	1548	1327	474	1184
Grp Volume(v), veh/h	26	1957	10	1	285	298	44	0	73	89	0	56
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1348	0	1592	1327	0	1657
Q Serve(g_s), s	0.5	0.0	0.0	0.0	7.6	7.6	4.9	0.0	6.7	10.6	0.0	4.9
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.0	7.6	7.6	9.8	0.0	6.7	17.3	0.0	4.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.97	1.00		0.71
Lane Grp Cap(c), veh/h	670	2746	1225	215	1337	1397	169	0	196	152	0	204
V/C Ratio(X)	0.04	0.71	0.01	0.00	0.21	0.21	0.26	0.00	0.37	0.58	0.00	0.27
Avail Cap(c_a), veh/h	688	2746	1225	268	1337	1397	265	0	308	246	0	321
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	0.0	4.8	5.8	5.8	68.1	0.0	64.5	72.5	0.0	63.7
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.4	0.3	0.8	0.0	1.2	3.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.1	0.0	0.0	4.8	5.0	3.2	0.0	5.1	6.8	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	1.6	0.0	4.9	6.2	6.2	69.0	0.0	65.7	76.0	0.0	64.4
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1993			584			117			145	
Approach Delay, s/veh		1.6			6.2			66.9			71.5	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	129.1		25.2	8.9	125.9		25.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		19.3	2.5	9.6		11.8				
Green Ext Time (p_c), s	0.0	102.1		0.3	0.0	22.5		0.4				

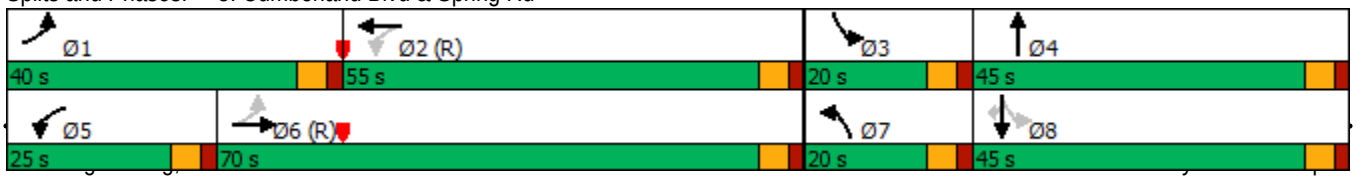
Intersection Summary			
HCM 6th Ctrl Delay		8.8	
HCM 6th LOS		A	

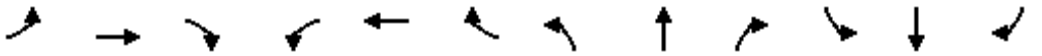
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	202	1446	151	245	159	457	91	347	120
Future Volume (vph)	202	1446	151	245	159	457	91	347	120
Lane Group Flow (vph)	206	1782	154	271	162	1067	93	354	122
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	23.5
Total Split (s)	40.0	70.0	25.0	55.0	20.0	45.0	20.0	45.0	45.0
Total Split (%)	25.0%	43.8%	15.6%	34.4%	12.5%	28.1%	12.5%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.33	0.81	0.78	0.12	0.60	1.06	0.55	0.39	0.24
Control Delay	24.0	52.4	64.9	27.0	80.7	89.0	46.3	50.7	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	52.4	64.9	27.0	80.7	89.0	46.3	50.7	7.2
Queue Length 50th (ft)	149	633	108	59	85	~558	64	162	0
Queue Length 95th (ft)	191	667	186	85	125	#736	108	216	47
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	745	2197	261	2177	311	1011	207	916	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.81	0.59	0.12	0.52	1.06	0.45	0.39	0.24

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1446	300	151	245	21	159	457	589	91	347	120
Future Volume (veh/h)	202	1446	300	151	245	21	159	457	589	91	347	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	1476	0	154	250	21	162	466	601	93	354	122
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	688	2589		257	2359	195	208	439	391	137	846	378
Arrive On Green	0.07	0.51	0.00	0.06	0.49	0.49	0.06	0.25	0.25	0.05	0.24	0.24
Sat Flow, veh/h	1781	5274	0	1781	4807	397	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	206	1476	0	154	176	95	162	466	601	93	354	122
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1799	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.1	32.1	0.0	6.8	4.4	4.6	7.4	39.5	39.5	6.3	13.5	10.2
Cycle Q Clear(g_c), s	9.1	32.1	0.0	6.8	4.4	4.6	7.4	39.5	39.5	6.3	13.5	10.2
Prop In Lane	1.00		0.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	688	2589		257	1671	883	208	439	391	137	846	378
V/C Ratio(X)	0.30	0.57		0.60	0.11	0.11	0.78	1.06	1.54	0.68	0.42	0.32
Avail Cap(c_a), veh/h	941	2589		372	1671	883	313	439	391	206	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	27.3	0.0	22.7	21.9	21.9	74.1	60.3	60.3	47.1	51.6	50.3
Incr Delay (d2), s/veh	0.2	0.9	0.0	2.2	0.1	0.2	7.0	60.5	253.7	5.8	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	18.8	0.0	5.3	3.2	3.6	6.3	34.5	66.3	5.4	10.1	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	28.3	0.0	24.9	22.0	22.2	81.1	120.7	313.9	53.0	51.9	50.8
LnGrp LOS	B	C		C	C	C	F	F	F	D	D	D
Approach Vol, veh/h		1682	A		425			1229			569	
Approach Delay, s/veh		26.9			23.1			210.0			51.8	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	84.0	13.7	45.0	14.6	86.6	15.1	43.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	34.5	49.5	14.5	39.5	19.5	64.5	14.5	39.5
Max Q Clear Time (g_c+I1), s	11.1	6.6	8.3	41.5	8.8	34.1	9.4	15.5
Green Ext Time (p_c), s	0.6	5.1	0.1	0.0	0.3	25.5	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	87.8
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

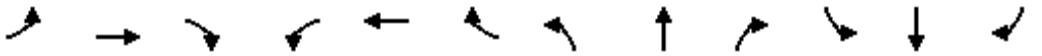
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	165	1575	2	983	139	2	4	137	0	56
Future Volume (vph)	165	1575	2	983	139	2	4	137	0	56
Lane Group Flow (vph)	172	1649	2	1024	145	0	7	0	143	58
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	22.0	86.4	64.4	64.4	64.4	33.6	33.6	33.6	33.6	33.6
Total Split (%)	18.3%	72.0%	53.7%	53.7%	53.7%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.42	0.61	0.01	0.45	0.14		0.03		0.70	0.20
Control Delay	7.6	8.2	11.0	12.5	2.2		37.9		65.7	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	7.6	8.2	11.0	12.5	2.2		37.9		65.7	7.6
Queue Length 50th (ft)	30	255	1	193	0		4		107	0
Queue Length 95th (ft)	63	402	5	303	29		17		167	26
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	496	2694	162	2274	1069		400		328	426
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.35	0.61	0.01	0.45	0.14		0.02		0.44	0.14

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1575	8	2	983	139	2	4	1	137	0	56
Future Volume (veh/h)	165	1575	8	2	983	139	2	4	1	137	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	1641	8	2	1024	0	2	4	1	143	0	58
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	2445	12	183	2029		39	65	11	195	0	371
Arrive On Green	0.06	0.67	0.67	0.57	0.57	0.00	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	1781	3626	18	303	3554	1585	0	276	46	576	0	1585
Grp Volume(v), veh/h	172	804	845	2	1024	0	7	0	0	143	0	58
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	303	1777	1585	322	0	0	576	0	1585
Q Serve(g_s), s	4.6	32.3	32.3	0.5	20.8	0.0	0.0	0.0	0.0	0.0	0.0	3.5
Cycle Q Clear(g_c), s	4.6	32.3	32.3	20.4	20.8	0.0	28.1	0.0	0.0	28.1	0.0	3.5
Prop In Lane	1.00		0.01	1.00		1.00	0.29		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	381	1198	1259	183	2029		114	0	0	195	0	371
V/C Ratio(X)	0.45	0.67	0.67	0.01	0.50		0.06	0.00	0.00	0.73	0.00	0.16
Avail Cap(c_a), veh/h	524	1198	1259	183	2029		114	0	0	195	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	11.6	11.6	21.4	15.5	0.0	37.6	0.0	0.0	46.7	0.0	36.5
Incr Delay (d2), s/veh	0.8	3.0	2.9	0.1	0.9	0.0	0.2	0.0	0.0	13.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	17.3	18.0	0.1	12.6	0.0	0.3	0.0	0.0	8.7	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	14.6	14.5	21.5	16.4	0.0	37.8	0.0	0.0	60.1	0.0	36.7
LnGrp LOS	B	B	B	C	B		D	A	A	E	A	D
Approach Vol, veh/h		1821			1026	A		7			201	
Approach Delay, s/veh		14.4			16.4			37.8			53.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.4	74.0		33.6		86.4		33.6				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	16.5	58.9		28.1		80.9		28.1				
Max Q Clear Time (g_c+I1), s	6.6	22.8		30.1		34.3		30.1				
Green Ext Time (p_c), s	0.3	27.8		0.0		44.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		17.7	
HCM 6th LOS		B	

Notes

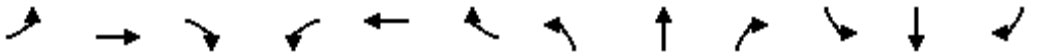
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	243	706	25	1680	192	23	13	232	11	463
Future Volume (vph)	243	706	25	1680	192	23	13	232	11	463
Lane Group Flow (vph)	253	755	26	1750	200	34	14	126	127	482
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	23.4	108.1	84.7	84.7	84.7	23.5	23.5	28.4	28.4	28.4
Total Split (%)	14.6%	67.6%	52.9%	52.9%	52.9%	14.7%	14.7%	17.8%	17.8%	17.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.75	0.30	0.07	0.94	0.23	0.35	0.08	0.56	0.56	0.97
Control Delay	59.9	8.8	34.7	62.1	25.2	82.0	0.9	74.7	74.7	55.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	8.8	34.7	62.1	25.2	82.0	0.9	74.7	74.7	55.5
Queue Length 50th (ft)	202	146	23	944	134	35	0	130	131	182
Queue Length 95th (ft)	#345	189	m26	#1156	m173	73	0	208	210	#414
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	337	2553	357	1860	876	206	259	240	242	507
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	0.75	0.30	0.07	0.94	0.23	0.17	0.05	0.53	0.52	0.95

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	706	19	25	1680	192	10	23	13	232	11	463
Future Volume (veh/h)	243	706	19	25	1680	192	10	23	13	232	11	463
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	253	735	20	26	1750	200	10	24	14	250	0	482
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	2778	76	517	2366	1055	15	37	45	294	0	131
Arrive On Green	0.09	0.79	0.79	0.67	0.67	0.67	0.03	0.03	0.03	0.08	0.00	0.08
Sat Flow, veh/h	1781	3534	96	709	3554	1585	542	1301	1585	3563	0	1585
Grp Volume(v), veh/h	253	369	386	26	1750	200	34	0	14	250	0	482
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	709	1777	1585	1843	0	1585	1781	0	1585
Q Serve(g_s), s	11.4	9.0	9.0	2.0	51.9	7.7	2.9	0.0	1.4	11.1	0.0	13.2
Cycle Q Clear(g_c), s	11.4	9.0	9.0	2.0	51.9	7.7	2.9	0.0	1.4	11.1	0.0	13.2
Prop In Lane	1.00		0.05	1.00		1.00	0.29		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	1397	1457	517	2366	1055	52	0	45	294	0	131
V/C Ratio(X)	0.92	0.26	0.26	0.05	0.74	0.19	0.65	0.00	0.31	0.85	0.00	3.68
Avail Cap(c_a), veh/h	322	1397	1457	517	2366	1055	207	0	178	510	0	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.49	0.49	0.49	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	4.6	4.6	9.3	17.6	10.2	77.0	0.0	76.2	72.4	0.0	73.4
Incr Delay (d2), s/veh	28.0	0.5	0.4	0.1	1.0	0.2	13.1	0.0	3.9	6.8	0.0	1226.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.9	5.3	5.5	0.6	24.9	4.5	2.9	0.0	1.1	9.1	0.0	76.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.7	5.1	5.1	9.4	18.6	10.4	90.1	0.0	80.2	79.2	0.0	1300.0
LnGrp LOS	E	A	A	A	B	B	F	A	F	E	A	F
Approach Vol, veh/h		1008			1976			48			732	
Approach Delay, s/veh		21.5			17.7			87.2			883.1	
Approach LOS		C			B			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		131.3		18.7	19.2	112.0		10.0				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		102.6		22.9	17.9	79.2		18.0				
Max Q Clear Time (g_c+I1), s		11.0		13.1	13.4	53.9		4.9				
Green Ext Time (p_c), s		20.2		0.1	0.3	23.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		187.9
HCM 6th LOS		F

Notes

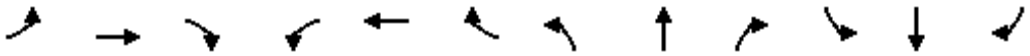
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	46	793	191	505	1915	153	18	210	25	4
Future Volume (vph)	46	793	191	505	1915	153	18	210	25	4
Lane Group Flow (vph)	48	835	201	532	2040	0	180	221	0	35
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	39.5	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	24.7%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.42	0.37	0.19	1.03	0.81		0.79	0.50		0.19
Control Delay	28.2	17.7	4.0	55.8	17.0		87.1	10.1		50.8
Queue Delay	0.0	0.0	0.0	20.8	6.0		0.0	0.0		0.0
Total Delay	28.2	17.7	4.0	76.7	22.9		87.1	10.1		50.8
Queue Length 50th (ft)	15	286	20	~202	1152		183	0		27
Queue Length 95th (ft)	m44	361	41	m#384	1105		263	73		60
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	113	2260	1083	517	2523		296	510		240
Starvation Cap Reductn	0	0	0	28	438		0	0		0
Spillback Cap Reductn	0	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.42	0.37	0.19	1.09	0.98		0.61	0.43		0.15

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	793	191	505	1915	23	153	18	210	25	4	5
Future Volume (veh/h)	46	793	191	505	1915	23	153	18	210	25	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	835	201	532	2016	24	161	19	221	26	4	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	2297	1025	506	2565	30	242	24	247	71	12	7
Arrive On Green	0.03	0.65	0.65	0.13	0.95	0.95	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3597	43	1279	151	1585	204	75	46
Grp Volume(v), veh/h	48	835	201	532	994	1046	180	0	221	35	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1430	0	1585	325	0	0
Q Serve(g_s), s	1.4	17.4	8.2	15.1	17.9	18.2	0.0	0.0	21.9	3.4	0.0	0.0
Cycle Q Clear(g_c), s	1.4	17.4	8.2	15.1	17.9	18.2	19.5	0.0	21.9	22.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.89		1.00	0.74		0.14
Lane Grp Cap(c), veh/h	218	2297	1025	506	1267	1329	266	0	247	90	0	0
V/C Ratio(X)	0.22	0.36	0.20	1.05	0.78	0.79	0.68	0.00	0.89	0.39	0.00	0.00
Avail Cap(c_a), veh/h	226	2297	1025	506	1267	1329	347	0	337	160	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.0	13.1	11.5	18.7	1.6	1.6	65.2	0.0	66.2	71.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.4	0.4	54.2	4.9	4.8	3.4	0.0	19.9	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	10.9	5.2	29.0	6.4	6.6	11.8	0.0	15.4	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	13.5	11.9	72.9	6.6	6.4	68.6	0.0	86.1	74.3	0.0	0.0
LnGrp LOS	A	B	B	F	A	A	E	A	F	E	A	A
Approach Vol, veh/h		1084			2572			401			35	
Approach Delay, s/veh		13.0			20.2			78.2			74.3	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	108.9		30.5	9.9	119.6		30.5				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	17.1	19.4		24.9	3.4	20.2		23.9				
Green Ext Time (p_c), s	0.0	40.1		0.0	0.0	83.1		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		24.5	
HCM 6th LOS		C	

Notes

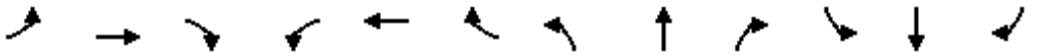
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	62	1023	2	4	2235	11	0	61	0
Future Volume (vph)	62	1023	2	4	2235	11	0	61	0
Lane Group Flow (vph)	65	1077	2	4	2426	12	14	64	34
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.62	0.35	0.00	0.01	0.86	0.11	0.05	0.58	0.19
Control Delay	58.7	2.7	0.0	2.2	29.4	68.0	0.3	89.9	6.8
Queue Delay	0.0	0.1	0.0	0.0	8.8	0.0	0.0	0.0	0.0
Total Delay	58.7	2.8	0.0	2.2	38.2	68.0	0.3	89.9	6.8
Queue Length 50th (ft)	26	76	0	1	1391	12	0	66	0
Queue Length 95th (ft)	#95	158	m0	m1	m1444	34	0	116	13
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)				190				50	
Base Capacity (vph)	104	3046	1370	440	2821	265	446	269	352
Starvation Cap Reductn	0	711	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	394	0	0	0	5
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.46	0.00	0.01	1.00	0.05	0.03	0.24	0.10

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	1023	2	4	2235	69	11	0	13	61	0	32
Future Volume (veh/h)	62	1023	2	4	2235	69	11	0	13	61	0	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	1077	2	4	2353	73	12	0	14	64	0	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	2930	1307	472	2815	87	109	0	107	128	0	107
Arrive On Green	0.06	1.00	1.00	0.01	0.80	0.80	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3519	109	1375	0	1585	1400	0	1585
Grp Volume(v), veh/h	65	1077	2	4	1182	1244	12	0	14	64	0	34
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1851	1375	0	1585	1400	0	1585
Q Serve(g_s), s	1.0	0.0	0.0	0.1	63.6	65.6	1.3	0.0	1.3	7.2	0.0	3.3
Cycle Q Clear(g_c), s	1.0	0.0	0.0	0.1	63.6	65.6	4.6	0.0	1.3	8.5	0.0	3.3
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	2930	1307	472	1422	1481	109	0	107	128	0	107
V/C Ratio(X)	0.43	0.37	0.00	0.01	0.83	0.84	0.11	0.00	0.13	0.50	0.00	0.32
Avail Cap(c_a), veh/h	157	2930	1307	519	1422	1481	283	0	307	305	0	307
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	0.0	3.0	9.6	9.8	73.3	0.0	70.2	74.2	0.0	71.1
Incr Delay (d2), s/veh	1.9	0.4	0.0	0.0	5.8	5.9	0.4	0.0	0.5	3.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.3	0.0	0.0	28.6	30.4	0.9	0.0	1.0	4.9	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.4	0.0	3.1	15.4	15.7	73.8	0.0	70.8	77.3	0.0	72.8
LnGrp LOS	C	A	A	A	B	B	E	A	E	E	A	E
Approach Vol, veh/h		1144			2430			26			98	
Approach Delay, s/veh		1.9			15.5			72.1			75.7	
Approach LOS		A			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	137.4		16.3	10.2	133.5		16.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		10.5	3.0	67.6		6.6				
Green Ext Time (p_c), s	0.0	62.0		0.3	0.0	39.7		0.0				

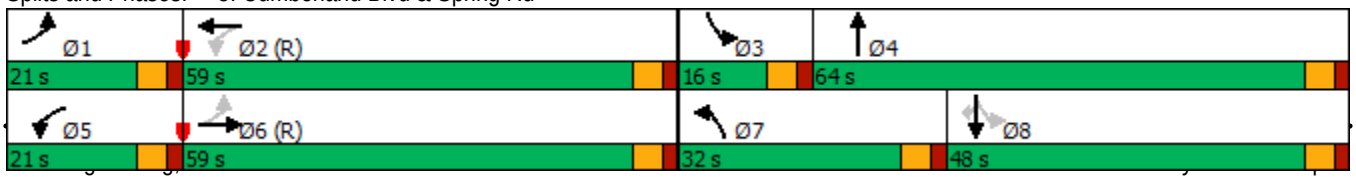
Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									

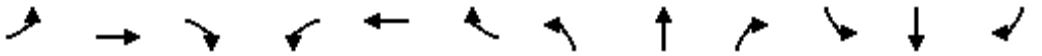
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	169	549	266	1458	558	455	96	533	486
Future Volume (vph)	169	549	266	1458	558	455	96	533	486
Lane Group Flow (vph)	178	793	280	1683	587	852	101	561	512
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	23.5
Total Split (s)	21.0	59.0	21.0	59.0	32.0	64.0	16.0	48.0	48.0
Total Split (%)	13.1%	36.9%	13.1%	36.9%	20.0%	40.0%	10.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	Min	C-Min	None	None	None	None	None
v/c Ratio	0.86	0.46	0.83	0.94	1.03	0.68	0.47	0.64	0.95
Control Delay	98.6	26.0	50.0	60.2	110.0	39.0	34.4	56.8	64.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.6	26.0	50.0	60.2	110.0	39.0	34.4	56.8	64.9
Queue Length 50th (ft)	145	188	184	642	~338	331	59	271	356
Queue Length 95th (ft)	#272	153	#281	#760	#462	407	98	337	#582
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	218	1739	337	1798	568	1296	223	940	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.46	0.83	0.94	1.03	0.66	0.45	0.60	0.91

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	549	204	266	1458	141	558	455	354	96	533	486
Future Volume (veh/h)	169	549	204	266	1458	141	558	455	354	96	533	486
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	178	578	0	280	1535	148	587	479	373	101	561	512
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	2181		513	2152	207	572	532	413	173	614	274
Arrive On Green	0.07	0.43	0.00	0.10	0.45	0.45	0.17	0.28	0.28	0.06	0.17	0.17
Sat Flow, veh/h	1781	5274	0	1781	4736	456	3456	1903	1479	1781	3554	1585
Grp Volume(v), veh/h	178	578	0	280	1103	580	587	447	405	101	561	512
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1788	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	8.9	11.7	0.0	14.0	41.8	41.9	26.5	38.8	38.9	7.4	24.8	27.6
Cycle Q Clear(g_c), s	8.9	11.7	0.0	14.0	41.8	41.9	26.5	38.8	38.9	7.4	24.8	27.6
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	225	2181		513	1547	813	572	497	448	173	614	274
V/C Ratio(X)	0.79	0.26		0.55	0.71	0.71	1.03	0.90	0.90	0.58	0.91	1.87
Avail Cap(c_a), veh/h	274	2181		513	1547	813	572	650	587	186	944	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.6	0.0	21.8	35.2	35.2	66.8	55.5	55.5	51.8	65.0	66.2
Incr Delay (d2), s/veh	12.0	0.3	0.0	1.2	2.8	5.3	44.3	13.0	14.4	4.0	9.1	404.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	8.4	0.0	9.9	24.3	26.1	21.8	26.2	24.3	6.3	17.7	65.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	29.9	0.0	23.0	38.0	40.5	111.0	68.5	69.9	55.9	74.1	471.1
LnGrp LOS	D	C		C	D	D	F	E	E	E	E	F
Approach Vol, veh/h		756	A		1963			1439			1174	
Approach Delay, s/veh		33.3			36.6			86.2			245.7	
Approach LOS		C			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	78.2	14.9	50.2	21.0	73.9	32.0	33.1
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	15.5	53.5	10.5	58.5	15.5	53.5	26.5	42.5
Max Q Clear Time (g_c+I1), s	10.9	43.9	9.4	40.9	16.0	13.7	28.5	26.8
Green Ext Time (p_c), s	0.2	9.1	0.0	3.2	0.0	12.2	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	95.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

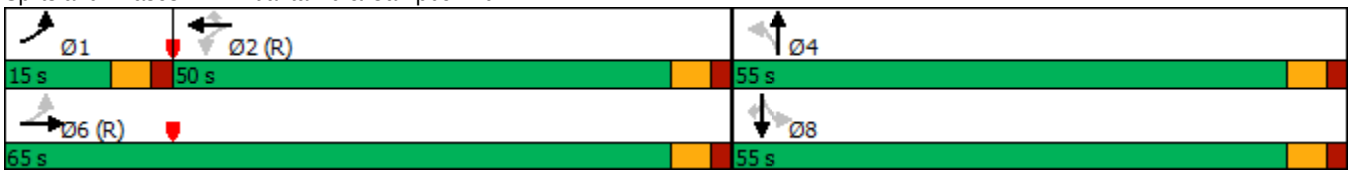
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

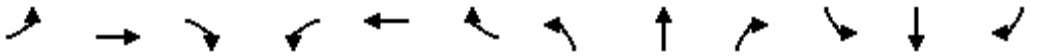
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	97	881	2	1362	304	6	4	423	3	149
Future Volume (vph)	97	881	2	1362	304	6	4	423	3	149
Lane Group Flow (vph)	100	913	2	1404	313	0	13	0	439	154
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	15.0	65.0	50.0	50.0	50.0	55.0	55.0	55.0	55.0	55.0
Total Split (%)	12.5%	54.2%	41.7%	41.7%	41.7%	45.8%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.54	0.48	0.01	0.93	0.37		0.02		0.90	0.23
Control Delay	29.1	18.8	24.0	45.4	5.6		18.2		57.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	29.1	18.8	24.0	45.4	5.6		18.2		57.8	4.3
Queue Length 50th (ft)	37	228	1	555	14		5		309	0
Queue Length 95th (ft)	88	304	7	#773	78		17		#466	40
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	200	1921	245	1514	839		643		552	743
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.50	0.48	0.01	0.93	0.37		0.02		0.80	0.21

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Atlanta Rd & Campbell Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	881	5	2	1362	304	6	4	3	423	3	149
Future Volume (veh/h)	97	881	5	2	1362	304	6	4	3	423	3	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	908	5	2	1404	0	6	4	3	436	3	154
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	1797	10	260	1431		44	27	8	415	2	654
Arrive On Green	0.05	0.50	0.50	0.40	0.40	0.00	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	3624	20	611	3554	1585	0	65	20	861	6	1585
Grp Volume(v), veh/h	100	445	468	2	1404	0	13	0	0	439	0	154
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	611	1777	1585	85	0	0	867	0	1585
Q Serve(g_s), s	3.8	20.2	20.2	0.3	46.8	0.0	0.0	0.0	0.0	0.0	0.0	7.6
Cycle Q Clear(g_c), s	3.8	20.2	20.2	9.3	46.8	0.0	49.5	0.0	0.0	49.5	0.0	7.6
Prop In Lane	1.00		0.01	1.00		1.00	0.46		0.23	0.99		1.00
Lane Grp Cap(c), veh/h	149	881	926	260	1431		79	0	0	417	0	654
V/C Ratio(X)	0.67	0.51	0.51	0.01	0.98		0.17	0.00	0.00	1.05	0.00	0.24
Avail Cap(c_a), veh/h	206	881	926	260	1431		79	0	0	417	0	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	20.4	20.4	27.2	35.4	0.0	30.1	0.0	0.0	38.8	0.0	22.9
Incr Delay (d2), s/veh	5.1	2.1	2.0	0.1	19.7	0.0	1.0	0.0	0.0	58.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	13.1	13.6	0.1	30.7	0.0	0.4	0.0	0.0	27.6	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	22.4	22.3	27.3	55.0	0.0	31.1	0.0	0.0	97.2	0.0	23.1
LnGrp LOS	C	C	C	C	E		C	A	A	F	A	C
Approach Vol, veh/h		1013			1406	A		13			593	
Approach Delay, s/veh		23.5			55.0			31.1			78.0	
Approach LOS		C			D			C			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.2	53.8		55.0		65.0		55.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	9.5	44.5		49.5		59.5		49.5				
Max Q Clear Time (g_c+I1), s	5.8	48.8		51.5		22.2		51.5				
Green Ext Time (p_c), s	0.1	0.0		0.0		25.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.8	
HCM 6th LOS		D	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

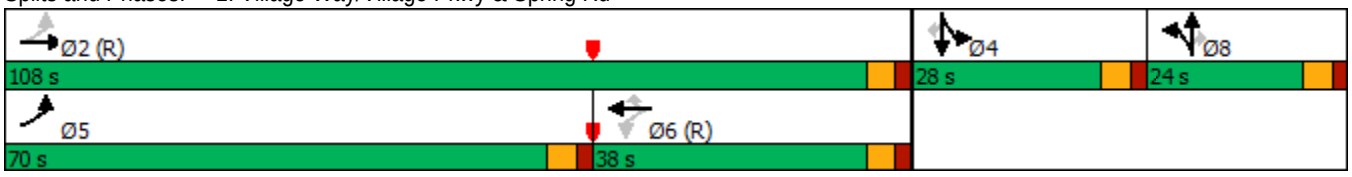
FUTURE NO-BUILD ANALYSIS - 2022

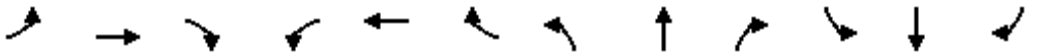
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	625	1676	7	420	107	6	23	85	5	231
Future Volume (vph)	625	1676	7	420	107	6	23	85	5	231
Lane Group Flow (vph)	631	1695	7	424	108	19	23	46	45	233
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	70.0	108.0	38.0	38.0	38.0	24.0	24.0	28.0	28.0	28.0
Total Split (%)	43.8%	67.5%	23.8%	23.8%	23.8%	15.0%	15.0%	17.5%	17.5%	17.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.72	0.60	0.05	0.22	0.12	0.23	0.14	0.43	0.41	0.73
Control Delay	11.2	8.2	32.4	24.3	11.6	79.5	1.9	82.6	81.8	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	8.2	32.4	24.3	11.6	79.5	1.9	82.6	81.8	21.5
Queue Length 50th (ft)	187	326	4	130	2	20	0	49	48	0
Queue Length 95th (ft)	325	494	18	211	64	49	0	94	92	88
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	1043	2832	143	1919	900	208	264	236	238	422
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	0.60	0.60	0.05	0.22	0.12	0.09	0.09	0.19	0.19	0.55

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	625	1676	2	7	420	107	13	6	23	85	5	231
Future Volume (veh/h)	625	1676	2	7	420	107	13	6	23	85	5	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	631	1693	2	7	424	108	13	6	23	90	0	233
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	822	3033	4	238	2366	1055	33	15	42	134	0	60
Arrive On Green	0.13	0.83	0.83	0.67	0.67	0.67	0.03	0.03	0.03	0.04	0.00	0.04
Sat Flow, veh/h	1781	3642	4	290	3554	1585	1237	571	1585	3563	0	1585
Grp Volume(v), veh/h	631	826	869	7	424	108	19	0	23	90	0	233
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	290	1777	1585	1808	0	1585	1781	0	1585
Q Serve(g_s), s	16.6	23.2	23.3	1.3	7.2	3.9	1.7	0.0	2.3	4.0	0.0	6.0
Cycle Q Clear(g_c), s	16.6	23.2	23.3	1.3	7.2	3.9	1.7	0.0	2.3	4.0	0.0	6.0
Prop In Lane	1.00		0.00	1.00		1.00	0.68		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	822	1480	1557	238	2366	1055	48	0	42	134	0	60
V/C Ratio(X)	0.77	0.56	0.56	0.03	0.18	0.10	0.40	0.00	0.55	0.67	0.00	3.90
Avail Cap(c_a), veh/h	1304	1480	1557	238	2366	1055	209	0	183	501	0	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.4	4.2	4.2	9.2	10.1	9.6	76.6	0.0	76.9	76.0	0.0	77.0
Incr Delay (d2), s/veh	1.5	1.5	1.5	0.2	0.2	0.2	5.3	0.0	10.7	5.7	0.0	1342.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.7	10.8	11.2	0.2	5.0	2.4	1.5	0.0	1.9	3.4	0.0	38.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	5.7	5.6	9.4	10.3	9.8	81.9	0.0	87.7	81.6	0.0	1419.8
LnGrp LOS	A	A	A	A	B	A	F	A	F	F	A	F
Approach Vol, veh/h		2326			539			42			323	
Approach Delay, s/veh		6.0			10.2			85.1			1046.9	
Approach LOS		A			B			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		138.7		11.5	26.7	112.0		9.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		102.5		22.5	64.5	32.5		18.5				
Max Q Clear Time (g_c+I1), s		25.3		6.0	18.6	9.2		3.7				
Green Ext Time (p_c), s		64.6		0.0	2.6	6.1		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	111.8	
HCM 6th LOS	F	

Notes

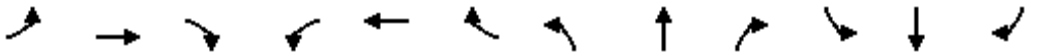
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	1618	58	90	595	47	6	175	60	10
Future Volume (vph)	25	1618	58	90	595	47	6	175	60	10
Lane Group Flow (vph)	26	1668	60	93	628	0	54	180	0	78
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	104.0	104.0	20.6	114.0	35.4	35.4	35.4	35.4	35.4
Total Split (%)	6.6%	65.0%	65.0%	12.9%	71.3%	22.1%	22.1%	22.1%	22.1%	22.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.04	0.62	0.05	0.39	0.22		0.43	0.71		0.63
Control Delay	5.4	21.2	3.6	9.1	2.0		78.1	39.4		89.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.4	21.2	3.6	9.1	2.0		78.1	39.4		89.7
Queue Length 50th (ft)	7	594	3	3	47		54	58		78
Queue Length 95th (ft)	m14	993	m24	14	81		100	143		133
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	640	2681	1221	311	2825		259	395		254
Starvation Cap Reductn	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.04	0.62	0.05	0.30	0.22		0.21	0.46		0.31

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1618	58	90	595	15	47	6	175	60	10	6
Future Volume (veh/h)	25	1618	58	90	595	15	47	6	175	60	10	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	1668	60	93	613	15	48	6	180	62	10	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	569	2624	1170	242	2650	65	210	24	203	138	21	10
Arrive On Green	0.02	0.74	0.74	0.01	0.25	0.25	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3545	87	1313	187	1585	766	167	78
Grp Volume(v), veh/h	26	1668	60	93	307	321	54	0	180	78	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1855	1500	0	1585	1010	0	0
Q Serve(g_s), s	0.6	37.0	1.6	2.0	22.1	22.1	0.0	0.0	17.9	8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.6	37.0	1.6	2.0	22.1	22.1	5.1	0.0	17.9	13.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.89		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	569	2624	1170	242	1328	1387	234	0	203	170	0	0
V/C Ratio(X)	0.05	0.64	0.05	0.38	0.23	0.23	0.23	0.00	0.89	0.46	0.00	0.00
Avail Cap(c_a), veh/h	588	2624	1170	355	1328	1387	319	0	296	245	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	10.3	5.7	11.2	23.5	23.5	63.0	0.0	68.6	68.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.1	1.0	0.4	0.4	0.5	0.0	19.6	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	18.2	0.9	1.9	16.0	16.6	3.6	0.0	13.1	5.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	11.3	5.8	12.2	23.9	23.9	63.5	0.0	88.2	70.5	0.0	0.0
LnGrp LOS	A	B	A	B	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1754			721			234			78	
Approach Delay, s/veh		11.0			22.4			82.5			70.5	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	123.6		26.0	8.9	125.1		26.0				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	98.5		29.9	5.1	108.5		29.9				
Max Q Clear Time (g_c+I1), s	4.0	39.0		15.6	2.6	24.1		19.9				
Green Ext Time (p_c), s	0.2	56.4		0.2	0.0	24.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		21.6	
HCM 6th LOS		C	

Notes

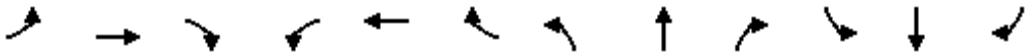
User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	25	1931	10	1	562	43	2	88	16
Future Volume (vph)	25	1931	10	1	562	43	2	88	16
Lane Group Flow (vph)	27	2076	11	1	618	46	77	95	59
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.04	0.72	0.01	0.01	0.22	0.32	0.34	0.71	0.28
Control Delay	2.0	6.3	0.0	3.0	3.0	70.2	22.2	96.2	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.0	6.3	0.0	3.0	3.0	70.2	22.2	96.2	27.5
Queue Length 50th (ft)	1	154	0	0	34	45	12	98	16
Queue Length 95th (ft)	m6	265	m0	m1	70	86	63	158	61
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)				190				50	
Base Capacity (vph)	645	2871	1294	142	2770	259	359	241	356
Starvation Cap Reductn	0	5	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.72	0.01	0.01	0.22	0.18	0.21	0.39	0.17

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1931	10	1	562	13	43	2	70	88	16	39
Future Volume (veh/h)	25	1931	10	1	562	13	43	2	70	88	16	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	2076	11	1	604	14	46	2	75	95	17	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	642	2721	1214	195	2646	61	176	5	201	158	62	153
Arrive On Green	0.04	1.00	1.00	0.00	0.75	0.75	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3550	82	1344	41	1550	1322	478	1180
Grp Volume(v), veh/h	27	2076	11	1	302	316	46	0	77	95	0	59
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1344	0	1591	1322	0	1658
Q Serve(g_s), s	0.6	0.0	0.0	0.0	8.4	8.4	5.1	0.0	7.1	11.3	0.0	5.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.0	8.4	8.4	10.3	0.0	7.1	18.4	0.0	5.1
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.97	1.00		0.71
Lane Grp Cap(c), veh/h	642	2721	1214	195	1324	1383	176	0	207	158	0	215
V/C Ratio(X)	0.04	0.76	0.01	0.01	0.23	0.23	0.26	0.00	0.37	0.60	0.00	0.27
Avail Cap(c_a), veh/h	660	2721	1214	248	1324	1383	262	0	308	243	0	321
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.5	0.0	0.0	5.1	6.3	6.3	67.4	0.0	63.7	72.1	0.0	62.8
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	0.4	0.4	0.8	0.0	1.1	3.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.4	0.0	0.0	5.4	5.6	3.3	0.0	5.4	7.3	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	2.1	0.0	5.1	6.7	6.6	68.2	0.0	64.8	75.7	0.0	63.5
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2114			619			123			154	
Approach Delay, s/veh		2.1			6.6			66.1			71.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	128.0		26.3	9.0	124.7		26.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		20.4	2.6	10.4		12.3				
Green Ext Time (p_c), s	0.0	103.3		0.4	0.0	24.5		0.4				

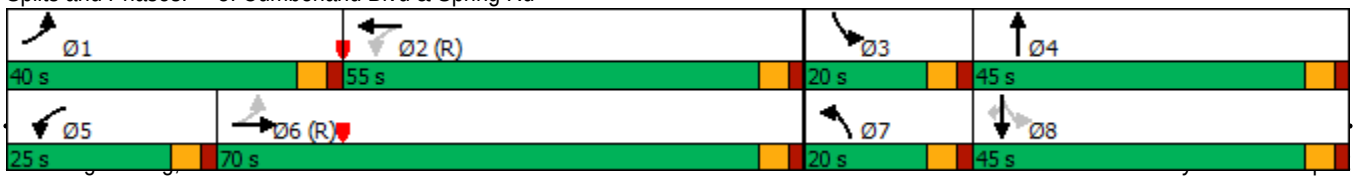
Intersection Summary			
HCM 6th Ctrl Delay		9.2	
HCM 6th LOS		A	

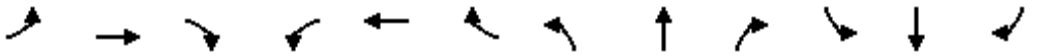
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	214	1534	160	260	169	485	97	368	127
Future Volume (vph)	214	1534	160	260	169	485	97	368	127
Lane Group Flow (vph)	218	1889	163	287	172	1133	99	376	130
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	23.5
Total Split (s)	40.0	70.0	25.0	55.0	20.0	45.0	20.0	45.0	45.0
Total Split (%)	25.0%	43.8%	15.6%	34.4%	12.5%	28.1%	12.5%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.35	0.87	0.81	0.13	0.63	1.13	0.58	0.41	0.26
Control Delay	22.7	51.8	68.9	27.6	81.4	113.2	47.6	51.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	51.8	68.9	27.6	81.4	113.2	47.6	51.4	8.3
Queue Length 50th (ft)	151	660	118	63	91	~639	69	174	0
Queue Length 95th (ft)	213	719	201	91	132	#812	115	228	56
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	737	2183	261	2158	311	1005	207	910	503
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.87	0.62	0.13	0.55	1.13	0.48	0.41	0.26

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	1534	318	160	260	22	169	485	625	97	368	127
Future Volume (veh/h)	214	1534	318	160	260	22	169	485	625	97	368	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	1565	0	163	265	22	172	495	638	99	376	130
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	678	2559		245	2327	190	218	439	391	141	846	377
Arrive On Green	0.08	0.50	0.00	0.06	0.48	0.48	0.06	0.25	0.25	0.05	0.24	0.24
Sat Flow, veh/h	1781	5274	0	1781	4811	393	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	218	1565	0	163	186	101	172	495	638	99	376	130
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1800	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.8	35.3	0.0	7.3	4.8	4.9	7.9	39.5	39.5	6.7	14.4	10.9
Cycle Q Clear(g_c), s	9.8	35.3	0.0	7.3	4.8	4.9	7.9	39.5	39.5	6.7	14.4	10.9
Prop In Lane	1.00		0.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	678	2559		245	1646	870	218	439	391	141	846	377
V/C Ratio(X)	0.32	0.61		0.67	0.11	0.12	0.79	1.13	1.63	0.70	0.44	0.34
Avail Cap(c_a), veh/h	924	2559		354	1646	870	313	439	391	206	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	28.7	0.0	24.9	22.6	22.6	73.9	60.3	60.3	47.0	51.9	50.6
Incr Delay (d2), s/veh	0.3	1.1	0.0	3.1	0.1	0.3	8.4	82.9	295.1	6.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	20.5	0.0	5.8	3.5	3.8	6.7	39.1	73.8	5.8	10.7	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	29.8	0.0	28.0	22.7	22.9	82.3	143.2	355.4	53.1	52.3	51.1
LnGrp LOS	B	C		C	C	C	F	F	F	D	D	D
Approach Vol, veh/h		1783	A		450			1305			605	
Approach Delay, s/veh		28.4			24.6			238.9			52.2	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	82.9	14.2	45.0	15.2	85.7	15.6	43.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	34.5	49.5	14.5	39.5	19.5	64.5	14.5	39.5
Max Q Clear Time (g_c+I1), s	11.8	6.9	8.7	41.5	9.3	37.3	9.9	16.4
Green Ext Time (p_c), s	0.7	5.4	0.1	0.0	0.3	23.8	0.2	1.0

Intersection Summary			
HCM 6th Ctrl Delay		97.8	
HCM 6th LOS		F	

Notes

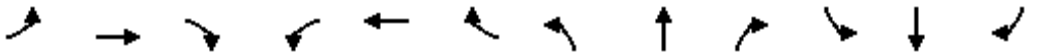
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	175	1671	2	1043	147	2	4	145	0	59
Future Volume (vph)	175	1671	2	1043	147	2	4	145	0	59
Lane Group Flow (vph)	182	1749	2	1086	153	0	7	0	151	61
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	22.0	86.4	64.4	64.4	64.4	33.6	33.6	33.6	33.6	33.6
Total Split (%)	18.3%	72.0%	53.7%	53.7%	53.7%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.47	0.65	0.01	0.48	0.14		0.03		0.71	0.20
Control Delay	8.8	9.2	11.5	13.5	2.2		37.3		65.7	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	8.8	9.2	11.5	13.5	2.2		37.3		65.7	8.3
Queue Length 50th (ft)	33	294	1	215	0		4		112	0
Queue Length 95th (ft)	68	463	5	339	30		17		175	29
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	470	2674	137	2245	1060		400		328	426
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.39	0.65	0.01	0.48	0.14		0.02		0.46	0.14

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1671	8	2	1043	147	2	4	1	145	0	59
Future Volume (veh/h)	175	1671	8	2	1043	147	2	4	1	145	0	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	182	1741	8	2	1086	0	2	4	1	151	0	61
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	2446	11	163	2020		39	65	11	195	0	371
Arrive On Green	0.06	0.67	0.67	0.57	0.57	0.00	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	1781	3628	17	275	3554	1585	0	276	46	576	0	1585
Grp Volume(v), veh/h	182	852	897	2	1086	0	7	0	0	151	0	61
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	275	1777	1585	322	0	0	576	0	1585
Q Serve(g_s), s	4.8	36.0	36.1	0.6	22.8	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Cycle Q Clear(g_c), s	4.8	36.0	36.1	24.0	22.8	0.0	28.1	0.0	0.0	28.1	0.0	3.7
Prop In Lane	1.00		0.01	1.00		1.00	0.29		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	363	1198	1259	163	2020		114	0	0	195	0	371
V/C Ratio(X)	0.50	0.71	0.71	0.01	0.54		0.06	0.00	0.00	0.77	0.00	0.16
Avail Cap(c_a), veh/h	501	1198	1259	163	2020		114	0	0	195	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	12.2	12.3	23.7	16.1	0.0	37.6	0.0	0.0	47.4	0.0	36.6
Incr Delay (d2), s/veh	1.1	3.6	3.4	0.1	1.0	0.0	0.2	0.0	0.0	17.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	19.1	19.9	0.1	13.6	0.0	0.3	0.0	0.0	9.4	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	15.8	15.7	23.9	17.1	0.0	37.8	0.0	0.0	65.0	0.0	36.8
LnGrp LOS	B	B	B	C	B		D	A	A	E	A	D
Approach Vol, veh/h		1931			1088	A		7			212	
Approach Delay, s/veh		15.6			17.1			37.8			56.9	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.7	73.7		33.6		86.4		33.6				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	16.5	58.9		28.1		80.9		28.1				
Max Q Clear Time (g_c+I1), s	6.8	26.0		30.1		38.1		30.1				
Green Ext Time (p_c), s	0.4	26.8		0.0		41.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									

Notes

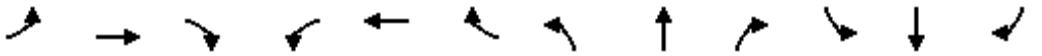
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	258	749	27	1782	204	24	14	246	12	491
Future Volume (vph)	258	749	27	1782	204	24	14	246	12	491
Lane Group Flow (vph)	269	801	28	1856	213	36	15	133	136	511
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	23.6	107.9	84.3	84.3	84.3	23.5	23.5	28.6	28.6	28.6
Total Split (%)	14.8%	67.4%	52.7%	52.7%	52.7%	14.7%	14.7%	17.9%	17.9%	17.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.76	0.32	0.09	1.04	0.25	0.37	0.09	0.55	0.56	1.01
Control Delay	59.5	9.4	22.6	72.0	13.6	82.5	1.0	73.1	73.3	64.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	9.4	22.6	72.0	13.6	82.5	1.0	73.1	73.3	64.9
Queue Length 50th (ft)	218	158	15	~1123	69	37	0	137	141	~231
Queue Length 95th (ft)	#381	205	36	#1256	125	77	0	218	222	#481
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	356	2512	327	1780	842	206	259	242	244	508
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	0.76	0.32	0.09	1.04	0.25	0.17	0.06	0.55	0.56	1.01

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	749	20	27	1782	204	11	24	14	246	12	491
Future Volume (veh/h)	258	749	20	27	1782	204	11	24	14	246	12	491
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	269	780	21	28	1856	212	11	25	15	265	0	511
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	2759	74	477	2262	1009	17	38	47	309	0	137
Arrive On Green	0.11	0.78	0.78	0.64	0.64	0.64	0.03	0.03	0.03	0.09	0.00	0.09
Sat Flow, veh/h	1781	3535	95	679	3554	1585	563	1279	1585	3563	0	1585
Grp Volume(v), veh/h	269	392	409	28	1856	212	36	0	15	265	0	511
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	679	1777	1585	1842	0	1585	1781	0	1585
Q Serve(g_s), s	15.5	9.9	9.9	2.5	63.6	9.0	3.1	0.0	1.5	11.7	0.0	13.9
Cycle Q Clear(g_c), s	15.5	9.9	9.9	2.5	63.6	9.0	3.1	0.0	1.5	11.7	0.0	13.9
Prop In Lane	1.00		0.05	1.00		1.00	0.31		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1387	1446	477	2262	1009	55	0	47	309	0	137
V/C Ratio(X)	0.93	0.28	0.28	0.06	0.82	0.21	0.66	0.00	0.32	0.86	0.00	3.72
Avail Cap(c_a), veh/h	295	1387	1446	477	2262	1009	207	0	178	514	0	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.35	0.35	0.35	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	4.9	4.9	11.0	22.1	12.2	76.8	0.0	76.0	72.1	0.0	73.1
Incr Delay (d2), s/veh	34.7	0.5	0.5	0.1	1.3	0.2	12.6	0.0	3.8	7.5	0.0	1240.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.5	6.0	6.2	0.7	29.7	4.8	3.0	0.0	1.2	9.5	0.0	80.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.6	5.5	5.4	11.1	23.4	12.4	89.5	0.0	79.9	79.6	0.0	1313.7
LnGrp LOS	F	A	A	B	C	B	F	A	E	E	A	F
Approach Vol, veh/h		1070			2096			51			776	
Approach Delay, s/veh		25.6			22.1			86.6			892.3	
Approach LOS		C			C			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		130.4		19.4	23.0	107.3		10.3				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		102.4		23.1	18.1	78.8		18.0				
Max Q Clear Time (g_c+I1), s		11.9		13.7	17.5	65.6		5.1				
Green Ext Time (p_c), s		22.1		0.1	0.1	12.8		0.2				

Intersection Summary		
HCM 6th Ctrl Delay	193.0	
HCM 6th LOS	F	

Notes

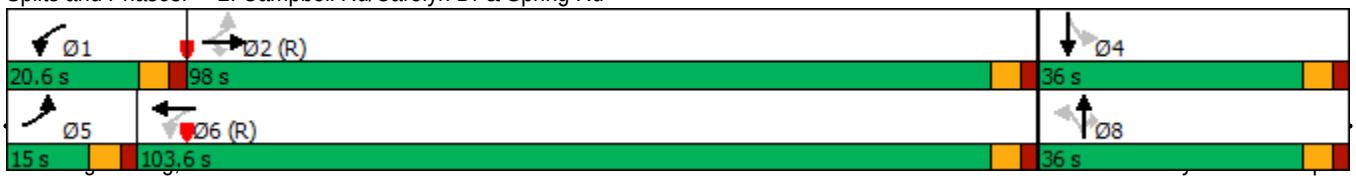
User approved volume balancing among the lanes for turning movement.

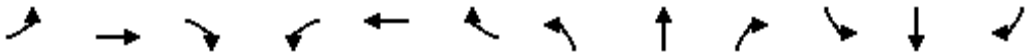
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	48	841	203	536	2032	162	19	223	27	4
Future Volume (vph)	48	841	203	536	2032	162	19	223	27	4
Lane Group Flow (vph)	51	885	214	564	2164	0	191	235	0	37
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	15.0	98.0	98.0	20.6	103.6	36.0	36.0	36.0	36.0	36.0
Total Split (%)	9.7%	63.4%	63.4%	13.3%	67.0%	23.3%	23.3%	23.3%	23.3%	23.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.40	0.40	0.20	1.14	0.88		0.82	0.51		0.21
Control Delay	24.8	15.4	2.0	100.3	25.8		88.9	10.1		50.3
Queue Delay	0.0	0.0	0.0	0.0	46.3		0.0	0.0		0.0
Total Delay	24.8	15.4	2.0	100.3	72.1		88.9	10.1		50.3
Queue Length 50th (ft)	12	226	0	~283	900		187	0		28
Queue Length 95th (ft)	48	289	34	#569	#1275		276	76		64
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	156	2225	1075	493	2457		274	500		212
Starvation Cap Reductn	0	0	0	0	493		0	0		0
Spillback Cap Reductn	0	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.33	0.40	0.20	1.14	1.10		0.70	0.47		0.17

Intersection Summary

Cycle Length: 154.6
Actuated Cycle Length: 154.6
Offset: 32 (21%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	841	203	536	2032	24	162	19	223	27	4	5
Future Volume (veh/h)	48	841	203	536	2032	24	162	19	223	27	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	885	214	564	2139	25	171	20	235	28	4	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	2247	1002	482	2522	29	257	25	260	75	12	7
Arrive On Green	0.03	0.63	0.63	0.10	0.70	0.70	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3598	42	1300	152	1585	211	70	44
Grp Volume(v), veh/h	51	885	214	564	1054	1110	191	0	235	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1452	0	1585	325	0	0
Q Serve(g_s), s	1.5	18.9	8.9	15.1	67.6	68.3	0.0	0.0	22.6	3.7	0.0	0.0
Cycle Q Clear(g_c), s	1.5	18.9	8.9	15.1	67.6	68.3	19.6	0.0	22.6	23.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	145	2247	1002	482	1245	1306	282	0	260	94	0	0
V/C Ratio(X)	0.35	0.39	0.21	1.17	0.85	0.85	0.68	0.00	0.90	0.39	0.00	0.00
Avail Cap(c_a), veh/h	203	2247	1002	482	1245	1306	329	0	312	134	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.0	14.0	12.1	18.1	17.0	17.1	62.4	0.0	63.6	69.3	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.5	0.5	97.1	7.2	7.1	4.4	0.0	25.3	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	11.7	5.7	35.0	35.2	36.9	12.1	0.0	16.3	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	14.5	12.6	115.2	24.3	24.2	66.8	0.0	88.9	71.9	0.0	0.0
LnGrp LOS	C	B	B	F	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1150			2728			426			37	
Approach Delay, s/veh		14.6			43.0			79.0			71.9	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	103.5		30.9	9.9	114.1		30.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	92.5		30.5	9.5	98.1		30.5				
Max Q Clear Time (g_c+I1), s	17.1	20.9		25.3	3.5	70.3		24.6				
Green Ext Time (p_c), s	0.0	42.2		0.0	0.0	27.7		0.9				

Intersection Summary		
HCM 6th Ctrl Delay		39.3
HCM 6th LOS		D

Notes

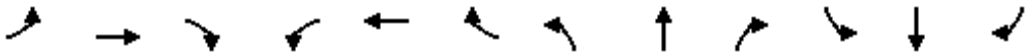
User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	66	1085	2	4	2371	12	0	65	0
Future Volume (vph)	66	1085	2	4	2371	12	0	65	0
Lane Group Flow (vph)	69	1142	2	4	2573	13	15	68	36
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.67	0.39	0.00	0.01	0.93	0.12	0.05	0.59	0.20
Control Delay	54.8	4.2	0.0	2.5	34.6	67.6	0.4	90.0	8.4
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	4.8	0.0	2.5	34.6	67.6	0.4	90.0	8.4
Queue Length 50th (ft)	20	113	0	1	1491	13	0	70	0
Queue Length 95th (ft)	#107	248	0	m1	m1448	36	0	122	19
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)				190				50	
Base Capacity (vph)	103	2955	1330	400	2756	264	434	269	351
Starvation Cap Reductn	0	1279	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.68	0.00	0.01	0.93	0.05	0.03	0.25	0.10

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1085	2	4	2371	73	12	0	14	65	0	34
Future Volume (veh/h)	66	1085	2	4	2371	73	12	0	14	65	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	1142	2	4	2496	77	13	0	15	68	0	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	2917	1301	416	2802	86	113	0	112	132	0	112
Arrive On Green	0.03	0.82	0.82	0.01	0.80	0.80	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3520	108	1372	0	1585	1398	0	1585
Grp Volume(v), veh/h	69	1142	2	4	1254	1319	13	0	15	68	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1851	1372	0	1585	1398	0	1585
Q Serve(g_s), s	1.1	13.6	0.0	0.1	78.1	81.0	1.5	0.0	1.4	7.7	0.0	3.5
Cycle Q Clear(g_c), s	1.1	13.6	0.0	0.1	78.1	81.0	4.9	0.0	1.4	9.1	0.0	3.5
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	2917	1301	416	1415	1474	113	0	112	132	0	112
V/C Ratio(X)	0.52	0.39	0.00	0.01	0.89	0.90	0.12	0.00	0.13	0.52	0.00	0.32
Avail Cap(c_a), veh/h	137	2917	1301	463	1415	1474	281	0	307	304	0	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.6	3.8	2.6	3.5	11.3	11.6	73.0	0.0	69.7	74.0	0.0	70.7
Incr Delay (d2), s/veh	3.1	0.4	0.0	0.0	8.5	8.8	0.4	0.0	0.5	3.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.2	7.0	0.0	0.0	35.3	37.8	1.0	0.0	1.1	5.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	4.2	2.6	3.5	19.8	20.4	73.4	0.0	70.2	77.1	0.0	72.3
LnGrp LOS	D	A	A	A	B	C	E	A	E	E	A	E
Approach Vol, veh/h		1213			2577			28			104	
Approach Delay, s/veh		6.5			20.1			71.7			75.4	
Approach LOS		A			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	136.8		16.9	10.3	132.9		16.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.1	15.6		11.1	3.1	83.0		6.9				
Green Ext Time (p_c), s	0.0	61.5		0.3	0.0	24.4		0.1				

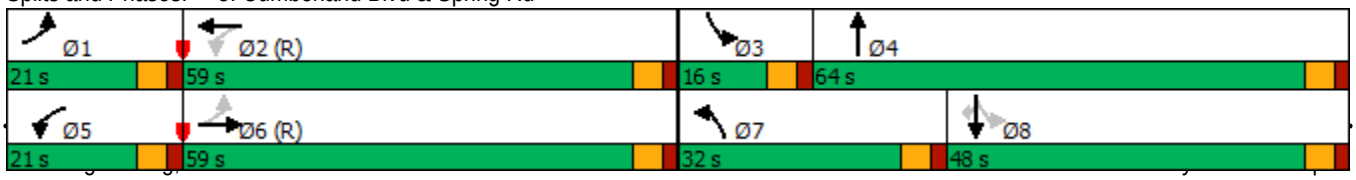
Intersection Summary			
HCM 6th Ctrl Delay		17.7	
HCM 6th LOS		B	

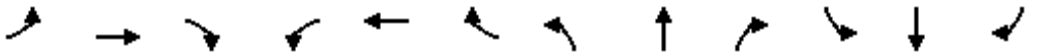
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	179	582	282	1547	592	483	102	565	516
Future Volume (vph)	179	582	282	1547	592	483	102	565	516
Lane Group Flow (vph)	188	840	297	1786	623	904	107	595	543
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	23.5
Total Split (s)	21.0	59.0	21.0	59.0	32.0	64.0	16.0	48.0	48.0
Total Split (%)	13.1%	36.9%	13.1%	36.9%	20.0%	40.0%	10.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	Min	C-Min	None	None	None	None	None
v/c Ratio	0.89	0.50	0.93	1.03	1.10	0.70	0.51	0.64	0.98
Control Delay	75.8	39.6	67.6	81.1	126.7	39.5	35.7	56.1	71.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.8	39.6	67.6	81.1	126.7	39.5	35.7	56.1	71.2
Queue Length 50th (ft)	145	244	197	~746	~378	363	63	291	404
Queue Length 95th (ft)	#291	291	#354	#841	#504	443	103	360	#656
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	218	1672	318	1728	568	1299	216	940	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.50	0.93	1.03	1.10	0.70	0.50	0.63	0.97

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	582	216	282	1547	150	592	483	376	102	565	516
Future Volume (veh/h)	179	582	216	282	1547	150	592	483	376	102	565	516
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	613	0	297	1628	158	623	508	396	107	595	543
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	2109		487	2063	200	572	555	432	174	664	296
Arrive On Green	0.07	0.41	0.00	0.10	0.44	0.44	0.17	0.29	0.29	0.06	0.19	0.19
Sat Flow, veh/h	1781	5274	0	1781	4733	459	3456	1900	1480	1781	3554	1585
Grp Volume(v), veh/h	188	613	0	297	1170	616	623	475	429	107	595	543
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1788	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	9.7	12.8	0.0	15.5	47.3	47.4	26.5	41.3	41.4	7.7	26.2	29.9
Cycle Q Clear(g_c), s	9.7	12.8	0.0	15.5	47.3	47.4	26.5	41.3	41.4	7.7	26.2	29.9
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	214	2109		487	1483	779	572	519	468	174	664	296
V/C Ratio(X)	0.88	0.29		0.61	0.79	0.79	1.09	0.92	0.92	0.62	0.90	1.83
Avail Cap(c_a), veh/h	255	2109		487	1483	779	572	650	586	182	944	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	31.3	0.0	23.9	38.8	38.8	66.8	54.8	54.8	50.5	63.5	65.0
Incr Delay (d2), s/veh	24.7	0.3	0.0	2.2	4.3	8.0	63.9	15.5	16.9	5.7	8.3	387.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.4	9.1	0.0	11.0	27.4	29.6	24.4	28.1	25.9	6.7	18.4	68.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	31.7	0.0	26.1	43.1	46.9	130.7	70.3	71.7	56.1	71.8	452.8
LnGrp LOS	E	C		C	D	D	F	E	E	E	E	F
Approach Vol, veh/h		801	A		2083			1527			1245	
Approach Delay, s/veh		38.2			41.8			95.3			236.6	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	75.2	15.2	52.2	21.0	71.6	32.0	35.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	15.5	53.5	10.5	58.5	15.5	53.5	26.5	42.5
Max Q Clear Time (g_c+I1), s	11.7	49.4	9.7	43.4	17.5	14.8	28.5	28.2
Green Ext Time (p_c), s	0.2	4.0	0.0	3.3	0.0	12.9	0.0	0.9

Intersection Summary			
HCM 6th Ctrl Delay		98.6	
HCM 6th LOS		F	

Notes

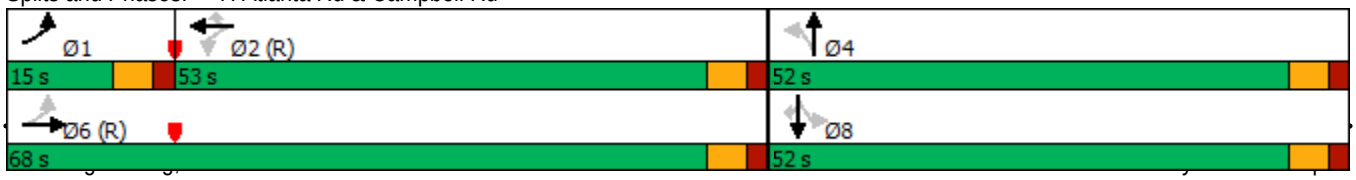
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

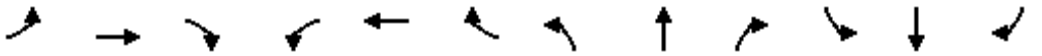
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	103	935	2	1445	323	6	4	449	3	158
Future Volume (vph)	103	935	2	1445	323	6	4	449	3	158
Lane Group Flow (vph)	106	969	2	1490	333	0	13	0	466	163
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	15.0	68.0	53.0	53.0	53.0	52.0	52.0	52.0	52.0	52.0
Total Split (%)	12.5%	56.7%	44.2%	44.2%	44.2%	43.3%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.57	0.51	0.01	1.00	0.40		0.02		0.95	0.24
Control Delay	30.2	19.1	22.5	57.7	5.7		19.4		65.9	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	30.2	19.1	22.5	57.7	5.7		19.4		65.9	4.5
Queue Length 50th (ft)	40	251	1	~664	18		5		335	0
Queue Length 95th (ft)	90	310	7	#808	81		18		#540	43
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	200	1907	221	1496	839		602		518	713
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.53	0.51	0.01	1.00	0.40		0.02		0.90	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Atlanta Rd & Campbell Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	935	5	2	1445	323	6	4	3	449	3	158
Future Volume (veh/h)	103	935	5	2	1445	323	6	4	3	449	3	158
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	964	5	2	1490	0	6	4	3	463	3	163
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1888	10	261	1517		44	27	8	393	2	614
Arrive On Green	0.05	0.52	0.52	0.43	0.43	0.00	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	3625	19	580	3554	1585	0	69	21	861	6	1585
Grp Volume(v), veh/h	106	473	496	2	1490	0	13	0	0	466	0	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	580	1777	1585	90	0	0	867	0	1585
Q Serve(g_s), s	3.9	20.8	20.8	0.3	49.6	0.0	0.0	0.0	0.0	0.0	0.0	8.4
Cycle Q Clear(g_c), s	3.9	20.8	20.8	9.8	49.6	0.0	46.5	0.0	0.0	46.5	0.0	8.4
Prop In Lane	1.00		0.01	1.00		1.00	0.46		0.23	0.99		1.00
Lane Grp Cap(c), veh/h	150	925	972	261	1517		79	0	0	396	0	614
V/C Ratio(X)	0.71	0.51	0.51	0.01	0.98		0.17	0.00	0.00	1.18	0.00	0.27
Avail Cap(c_a), veh/h	206	925	972	261	1517		79	0	0	396	0	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	18.8	18.8	25.7	33.9	0.0	30.8	0.0	0.0	40.3	0.0	25.1
Incr Delay (d2), s/veh	6.6	2.0	1.9	0.1	19.2	0.0	1.0	0.0	0.0	103.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	13.3	13.8	0.1	32.0	0.0	0.5	0.0	0.0	34.7	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	20.8	20.7	25.7	53.1	0.0	31.8	0.0	0.0	143.7	0.0	25.3
LnGrp LOS	C	C	C	C	D		C	A	A	F	A	C
Approach Vol, veh/h		1075			1492	A		13			629	
Approach Delay, s/veh		22.1			53.1			31.8			113.0	
Approach LOS		C			D			C			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.3	56.7		52.0		68.0		52.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	9.5	47.5		46.5		62.5		46.5				
Max Q Clear Time (g_c+I1), s	5.9	51.6		48.5		22.8		48.5				
Green Ext Time (p_c), s	0.1	0.0		0.0		28.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		54.4	
HCM 6th LOS		D	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

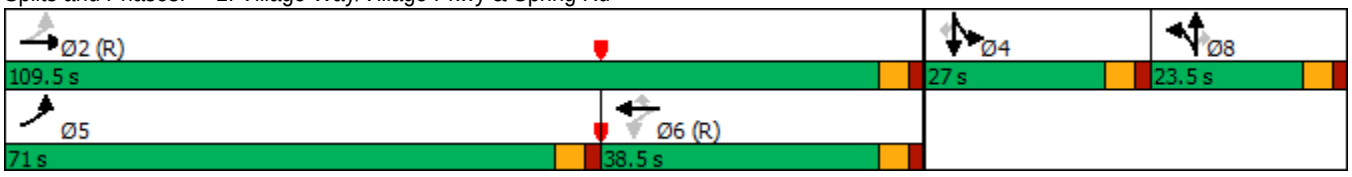
FUTURE "NO-BUILD" - ANALYSIS- 2032

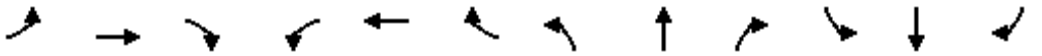
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	690	1851	8	464	118	7	25	94	6	255
Future Volume (vph)	690	1851	8	464	118	7	25	94	6	255
Lane Group Flow (vph)	697	1872	8	469	119	21	25	50	51	258
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	71.0	109.5	38.5	38.5	38.5	23.5	23.5	27.0	27.0	27.0
Total Split (%)	44.4%	68.4%	24.1%	24.1%	24.1%	14.7%	14.7%	16.9%	16.9%	16.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.77	0.66	0.08	0.29	0.15	0.25	0.16	0.44	0.45	0.74
Control Delay	14.5	9.6	41.9	32.9	15.5	80.0	2.0	82.5	82.6	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	9.6	41.9	32.9	15.5	80.0	2.0	82.5	82.6	20.9
Queue Length 50th (ft)	225	407	5	165	9	22	0	53	55	0
Queue Length 95th (ft)	436	621	24	304	77	53	0	101	102	92
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	1015	2818	100	1614	772	202	259	225	227	436
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	0.69	0.66	0.08	0.29	0.15	0.10	0.10	0.22	0.22	0.59

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	690	1851	2	8	464	118	14	7	25	94	6	255
Future Volume (veh/h)	690	1851	2	8	464	118	14	7	25	94	6	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	697	1870	2	8	469	119	14	7	25	99	0	258
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	806	3021	3	201	2275	1015	33	16	43	143	0	64
Arrive On Green	0.15	0.83	0.83	0.64	0.64	0.64	0.03	0.03	0.03	0.04	0.00	0.04
Sat Flow, veh/h	1781	3643	4	244	3554	1585	1207	603	1585	3563	0	1585
Grp Volume(v), veh/h	697	912	960	8	469	119	21	0	25	99	0	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	244	1777	1585	1810	0	1585	1781	0	1585
Q Serve(g_s), s	19.8	28.8	28.8	2.0	8.8	4.7	1.8	0.0	2.5	4.4	0.0	6.4
Cycle Q Clear(g_c), s	19.8	28.8	28.8	2.0	8.8	4.7	1.8	0.0	2.5	4.4	0.0	6.4
Prop In Lane	1.00		0.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	806	1474	1551	201	2275	1015	49	0	43	143	0	64
V/C Ratio(X)	0.87	0.62	0.62	0.04	0.21	0.12	0.43	0.00	0.58	0.69	0.00	4.04
Avail Cap(c_a), veh/h	1259	1474	1551	201	2275	1015	204	0	178	479	0	213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.2	4.8	4.8	10.7	11.9	11.2	76.6	0.0	76.9	75.8	0.0	76.8
Incr Delay (d2), s/veh	4.0	2.0	1.9	0.4	0.2	0.2	5.7	0.0	11.7	5.8	0.0	1406.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	13.0	13.6	0.2	6.2	3.0	1.7	0.0	2.1	3.8	0.0	42.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	6.7	6.7	11.1	12.1	11.4	82.3	0.0	88.6	81.6	0.0	1483.2
LnGrp LOS	B	A	A	B	B	B	F	A	F	F	A	F
Approach Vol, veh/h		2569			596			46			357	
Approach Delay, s/veh		7.9			12.0			85.8			1094.5	
Approach LOS		A			B			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		138.2		11.9	30.3	107.9		9.9				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		104.0		21.5	65.5	33.0		18.0				
Max Q Clear Time (g_c+I1), s		30.8		6.4	21.8	10.8		3.8				
Green Ext Time (p_c), s		66.4		0.1	3.0	6.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		118.3
HCM 6th LOS		F

Notes

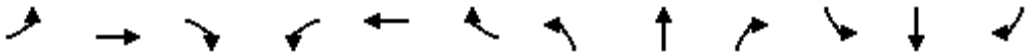
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	27	1787	64	99	657	52	7	193	66	11
Future Volume (vph)	27	1787	64	99	657	52	7	193	66	11
Lane Group Flow (vph)	28	1842	66	102	695	0	61	199	0	86
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	104.0	104.0	20.6	114.0	35.4	35.4	35.4	35.4	35.4
Total Split (%)	6.6%	65.0%	65.0%	12.9%	71.3%	22.1%	22.1%	22.1%	22.1%	22.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.05	0.71	0.06	0.47	0.25		0.45	0.77		0.64
Control Delay	5.9	27.2	4.1	20.5	2.1		76.4	48.3		87.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2		0.2
Total Delay	5.9	27.3	4.1	20.5	2.1		76.4	48.6		87.5
Queue Length 50th (ft)	7	812	5	7	54		61	88		86
Queue Length 95th (ft)	m13	1142	m22	50	94		108	174		141
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	585	2595	1185	267	2793		258	388		252
Starvation Cap Reductn	0	0	0	0	0		0	0		0
Spillback Cap Reductn	0	7	0	0	0		0	18		13
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.05	0.71	0.06	0.38	0.25		0.24	0.54		0.36

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1787	64	99	657	17	52	7	193	66	11	7
Future Volume (veh/h)	27	1787	64	99	657	17	52	7	193	66	11	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1842	66	102	677	18	54	7	199	68	11	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	519	2581	1151	202	2599	69	225	27	221	144	22	11
Arrive On Green	0.02	0.73	0.73	0.01	0.24	0.24	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3536	94	1305	191	1585	743	160	80
Grp Volume(v), veh/h	28	1842	66	102	340	355	61	0	199	86	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1853	1496	0	1585	984	0	0
Q Serve(g_s), s	0.6	47.1	1.9	2.3	24.8	24.8	0.0	0.0	19.8	9.7	0.0	0.0
Cycle Q Clear(g_c), s	0.6	47.1	1.9	2.3	24.8	24.8	5.7	0.0	19.8	15.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.89		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	519	2581	1151	202	1306	1362	251	0	221	178	0	0
V/C Ratio(X)	0.05	0.71	0.06	0.51	0.26	0.26	0.24	0.00	0.90	0.48	0.00	0.00
Avail Cap(c_a), veh/h	537	2581	1151	315	1306	1362	319	0	296	237	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	12.4	6.3	17.8	25.4	25.4	61.6	0.0	67.7	67.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.1	2.0	0.5	0.5	0.5	0.0	23.2	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	22.6	1.1	3.4	17.7	18.3	4.1	0.0	14.5	6.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	13.7	6.3	19.8	25.9	25.9	62.1	0.0	90.9	69.9	0.0	0.0
LnGrp LOS	A	B	A	B	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1936			797			260			86	
Approach Delay, s/veh		13.3			25.1			84.2			69.9	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	121.7		27.8	9.1	123.1		27.8				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	98.5		29.9	5.1	108.5		29.9				
Max Q Clear Time (g_c+I1), s	4.3	49.1		17.4	2.6	26.8		21.8				
Green Ext Time (p_c), s	0.2	48.2		0.2	0.0	28.0		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		23.9
HCM 6th LOS		C

Notes

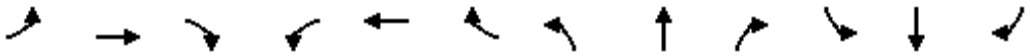
User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	28	2133	11	1	621	47	2	97	18
Future Volume (vph)	28	2133	11	1	621	47	2	97	18
Lane Group Flow (vph)	30	2294	12	1	683	51	85	104	65
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.05	0.81	0.01	0.01	0.25	0.33	0.36	0.75	0.28
Control Delay	3.4	9.9	0.0	3.0	3.4	68.9	27.8	98.3	26.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.4	10.0	0.0	3.0	3.4	68.9	27.8	98.3	26.2
Queue Length 50th (ft)	1	155	0	0	40	50	26	107	18
Queue Length 95th (ft)	m11	482	m0	m1	78	92	78	171	64
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)				190				50	
Base Capacity (vph)	590	2839	1281	104	2691	258	355	232	359
Starvation Cap Reductn	0	44	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.82	0.01	0.01	0.25	0.20	0.24	0.45	0.18

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	2133	11	1	621	14	47	2	77	97	18	43
Future Volume (veh/h)	28	2133	11	1	621	14	47	2	77	97	18	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	2294	12	1	668	15	51	2	83	104	19	46
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	594	2680	1196	164	2603	58	187	5	219	167	69	166
Arrive On Green	0.05	1.00	1.00	0.00	0.73	0.73	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3553	80	1337	37	1553	1313	485	1174
Grp Volume(v), veh/h	30	2294	12	1	334	349	51	0	85	104	0	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1337	0	1591	1313	0	1659
Q Serve(g_s), s	0.7	0.0	0.0	0.0	9.9	9.9	5.7	0.0	7.8	12.5	0.0	5.6
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.0	9.9	9.9	11.3	0.0	7.8	20.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.98	1.00		0.71
Lane Grp Cap(c), veh/h	594	2680	1196	164	1302	1360	187	0	225	167	0	234
V/C Ratio(X)	0.05	0.86	0.01	0.01	0.26	0.26	0.27	0.00	0.38	0.62	0.00	0.28
Avail Cap(c_a), veh/h	610	2680	1196	217	1302	1360	257	0	308	236	0	321
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.1	0.0	0.0	5.7	7.0	7.0	66.4	0.0	62.3	71.5	0.0	61.4
Incr Delay (d2), s/veh	0.0	3.8	0.0	0.0	0.5	0.5	0.8	0.0	1.0	3.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.5	0.0	0.0	6.5	6.8	3.6	0.0	5.9	7.9	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	3.8	0.0	5.7	7.5	7.5	67.2	0.0	63.4	75.3	0.0	62.0
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2336			684			136			169	
Approach Delay, s/veh		3.8			7.5			64.8			70.2	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	126.2		28.1	9.2	122.7		28.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		22.2	2.7	11.9		13.3				
Green Ext Time (p_c), s	0.0	104.6		0.4	0.0	28.4		0.4				

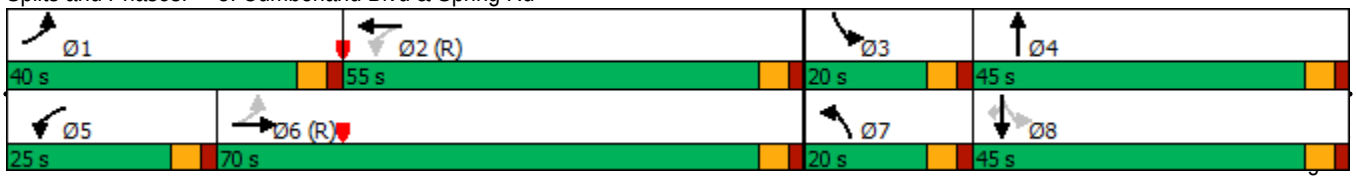
Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

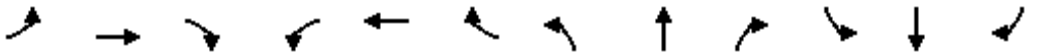
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	236	1694	177	287	187	536	107	407	140
Future Volume (vph)	236	1694	177	287	187	536	107	407	140
Lane Group Flow (vph)	241	2087	181	317	191	1251	109	415	143
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	23.5
Total Split (s)	40.0	70.0	25.0	55.0	20.0	45.0	20.0	45.0	45.0
Total Split (%)	25.0%	43.8%	15.6%	34.4%	12.5%	28.1%	12.5%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.39	0.97	0.85	0.15	0.67	1.26	0.62	0.46	0.28
Control Delay	22.1	59.4	73.8	28.7	83.1	163.1	50.3	52.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	59.4	73.8	28.7	83.1	163.1	50.3	52.6	8.2
Queue Length 50th (ft)	147	831	136	72	101	~782	76	196	0
Queue Length 95th (ft)	m229	#934	225	102	145	#948	128	253	57
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	723	2147	261	2119	311	996	206	900	509
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.97	0.69	0.15	0.61	1.26	0.53	0.46	0.28

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	1694	351	177	287	24	187	536	690	107	407	140
Future Volume (veh/h)	236	1694	351	177	287	24	187	536	690	107	407	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	1729	0	181	293	24	191	547	704	109	415	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	662	2502		228	2266	183	236	439	391	149	843	376
Arrive On Green	0.09	0.49	0.00	0.07	0.47	0.47	0.07	0.25	0.25	0.06	0.24	0.24
Sat Flow, veh/h	1781	5274	0	1781	4816	388	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	241	1729	0	181	206	111	191	547	704	109	415	143
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1800	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.1	41.8	0.0	8.4	5.4	5.6	8.7	39.5	39.5	7.3	16.1	12.1
Cycle Q Clear(g_c), s	11.1	41.8	0.0	8.4	5.4	5.6	8.7	39.5	39.5	7.3	16.1	12.1
Prop In Lane	1.00		0.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	662	2502		228	1602	847	236	439	391	149	843	376
V/C Ratio(X)	0.36	0.69		0.79	0.13	0.13	0.81	1.25	1.80	0.73	0.49	0.38
Avail Cap(c_a), veh/h	892	2502		326	1602	847	313	439	391	206	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	31.5	0.0	30.3	23.9	23.9	73.5	60.3	60.3	46.8	52.7	51.2
Incr Delay (d2), s/veh	0.3	1.6	0.0	8.3	0.2	0.3	11.0	129.0	369.7	7.9	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	23.8	0.0	7.1	4.0	4.4	7.6	48.4	87.2	6.5	11.7	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	33.0	0.0	38.6	24.0	24.2	84.5	189.2	429.9	54.7	53.2	51.8
LnGrp LOS	B	C		D	C	C	F	F	F	D	D	D
Approach Vol, veh/h		1970	A		498			1442			667	
Approach Delay, s/veh		31.3			29.4			292.9			53.1	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	80.8	14.9	45.0	16.2	83.9	16.4	43.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	34.5	49.5	14.5	39.5	19.5	64.5	14.5	39.5
Max Q Clear Time (g_c+I1), s	13.1	7.6	9.3	41.5	10.4	43.8	10.7	18.1
Green Ext Time (p_c), s	0.7	6.1	0.1	0.0	0.3	19.3	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	116.7
HCM 6th LOS	F

Notes

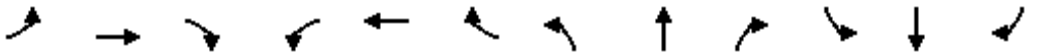
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	193	1846	2	1152	162	2	4	160	0	65
Future Volume (vph)	193	1846	2	1152	162	2	4	160	0	65
Lane Group Flow (vph)	201	1932	2	1200	169	0	7	0	167	68
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	22.0	86.4	64.4	64.4	64.4	33.6	33.6	33.6	33.6	33.6
Total Split (%)	18.3%	72.0%	53.7%	53.7%	53.7%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.57	0.73	0.02	0.56	0.16		0.03		0.73	0.21
Control Delay	11.9	11.7	14.5	16.5	2.6		36.0		65.4	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	11.9	11.7	14.5	16.5	2.6		36.0		65.4	9.6
Queue Length 50th (ft)	39	383	1	262	0		4		124	0
Queue Length 95th (ft)	79	603	6	437	35		17		188	34
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	424	2635	95	2161	1032		400		328	426
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.47	0.73	0.02	0.56	0.16		0.02		0.51	0.16

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	1846	9	2	1152	162	2	4	1	160	0	65
Future Volume (veh/h)	193	1846	9	2	1152	162	2	4	1	160	0	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	1923	9	2	1200	0	2	4	1	167	0	68
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	2445	11	130	2002		39	65	11	195	0	371
Arrive On Green	0.07	0.67	0.67	0.56	0.56	0.00	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	1781	3627	17	230	3554	1585	0	276	46	576	0	1585
Grp Volume(v), veh/h	201	941	991	2	1200	0	7	0	0	167	0	68
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	230	1777	1585	322	0	0	576	0	1585
Q Serve(g_s), s	5.4	44.0	44.2	0.7	26.7	0.0	0.0	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	5.4	44.0	44.2	31.6	26.7	0.0	28.1	0.0	0.0	28.1	0.0	4.1
Prop In Lane	1.00		0.01	1.00		1.00	0.29		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	335	1198	1259	130	2002		114	0	0	195	0	371
V/C Ratio(X)	0.60	0.79	0.79	0.02	0.60		0.06	0.00	0.00	0.86	0.00	0.18
Avail Cap(c_a), veh/h	464	1198	1259	130	2002		114	0	0	195	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	13.5	13.6	29.2	17.3	0.0	37.6	0.0	0.0	48.7	0.0	36.8
Incr Delay (d2), s/veh	1.7	5.2	5.0	0.2	1.3	0.0	0.2	0.0	0.0	29.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	23.0	24.0	0.1	15.6	0.0	0.3	0.0	0.0	10.9	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	18.8	18.6	29.4	18.6	0.0	37.8	0.0	0.0	78.1	0.0	37.0
LnGrp LOS	B	B	B	C	B		D	A	A	E	A	D
Approach Vol, veh/h		2133			1202	A		7			235	
Approach Delay, s/veh		18.5			18.6			37.8			66.2	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.3	73.1		33.6		86.4		33.6				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	16.5	58.9		28.1		80.9		28.1				
Max Q Clear Time (g_c+I1), s	7.4	33.6		30.1		46.2		30.1				
Green Ext Time (p_c), s	0.4	22.4		0.0		34.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		21.7
HCM 6th LOS		C

Notes

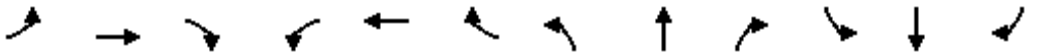
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	285	827	30	1968	225	27	15	272	13	542
Future Volume (vph)	285	827	30	1968	225	27	15	272	13	542
Lane Group Flow (vph)	297	884	31	2050	234	41	16	147	150	565
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	22.0	106.5	84.5	84.5	84.5	23.5	23.5	30.0	30.0	30.0
Total Split (%)	13.8%	66.6%	52.8%	52.8%	52.8%	14.7%	14.7%	18.8%	18.8%	18.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.84	0.36	0.10	1.17	0.28	0.39	0.09	0.57	0.58	1.12
Control Delay	68.8	10.5	33.3	130.6	26.0	83.0	1.0	72.6	72.8	103.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	10.5	33.3	130.6	26.0	83.0	1.0	72.6	72.8	103.8
Queue Length 50th (ft)	256	189	24	~1336	145	42	0	152	155	~387
Queue Length 95th (ft)	#475	242	m27	m#1456	m169	84	0	236	241	#629
Internal Link Dist (ft)		480		3663		280			810	
Turn Bay Length (ft)	235		180		135			210		
Base Capacity (vph)	353	2472	296	1747	828	206	259	257	259	504
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	0.84	0.36	0.10	1.17	0.28	0.20	0.06	0.57	0.58	1.12

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	827	22	30	1968	225	12	27	15	272	13	542
Future Volume (veh/h)	285	827	22	30	1968	225	12	27	15	272	13	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	297	861	23	31	2050	234	12	28	16	293	0	565
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	2722	73	442	2247	1002	18	42	52	337	0	150
Arrive On Green	0.10	0.77	0.77	0.63	0.63	0.63	0.03	0.03	0.03	0.09	0.00	0.09
Sat Flow, veh/h	1781	3536	94	628	3554	1585	553	1290	1585	3563	0	1585
Grp Volume(v), veh/h	297	433	451	31	2050	234	40	0	16	293	0	565
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	628	1777	1585	1843	0	1585	1781	0	1585
Q Serve(g_s), s	16.5	11.9	11.9	3.1	80.2	10.2	3.4	0.0	1.6	13.0	0.0	15.1
Cycle Q Clear(g_c), s	16.5	11.9	11.9	3.1	80.2	10.2	3.4	0.0	1.6	13.0	0.0	15.1
Prop In Lane	1.00		0.05	1.00		1.00	0.30		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	250	1368	1427	442	2247	1002	60	0	52	337	0	150
V/C Ratio(X)	1.19	0.32	0.32	0.07	0.91	0.23	0.67	0.00	0.31	0.87	0.00	3.77
Avail Cap(c_a), veh/h	250	1368	1427	442	2247	1002	207	0	178	546	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.17	0.17	0.17	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	5.6	5.6	11.4	25.6	12.7	76.5	0.0	75.6	71.5	0.0	72.4
Incr Delay (d2), s/veh	117.3	0.6	0.6	0.1	1.4	0.1	12.1	0.0	3.4	8.6	0.0	1263.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.1	7.3	7.6	0.8	35.2	4.8	3.3	0.0	1.3	10.4	0.0	89.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	175.3	6.2	6.2	11.4	26.9	12.8	88.6	0.0	79.0	80.0	0.0	1335.6
LnGrp LOS	F	A	A	B	C	B	F	A	E	F	A	F
Approach Vol, veh/h		1181			2315			56			858	
Approach Delay, s/veh		48.7			25.3			85.9			906.8	
Approach LOS		D			C			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		128.7		20.6	22.0	106.7		10.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		101.0		24.5	16.5	79.0		18.0				
Max Q Clear Time (g_c+I1), s		13.9		15.0	18.5	82.2		5.4				
Green Ext Time (p_c), s		25.9		0.1	0.0	0.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay	203.8	
HCM 6th LOS	F	

Notes

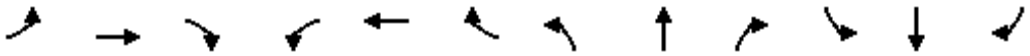
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	53	929	224	592	2245	179	21	246	30	4
Future Volume (vph)	53	929	224	592	2245	179	21	246	30	4
Lane Group Flow (vph)	56	978	236	623	2391	0	210	259	0	42
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	39.5	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	24.7%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.54	0.44	0.22	1.41	0.97		0.85	0.57		0.24
Control Delay	45.3	19.3	3.6	208.8	22.8		91.8	17.1		51.4
Queue Delay	0.0	0.0	0.0	0.0	42.8		0.0	0.0		0.0
Total Delay	45.3	19.3	3.6	208.8	65.6		91.8	17.1		51.4
Queue Length 50th (ft)	18	358	26	~477	1393		213	42		33
Queue Length 95th (ft)	m#64	435	44	m#474	m#1359		307	133		72
Internal Link Dist (ft)		3663			357		276			391
Turn Bay Length (ft)	165		435	170						
Base Capacity (vph)	103	2207	1076	443	2470		294	503		209
Starvation Cap Reductn	0	0	0	0	416		0	0		0
Spillback Cap Reductn	0	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0	0		0	0		0
Reduced v/c Ratio	0.54	0.44	0.22	1.41	1.16		0.71	0.51		0.20

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	929	224	592	2245	27	179	21	246	30	4	6
Future Volume (veh/h)	53	929	224	592	2245	27	179	21	246	30	4	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	978	236	623	2363	28	188	22	259	32	4	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	2215	988	434	2479	29	277	27	284	77	11	8
Arrive On Green	0.03	0.62	0.62	0.13	0.92	0.92	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3597	43	1307	153	1585	211	60	45
Grp Volume(v), veh/h	56	978	236	623	1165	1226	210	0	259	42	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1460	0	1585	317	0	0
Q Serve(g_s), s	1.8	22.9	10.5	15.1	68.4	70.6	0.0	0.0	25.7	4.6	0.0	0.0
Cycle Q Clear(g_c), s	1.8	22.9	10.5	15.1	68.4	70.6	22.0	0.0	25.7	26.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	132	2215	988	434	1224	1284	304	0	284	96	0	0
V/C Ratio(X)	0.42	0.44	0.24	1.44	0.95	0.96	0.69	0.00	0.91	0.44	0.00	0.00
Avail Cap(c_a), veh/h	138	2215	988	434	1224	1284	352	0	337	136	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.3	15.7	13.3	19.3	4.9	5.0	63.0	0.0	64.4	71.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.6	0.5	208.7	16.4	16.5	4.7	0.0	25.5	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	13.8	6.8	51.7	14.5	15.1	13.4	0.0	18.1	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	16.3	13.9	228.0	21.4	21.5	67.6	0.0	90.0	74.7	0.0	0.0
LnGrp LOS	C	B	B	F	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1270			3014			469			42	
Approach Delay, s/veh		16.4			64.1			80.0			74.7	
Approach LOS		B			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	105.2		34.2	10.1	115.8		34.2				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	17.1	24.9		28.6	3.8	72.6		27.7				
Green Ext Time (p_c), s	0.0	46.6		0.0	0.0	31.7		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		53.1	
HCM 6th LOS		D	

Notes

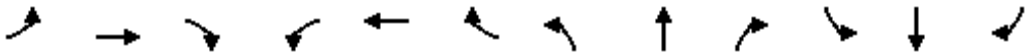
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	73	1199	2	4	2619	13	0	72	0
Future Volume (vph)	73	1199	2	4	2619	13	0	72	0
Lane Group Flow (vph)	77	1262	2	4	2842	14	16	76	40
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.75	0.43	0.00	0.01	1.04	0.12	0.06	0.62	0.21
Control Delay	73.2	3.4	0.0	2.8	54.5	66.6	0.5	90.4	9.9
Queue Delay	0.0	0.1	0.0	0.0	26.0	0.0	0.0	0.0	0.0
Total Delay	73.2	3.5	0.0	2.8	80.5	66.6	0.5	90.4	9.9
Queue Length 50th (ft)	43	96	0	1	~1720	14	0	78	0
Queue Length 95th (ft)	#130	201	m0	m1	m1430	37	0	133	24
Internal Link Dist (ft)		99			614		30		293
Turn Bay Length (ft)				190				50	
Base Capacity (vph)	103	2935	1322	351	2737	263	414	269	351
Starvation Cap Reductn	0	496	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	501	0	0	0	7
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.52	0.00	0.01	1.27	0.05	0.04	0.28	0.12

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1199	2	4	2619	81	13	0	15	72	0	38
Future Volume (veh/h)	73	1199	2	4	2619	81	13	0	15	72	0	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1262	2	4	2757	85	14	0	16	76	0	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	2894	1291	400	2778	85	118	0	123	140	0	123
Arrive On Green	0.06	1.00	1.00	0.01	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3520	108	1367	0	1585	1397	0	1585
Grp Volume(v), veh/h	77	1262	2	4	1385	1457	14	0	16	76	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1851	1367	0	1585	1397	0	1585
Q Serve(g_s), s	2.6	0.0	0.0	0.1	119.0	124.9	1.6	0.0	1.5	8.6	0.0	3.8
Cycle Q Clear(g_c), s	2.6	0.0	0.0	0.1	119.0	124.9	5.4	0.0	1.5	10.1	0.0	3.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	2894	1291	400	1402	1461	118	0	123	140	0	123
V/C Ratio(X)	0.77	0.44	0.00	0.01	0.99	1.00	0.12	0.00	0.13	0.54	0.00	0.33
Avail Cap(c_a), veh/h	103	2894	1291	447	1402	1461	277	0	307	303	0	307
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	0.0	0.0	3.4	16.1	16.7	72.4	0.0	68.8	73.5	0.0	69.9
Incr Delay (d2), s/veh	29.1	0.5	0.0	0.0	21.2	23.0	0.4	0.0	0.5	3.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	0.3	0.0	0.0	55.8	60.8	1.0	0.0	1.1	5.8	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.6	0.5	0.0	3.4	37.3	39.7	72.8	0.0	69.3	76.7	0.0	71.4
LnGrp LOS	F	A	A	A	D	D	E	A	E	E	A	E
Approach Vol, veh/h		1341			2846			30			116	
Approach Delay, s/veh		5.4			38.5			70.9			74.9	
Approach LOS		A			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	135.8		17.9	10.3	131.8		17.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		12.1	4.6	126.9		7.4				
Green Ext Time (p_c), s	0.0	76.1		0.3	0.0	0.0		0.1				

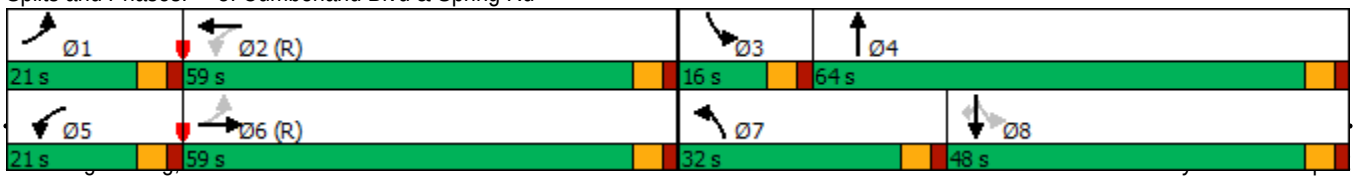
Intersection Summary			
HCM 6th Ctrl Delay		29.4	
HCM 6th LOS		C	

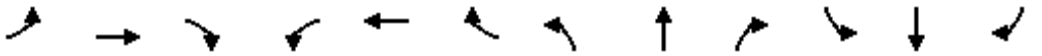
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	198	643	312	1709	654	534	113	624	570
Future Volume (vph)	198	643	312	1709	654	534	113	624	570
Lane Group Flow (vph)	208	929	328	1974	688	999	119	657	600
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	23.5
Total Split (s)	21.0	59.0	21.0	59.0	32.0	64.0	16.0	48.0	48.0
Total Split (%)	13.1%	36.9%	13.1%	36.9%	20.0%	40.0%	10.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	Min	C-Min	None	None	None	None	None
v/c Ratio	0.95	0.56	1.13	1.17	1.21	0.76	0.64	0.70	1.07
Control Delay	112.1	27.9	124.4	129.9	164.6	42.6	43.4	57.7	96.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.1	27.9	124.4	129.9	164.6	42.6	43.4	57.7	96.3
Queue Length 50th (ft)	176	205	~266	~898	~451	426	70	328	~541
Queue Length 95th (ft)	#346	202	#474	#990	#580	514	113	401	#787
Internal Link Dist (ft)		1002		1099		389		804	
Turn Bay Length (ft)	225		395				145		575
Base Capacity (vph)	218	1672	289	1685	568	1306	192	940	559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.56	1.13	1.17	1.21	0.76	0.62	0.70	1.07

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	643	239	312	1709	166	654	534	415	113	624	570
Future Volume (veh/h)	198	643	239	312	1709	166	654	534	415	113	624	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	677	0	328	1799	175	688	562	437	119	657	600
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1956		438	1813	176	572	606	471	177	771	344
Arrive On Green	0.10	0.38	0.00	0.10	0.38	0.38	0.17	0.32	0.32	0.06	0.22	0.22
Sat Flow, veh/h	1781	5274	0	1781	4733	459	3456	1902	1479	1781	3554	1585
Grp Volume(v), veh/h	208	677	0	328	1292	682	688	525	474	119	657	600
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1788	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	14.5	15.1	0.0	15.5	60.4	60.9	26.5	45.7	45.7	8.2	28.4	34.7
Cycle Q Clear(g_c), s	14.5	15.1	0.0	15.5	60.4	60.9	26.5	45.7	45.7	8.2	28.4	34.7
Prop In Lane	1.00		0.00	1.00		0.26	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	218	1956		438	1304	685	572	566	511	177	771	344
V/C Ratio(X)	0.95	0.35		0.75	0.99	1.00	1.20	0.93	0.93	0.67	0.85	1.74
Avail Cap(c_a), veh/h	218	1956		438	1304	685	572	650	587	180	944	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	35.1	0.0	30.5	49.1	49.2	66.8	52.7	52.7	47.7	60.2	62.6
Incr Delay (d2), s/veh	47.8	0.5	0.0	7.0	22.8	33.5	106.8	18.2	19.7	9.1	6.4	347.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.7	10.4	0.0	6.4	37.8	42.1	30.0	31.0	28.6	7.4	19.5	73.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.8	35.6	0.0	37.6	71.9	82.7	173.6	71.0	72.4	56.8	66.6	409.7
LnGrp LOS	F	D		D	E	F	F	E	E	E	E	F
Approach Vol, veh/h		885	A		2302			1687			1376	
Approach Delay, s/veh		50.7			70.2			113.2			215.3	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	66.8	15.7	56.5	21.0	66.8	32.0	40.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	15.5	53.5	10.5	58.5	15.5	53.5	26.5	42.5
Max Q Clear Time (g_c+I1), s	16.5	62.9	10.2	47.7	17.5	17.1	28.5	30.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	14.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	111.0
HCM 6th LOS	F

Notes

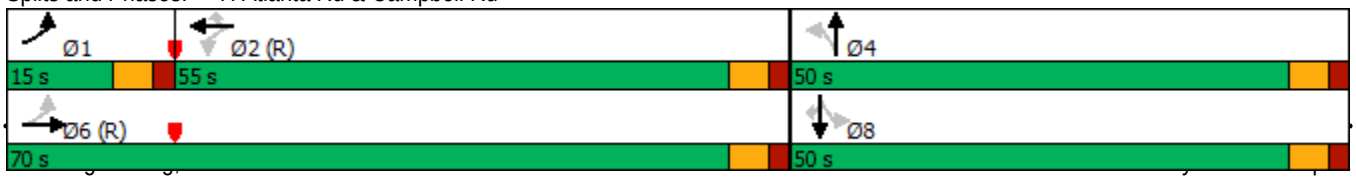
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

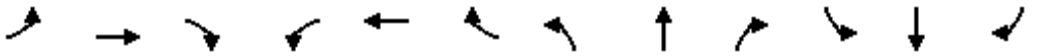
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	114	1033	2	1596	357	7	4	496	3	175
Future Volume (vph)	114	1033	2	1596	357	7	4	496	3	175
Lane Group Flow (vph)	118	1071	2	1645	368	0	14	0	514	180
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	15.0	70.0	55.0	55.0	55.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	12.5%	58.3%	45.8%	45.8%	45.8%	41.7%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.62	0.56	0.01	1.11	0.44		0.02		1.04	0.26
Control Delay	33.5	19.8	21.0	93.1	6.6		20.7		88.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.5	19.8	21.0	93.1	6.6		20.7		88.4	4.7
Queue Length 50th (ft)	44	277	1	~775	30		5		~429	1
Queue Length 95th (ft)	101	340	7	#915	100		20		#642	47
Internal Link Dist (ft)		988		1053			51		487	
Turn Bay Length (ft)	150		115		325					
Base Capacity (vph)	201	1901	184	1483	840		561		495	699
Starvation Cap Reductn	0	0	0	0	0		0		0	0
Spillback Cap Reductn	0	0	0	0	0		0		0	0
Storage Cap Reductn	0	0	0	0	0		0		0	0
Reduced v/c Ratio	0.59	0.56	0.01	1.11	0.44		0.02		1.04	0.26

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Atlanta Rd & Campbell Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	1033	6	2	1596	357	7	4	3	496	3	175
Future Volume (veh/h)	114	1033	6	2	1596	357	7	4	3	496	3	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	1065	6	2	1645	0	7	4	3	511	3	180
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1947	11	242	1565		45	24	6	406	2	588
Arrive On Green	0.05	0.54	0.54	0.44	0.44	0.00	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	3623	20	527	3554	1585	0	64	17	933	5	1585
Grp Volume(v), veh/h	118	522	549	2	1645	0	14	0	0	514	0	180
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	527	1777	1585	81	0	0	938	0	1585
Q Serve(g_s), s	4.2	23.1	23.1	0.3	52.9	0.0	0.0	0.0	0.0	0.0	0.0	9.7
Cycle Q Clear(g_c), s	4.2	23.1	23.1	11.8	52.9	0.0	44.5	0.0	0.0	44.5	0.0	9.7
Prop In Lane	1.00		0.01	1.00		1.00	0.50		0.21	0.99		1.00
Lane Grp Cap(c), veh/h	151	955	1003	242	1565		75	0	0	408	0	588
V/C Ratio(X)	0.78	0.55	0.55	0.01	1.05		0.19	0.00	0.00	1.26	0.00	0.31
Avail Cap(c_a), veh/h	201	955	1003	242	1565		75	0	0	408	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	18.2	18.2	25.8	33.6	0.0	31.5	0.0	0.0	41.0	0.0	26.8
Incr Delay (d2), s/veh	13.1	2.2	2.1	0.1	37.5	0.0	1.2	0.0	0.0	135.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	14.4	14.9	0.1	39.6	0.0	0.5	0.0	0.0	41.8	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	20.4	20.3	25.9	71.0	0.0	32.6	0.0	0.0	176.8	0.0	27.1
LnGrp LOS	D	C	C	C	F		C	A	A	F	A	C
Approach Vol, veh/h		1189			1647	A		14			694	
Approach Delay, s/veh		22.4			71.0			32.6			138.0	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.6	58.4		50.0		70.0		50.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	9.5	49.5		44.5		64.5		44.5				
Max Q Clear Time (g_c+I1), s	6.2	54.9		46.5		25.1		46.5				
Green Ext Time (p_c), s	0.1	0.0		0.0		30.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		67.7	
HCM 6th LOS		E	

Notes

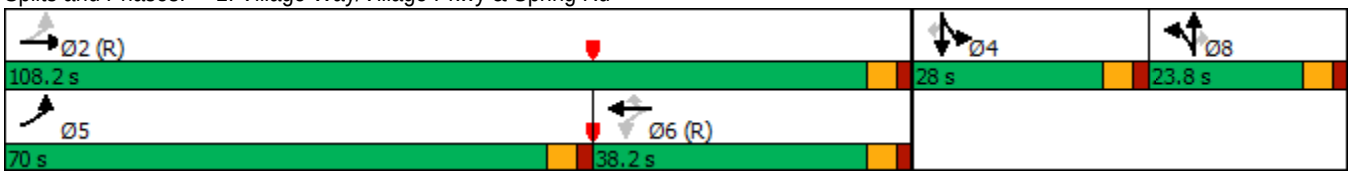
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

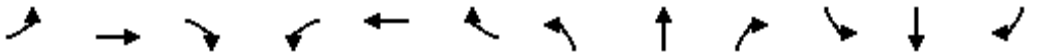
FUTURE "BUILD" ANALYSIS - 2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	625	1679	7	431	107	6	23	85	5	231
Future Volume (vph)	625	1679	7	431	107	6	23	85	5	231
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	70.0	108.2	38.2	38.2	38.2	23.8	23.8	28.0	28.0	28.0
Total Split (%)	43.8%	67.6%	23.9%	23.9%	23.9%	14.9%	14.9%	17.5%	17.5%	17.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	128.0	128.0	86.0	86.0	86.0	7.4	7.4	10.3	10.3	10.3
Actuated g/C Ratio	0.80	0.80	0.54	0.54	0.54	0.05	0.05	0.06	0.06	0.06
v/c Ratio	0.72	0.60	0.05	0.23	0.12	0.23	0.14	0.43	0.41	0.73
Control Delay	11.2	8.2	33.6	25.7	11.9	79.5	1.9	82.6	81.8	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	8.2	33.6	25.7	11.9	79.5	1.9	82.6	81.8	21.5
LOS	B	A	C	C	B	E	A	F	F	C
Approach Delay		9.0		23.1		37.0			38.5	
Approach LOS		A		C		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	625	1679	2	7	431	107	13	6	23	85	5	231
Future Volume (veh/h)	625	1679	2	7	431	107	13	6	23	85	5	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	631	1696	2	7	435	108	13	6	23	90	0	233
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	816	3033	4	237	2366	1055	33	15	42	134	0	60
Arrive On Green	0.13	0.83	0.83	0.67	0.67	0.67	0.03	0.03	0.03	0.04	0.00	0.04
Sat Flow, veh/h	1781	3642	4	289	3554	1585	1237	571	1585	3563	0	1585
Grp Volume(v), veh/h	631	827	871	7	435	108	19	0	23	90	0	233
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	289	1777	1585	1808	0	1585	1781	0	1585
Q Serve(g_s), s	16.6	23.3	23.3	1.3	7.5	3.9	1.7	0.0	2.3	4.0	0.0	6.0
Cycle Q Clear(g_c), s	16.6	23.3	23.3	1.3	7.5	3.9	1.7	0.0	2.3	4.0	0.0	6.0
Prop In Lane	1.00		0.00	1.00		1.00	0.68		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	816	1480	1557	237	2366	1055	48	0	42	134	0	60
V/C Ratio(X)	0.77	0.56	0.56	0.03	0.18	0.10	0.40	0.00	0.55	0.67	0.00	3.90
Avail Cap(c_a), veh/h	1298	1480	1557	237	2366	1055	207	0	181	501	0	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.5	4.2	4.2	9.2	10.2	9.6	76.6	0.0	76.9	76.0	0.0	77.0
Incr Delay (d2), s/veh	1.6	1.5	1.5	0.2	0.2	0.2	5.3	0.0	10.7	5.7	0.0	1342.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.7	10.8	11.3	0.2	5.1	2.4	1.5	0.0	1.9	3.4	0.0	38.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	5.7	5.6	9.4	10.3	9.8	81.9	0.0	87.7	81.6	0.0	1419.8
LnGrp LOS	A	A	A	A	B	A	F	A	F	F	A	F
Approach Vol, veh/h		2329			550			42			323	
Approach Delay, s/veh		6.1			10.2			85.1			1046.9	
Approach LOS		A			B			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		138.7		11.5	26.7	112.0		9.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		102.7		22.5	64.5	32.7		18.3				
Max Q Clear Time (g_c+I1), s		25.3		6.0	18.6	9.5		3.7				
Green Ext Time (p_c), s		64.8		0.0	2.6	6.3		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	111.4	
HCM 6th LOS	F	

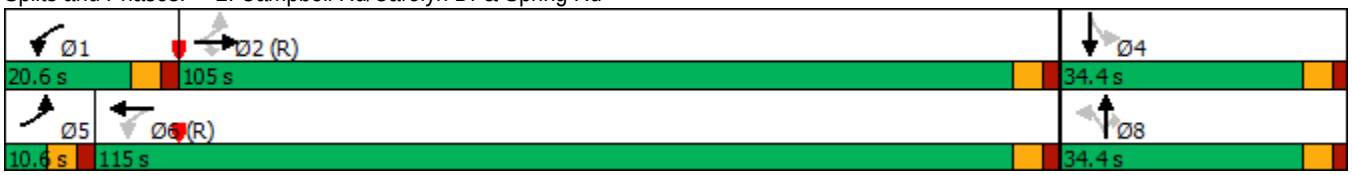
Notes

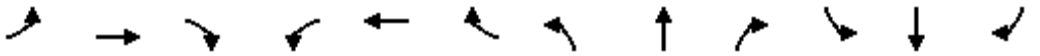
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	1621	58	100	595	58	6	188	60	10
Future Volume (vph)	25	1621	58	100	595	58	6	188	60	10
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	105.0	105.0	20.6	115.0	34.4	34.4	34.4	34.4	34.4
Total Split (%)	6.6%	65.6%	65.6%	12.9%	71.9%	21.5%	21.5%	21.5%	21.5%	21.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	125.5	120.4	120.4	133.2	127.8		14.8	14.8		14.8
Actuated g/C Ratio	0.78	0.75	0.75	0.83	0.80		0.09	0.09		0.09
v/c Ratio	0.04	0.63	0.05	0.43	0.22		0.52	0.75		0.62
Control Delay	5.9	22.1	4.0	11.4	2.2		82.0	44.7		88.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	5.9	22.1	4.0	11.4	2.2		82.0	44.7		88.0
LOS	A	C	A	B	A		F	D		F
Approach Delay		21.2			3.5		54.1			88.0
Approach LOS		C			A		D			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 75.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1621	58	100	595	15	58	6	188	60	10	6
Future Volume (veh/h)	25	1621	58	100	595	15	58	6	188	60	10	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	1671	60	103	613	15	60	6	194	62	10	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	562	2592	1156	237	2620	64	226	21	216	139	21	10
Arrive On Green	0.02	0.73	0.73	0.01	0.24	0.24	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3545	87	1341	151	1585	719	156	73
Grp Volume(v), veh/h	26	1671	60	103	307	321	66	0	194	78	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1855	1493	0	1585	949	0	0
Q Serve(g_s), s	0.6	38.4	1.7	2.3	22.2	22.2	0.0	0.0	19.3	8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.6	38.4	1.7	2.3	22.2	22.2	6.2	0.0	19.3	14.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.91		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	562	2592	1156	237	1313	1371	247	0	216	170	0	0
V/C Ratio(X)	0.05	0.64	0.05	0.43	0.23	0.23	0.27	0.00	0.90	0.46	0.00	0.00
Avail Cap(c_a), veh/h	581	2592	1156	350	1313	1371	310	0	286	226	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.4	11.0	6.1	12.5	24.2	24.2	62.3	0.0	68.0	68.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.1	1.3	0.4	0.4	0.6	0.0	23.7	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	19.1	1.0	2.3	16.1	16.7	4.5	0.0	14.2	5.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	12.0	6.1	13.8	24.6	24.6	62.9	0.0	91.7	70.2	0.0	0.0
LnGrp LOS	A	B	A	B	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1757			731			260			78	
Approach Delay, s/veh		11.7			23.1			84.4			70.2	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	122.2		27.3	8.9	123.7		27.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	99.5		28.9	5.1	109.5		28.9				
Max Q Clear Time (g_c+I1), s	4.3	40.4		16.9	2.6	24.2		21.3				
Green Ext Time (p_c), s	0.2	56.1		0.2	0.0	24.4		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		23.0	
HCM 6th LOS		C	

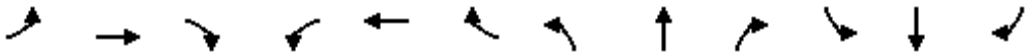
Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	25	1964	10	1	572	43	2	88	16
Future Volume (vph)	25	1964	10	1	572	43	2	88	16
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	130.9	129.8	129.8	128.6	125.6	17.1	17.1	17.1	17.1
Actuated g/C Ratio	0.82	0.81	0.81	0.80	0.78	0.11	0.11	0.11	0.11
v/c Ratio	0.04	0.74	0.01	0.01	0.23	0.32	0.34	0.71	0.28
Control Delay	2.4	6.9	0.0	3.0	3.0	70.2	22.8	96.2	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	7.0	0.0	3.0	3.0	70.2	22.8	96.2	27.5
LOS	A	A	A	A	A	E	C	F	C
Approach Delay		6.9			3.0		40.5		69.9
Approach LOS		A			A		D		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 75.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1964	10	1	572	13	43	2	70	88	16	39
Future Volume (veh/h)	25	1964	10	1	572	13	43	2	70	88	16	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	2112	11	1	615	14	46	2	75	95	17	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	635	2721	1214	190	2647	60	176	5	201	158	62	153
Arrive On Green	0.04	1.00	1.00	0.00	0.75	0.75	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3552	81	1344	41	1550	1322	478	1180
Grp Volume(v), veh/h	27	2112	11	1	308	321	46	0	77	95	0	59
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1344	0	1591	1322	0	1658
Q Serve(g_s), s	0.6	0.0	0.0	0.0	8.5	8.5	5.1	0.0	7.1	11.3	0.0	5.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.0	8.5	8.5	10.3	0.0	7.1	18.4	0.0	5.1
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.97	1.00		0.71
Lane Grp Cap(c), veh/h	635	2721	1214	190	1324	1383	176	0	207	158	0	215
V/C Ratio(X)	0.04	0.78	0.01	0.01	0.23	0.23	0.26	0.00	0.37	0.60	0.00	0.27
Avail Cap(c_a), veh/h	653	2721	1214	243	1324	1383	262	0	308	243	0	321
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.5	0.0	0.0	5.1	6.3	6.3	67.4	0.0	63.7	72.1	0.0	62.8
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.4	0.4	0.8	0.0	1.1	3.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.5	0.0	0.0	5.5	5.7	3.3	0.0	5.4	7.3	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.6	2.2	0.0	5.1	6.7	6.7	68.2	0.0	64.8	75.7	0.0	63.5
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2150			630			123			154	
Approach Delay, s/veh		2.3			6.7			66.1			71.0	
Approach LOS		A			A			E			E	

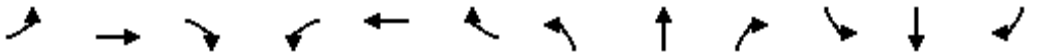
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	128.0		26.3	9.0	124.7		26.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		20.4	2.6	10.5		12.3				
Green Ext Time (p_c), s	0.0	103.6		0.4	0.0	25.1		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			9.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	214	1567	160	270	169	485	97	368	127
Future Volume (vph)	214	1567	160	270	169	485	97	368	127
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	23.5
Total Split (s)	40.0	70.0	25.0	55.0	20.0	45.0	20.0	45.0	45.0
Total Split (%)	25.0%	43.8%	15.6%	34.4%	12.5%	28.1%	12.5%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	85.4	69.9	82.6	68.5	12.8	42.6	52.5	41.2	41.2
Actuated g/C Ratio	0.53	0.44	0.52	0.43	0.08	0.27	0.33	0.26	0.26
v/c Ratio	0.35	0.88	0.81	0.14	0.63	1.13	0.58	0.41	0.26
Control Delay	22.2	51.4	68.9	27.8	81.4	113.2	47.6	51.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	51.4	68.9	27.8	81.4	113.2	47.6	51.4	8.3
LOS	C	D	E	C	F	F	D	D	A
Approach Delay		48.5		42.3		109.0		41.5	
Approach LOS		D		D		F		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 64.4	Intersection LOS: E
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	1567	318	160	270	22	169	485	625	97	368	127
Future Volume (veh/h)	214	1567	318	160	270	22	169	485	625	97	368	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	1599	0	163	276	22	172	495	638	99	376	130
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	672	2559		240	2335	183	218	439	391	141	846	377
Arrive On Green	0.08	0.50	0.00	0.06	0.48	0.48	0.06	0.25	0.25	0.05	0.24	0.24
Sat Flow, veh/h	1781	5274	0	1781	4828	379	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	218	1599	0	163	193	105	172	495	638	99	376	130
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1802	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.8	36.4	0.0	7.3	5.0	5.1	7.9	39.5	39.5	6.7	14.4	10.9
Cycle Q Clear(g_c), s	9.8	36.4	0.0	7.3	5.0	5.1	7.9	39.5	39.5	6.7	14.4	10.9
Prop In Lane	1.00		0.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	672	2559		240	1646	872	218	439	391	141	846	377
V/C Ratio(X)	0.32	0.62		0.68	0.12	0.12	0.79	1.13	1.63	0.70	0.44	0.34
Avail Cap(c_a), veh/h	918	2559		349	1646	872	313	439	391	206	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	29.0	0.0	25.5	22.6	22.6	73.9	60.3	60.3	47.0	51.9	50.6
Incr Delay (d2), s/veh	0.3	1.2	0.0	3.4	0.1	0.3	8.4	82.9	295.1	6.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.2	21.0	0.0	5.8	3.6	4.0	6.7	39.1	73.8	5.8	10.7	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	30.2	0.0	28.9	22.8	22.9	82.3	143.2	355.4	53.1	52.3	51.1
LnGrp LOS	B	C		C	C	C	F	F	F	D	D	D
Approach Vol, veh/h		1817	A		461			1305			605	
Approach Delay, s/veh		28.7			25.0			238.9			52.2	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	82.9	14.2	45.0	15.2	85.7	15.6	43.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	34.5	49.5	14.5	39.5	19.5	64.5	14.5	39.5
Max Q Clear Time (g_c+I1), s	11.8	7.1	8.7	41.5	9.3	38.4	9.9	16.4
Green Ext Time (p_c), s	0.7	5.7	0.1	0.0	0.3	23.2	0.2	1.0

Intersection Summary	
HCM 6th Ctrl Delay	97.2
HCM 6th LOS	F

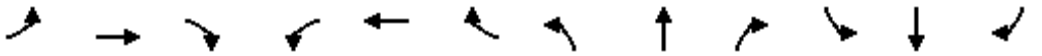
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	177	1671	2	1043	149	2	4	151	0	65
Future Volume (vph)	177	1671	2	1043	149	2	4	151	0	65
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	22.0	86.4	64.4	64.4	64.4	33.6	33.6	33.6	33.6	33.6
Total Split (%)	18.3%	72.0%	53.7%	53.7%	53.7%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	90.3	90.3	75.5	75.5	75.5		18.7		18.7	18.7
Actuated g/C Ratio	0.75	0.75	0.63	0.63	0.63		0.16		0.16	0.16
v/c Ratio	0.48	0.66	0.01	0.49	0.15		0.03		0.72	0.22
Control Delay	9.1	9.6	12.0	13.9	2.3		36.7		65.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	9.1	9.6	12.0	13.9	2.3		36.7		65.5	9.8
LOS	A	A	B	B	A		D		E	A
Approach Delay		9.5		12.5			36.7		48.7	
Approach LOS		A		B			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 87.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	1671	8	2	1043	149	2	4	1	151	0	65
Future Volume (veh/h)	177	1671	8	2	1043	149	2	4	1	151	0	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	184	1741	8	2	1086	0	2	4	1	157	0	68
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	2446	11	163	2018		39	65	11	195	0	371
Arrive On Green	0.06	0.67	0.67	0.57	0.57	0.00	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	1781	3628	17	275	3554	1585	0	276	46	576	0	1585
Grp Volume(v), veh/h	184	852	897	2	1086	0	7	0	0	157	0	68
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	275	1777	1585	322	0	0	576	0	1585
Q Serve(g_s), s	4.9	36.0	36.1	0.6	22.8	0.0	0.0	0.0	0.0	0.0	0.0	4.1
Cycle Q Clear(g_c), s	4.9	36.0	36.1	23.9	22.8	0.0	28.1	0.0	0.0	28.1	0.0	4.1
Prop In Lane	1.00		0.01	1.00		1.00	0.29		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	364	1198	1259	163	2018		114	0	0	195	0	371
V/C Ratio(X)	0.51	0.71	0.71	0.01	0.54		0.06	0.00	0.00	0.81	0.00	0.18
Avail Cap(c_a), veh/h	501	1198	1259	163	2018		114	0	0	195	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	12.2	12.3	23.7	16.1	0.0	37.6	0.0	0.0	47.9	0.0	36.8
Incr Delay (d2), s/veh	1.1	3.6	3.4	0.1	1.0	0.0	0.2	0.0	0.0	21.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	19.1	19.9	0.1	13.6	0.0	0.3	0.0	0.0	9.9	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	15.8	15.7	23.9	17.2	0.0	37.8	0.0	0.0	69.3	0.0	37.0
LnGrp LOS	B	B	B	C	B		D	A	A	E	A	D
Approach Vol, veh/h		1933			1088	A		7			225	
Approach Delay, s/veh		15.6			17.2			37.8			59.5	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.8	73.6		33.6		86.4		33.6				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	16.5	58.9		28.1		80.9		28.1				
Max Q Clear Time (g_c+I1), s	6.9	25.9		30.1		38.1		30.1				
Green Ext Time (p_c), s	0.4	26.9		0.0		41.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	24	294	3	10	109
Future Vol, veh/h	11	24	294	3	10	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	26	320	3	11	118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	460	320	0	0	323	0
Stage 1	320	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	559	721	-	-	1237	-
Stage 1	736	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	554	721	-	-	1237	-
Mov Cap-2 Maneuver	554	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	879	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	659	1237	-
HCM Lane V/C Ratio	-	-	0.058	0.009	-
HCM Control Delay (s)	-	-	10.8	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1979	3	0	655	0	20
Future Vol, veh/h	1979	3	0	655	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2151	3	0	712	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	1076
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	0	-	0	185
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	185
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

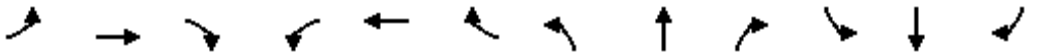
Approach	EB	WB	NB
HCM Control Delay, s	0	0	27
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	185	-	-
HCM Lane V/C Ratio	0.118	-	-
HCM Control Delay (s)	27	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	258	760	27	1788	204	24	14	246	12	491
Future Volume (vph)	258	760	27	1788	204	24	14	246	12	491
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	23.6	107.9	84.3	84.3	84.3	23.5	23.5	28.6	28.6	28.6
Total Split (%)	14.8%	67.4%	52.7%	52.7%	52.7%	14.7%	14.7%	17.9%	17.9%	17.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	114.0	114.0	80.5	80.5	80.5	8.6	8.6	23.1	23.1	23.1
Actuated g/C Ratio	0.71	0.71	0.50	0.50	0.50	0.05	0.05	0.14	0.14	0.14
v/c Ratio	0.76	0.32	0.09	1.05	0.25	0.37	0.09	0.55	0.56	1.01
Control Delay	59.5	9.5	33.8	84.9	25.9	82.5	1.0	73.1	73.3	64.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	9.5	33.8	84.9	25.9	82.5	1.0	73.1	73.3	64.9
LOS	E	A	C	F	C	F	A	E	E	E
Approach Delay		21.9		78.2		58.5			67.8	
Approach LOS		C		E		E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 60.8	Intersection LOS: E
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	760	20	27	1788	204	11	24	14	246	12	491
Future Volume (veh/h)	258	760	20	27	1788	204	11	24	14	246	12	491
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	269	792	21	28	1862	212	11	25	15	265	0	511
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	2760	73	472	2260	1008	17	38	47	309	0	137
Arrive On Green	0.11	0.78	0.78	0.64	0.64	0.64	0.03	0.03	0.03	0.09	0.00	0.09
Sat Flow, veh/h	1781	3537	94	671	3554	1585	563	1279	1585	3563	0	1585
Grp Volume(v), veh/h	269	398	415	28	1862	212	36	0	15	265	0	511
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	671	1777	1585	1842	0	1585	1781	0	1585
Q Serve(g_s), s	15.6	10.1	10.1	2.5	64.1	9.0	3.1	0.0	1.5	11.7	0.0	13.9
Cycle Q Clear(g_c), s	15.6	10.1	10.1	2.5	64.1	9.0	3.1	0.0	1.5	11.7	0.0	13.9
Prop In Lane	1.00		0.05	1.00		1.00	0.31		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1387	1447	472	2260	1008	55	0	47	309	0	137
V/C Ratio(X)	0.93	0.29	0.29	0.06	0.82	0.21	0.66	0.00	0.32	0.86	0.00	3.72
Avail Cap(c_a), veh/h	294	1387	1447	472	2260	1008	207	0	178	514	0	229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.38	0.38	0.38	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	5.0	5.0	11.1	22.3	12.2	76.8	0.0	76.0	72.1	0.0	73.1
Incr Delay (d2), s/veh	34.9	0.5	0.5	0.1	1.4	0.2	12.6	0.0	3.8	7.5	0.0	1240.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.5	6.1	6.3	0.7	30.2	4.9	3.0	0.0	1.2	9.5	0.0	80.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.0	5.5	5.5	11.2	23.7	12.4	89.5	0.0	79.9	79.6	0.0	1313.7
LnGrp LOS	F	A	A	B	C	B	F	A	E	E	A	F
Approach Vol, veh/h		1082			2102			51			776	
Approach Delay, s/veh		25.5			22.4			86.6			892.3	
Approach LOS		C			C			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		130.4		19.4	23.1	107.2		10.3				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		102.4		23.1	18.1	78.8		18.0				
Max Q Clear Time (g_c+I1), s		12.1		13.7	17.6	66.1		5.1				
Green Ext Time (p_c), s		22.7		0.1	0.1	12.3		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			192.3									
HCM 6th LOS			F									

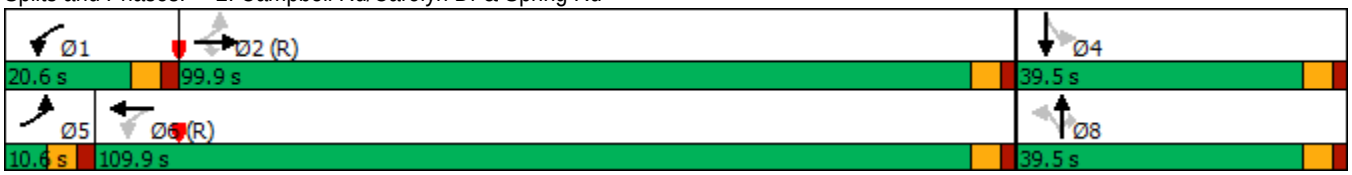
Notes

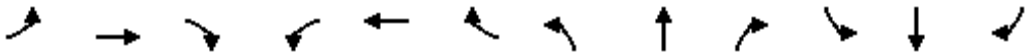
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	48	852	203	568	2032	168	19	231	27	4
Future Volume (vph)	48	852	203	568	2032	168	19	231	27	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	39.5	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	24.7%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	106.0	100.9	100.9	121.5	113.1		27.5	27.5		27.5
Actuated g/C Ratio	0.66	0.63	0.63	0.76	0.71		0.17	0.17		0.17
v/c Ratio	0.50	0.40	0.20	1.24	0.87		0.83	0.52		0.20
Control Delay	39.9	18.5	3.8	136.7	17.2		90.2	11.1		52.2
Queue Delay	0.0	0.0	0.0	0.4	26.9		0.0	0.0		0.0
Total Delay	39.9	18.5	3.8	137.1	44.1		90.2	11.1		52.2
LOS	D	B	A	F	D		F	B		D
Approach Delay		16.7			64.3		46.5			52.2
Approach LOS		B			E		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 49.8	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	852	203	568	2032	24	168	19	231	27	4	5
Future Volume (veh/h)	48	852	203	568	2032	24	168	19	231	27	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	897	214	598	2139	25	177	20	243	28	4	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	2249	1003	471	2516	29	264	25	269	76	11	7
Arrive On Green	0.03	0.63	0.63	0.13	0.93	0.93	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	3598	42	1303	147	1585	213	68	44
Grp Volume(v), veh/h	51	897	214	598	1054	1110	197	0	243	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1451	0	1585	324	0	0
Q Serve(g_s), s	1.6	19.8	9.2	15.1	31.5	32.1	0.0	0.0	24.1	3.8	0.0	0.0
Cycle Q Clear(g_c), s	1.6	19.8	9.2	15.1	31.5	32.1	20.9	0.0	24.1	24.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	186	2249	1003	471	1243	1303	289	0	269	95	0	0
V/C Ratio(X)	0.27	0.40	0.21	1.27	0.85	0.85	0.68	0.00	0.90	0.39	0.00	0.00
Avail Cap(c_a), veh/h	193	2249	1003	471	1243	1303	351	0	337	147	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.5	14.4	12.5	19.2	2.8	2.8	63.8	0.0	65.2	71.2	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.5	0.5	136.9	7.3	7.2	4.1	0.0	23.2	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	12.3	5.9	42.6	9.1	9.4	12.7	0.0	17.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	14.9	12.9	156.1	10.1	10.0	67.9	0.0	88.3	73.9	0.0	0.0
LnGrp LOS	B	B	B	F	B	A	E	A	F	E	A	A
Approach Vol, veh/h		1162			2762			440			37	
Approach Delay, s/veh		14.4			41.7			79.2			73.9	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	106.8		32.6	10.0	117.4		32.6				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	17.1	21.8		26.7	3.6	34.1		26.1				
Green Ext Time (p_c), s	0.0	43.2		0.0	0.0	69.9		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			38.5									
HCM 6th LOS			D									

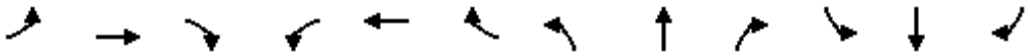
Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	66	1104	2	4	2403	12	0	65	0
Future Volume (vph)	66	1104	2	4	2403	12	0	65	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	134.6	133.6	133.6	130.1	125.1	13.3	13.3	13.3	13.3
Actuated g/C Ratio	0.84	0.84	0.84	0.81	0.78	0.08	0.08	0.08	0.08
v/c Ratio	0.67	0.39	0.00	0.01	0.95	0.12	0.06	0.59	0.20
Control Delay	62.6	3.1	0.0	2.5	35.6	67.6	0.4	90.0	8.4
Queue Delay	0.0	0.1	0.0	0.0	44.4	0.0	0.0	0.0	0.0
Total Delay	62.6	3.2	0.0	2.5	80.0	67.6	0.4	90.0	8.4
LOS	E	A	A	A	E	E	A	F	A
Approach Delay		6.5			79.8		31.6		61.7
Approach LOS		A			E		C		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 56.3	Intersection LOS: E
Intersection Capacity Utilization 88.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1104	2	4	2403	73	12	0	14	65	0	34
Future Volume (veh/h)	66	1104	2	4	2403	73	12	0	14	65	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	1162	2	4	2529	77	13	0	15	68	0	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	2917	1301	438	2803	85	113	0	112	132	0	112
Arrive On Green	0.06	1.00	1.00	0.01	0.80	0.80	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3521	107	1372	0	1585	1398	0	1585
Grp Volume(v), veh/h	69	1162	2	4	1270	1336	13	0	15	68	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1851	1372	0	1585	1398	0	1585
Q Serve(g_s), s	1.1	0.0	0.0	0.1	81.6	84.7	1.5	0.0	1.4	7.7	0.0	3.5
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.1	81.6	84.7	4.9	0.0	1.4	9.1	0.0	3.5
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	2917	1301	438	1415	1474	113	0	112	132	0	112
V/C Ratio(X)	0.53	0.40	0.00	0.01	0.90	0.91	0.12	0.00	0.13	0.52	0.00	0.32
Avail Cap(c_a), veh/h	133	2917	1301	485	1415	1474	281	0	307	304	0	307
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	3.2	11.6	12.0	73.0	0.0	69.7	74.0	0.0	70.7
Incr Delay (d2), s/veh	3.8	0.4	0.0	0.0	9.3	9.7	0.4	0.0	0.5	3.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	0.3	0.0	0.0	36.9	39.5	1.0	0.0	1.1	5.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	0.4	0.0	3.2	20.9	21.6	73.4	0.0	70.2	77.1	0.0	72.3
LnGrp LOS	D	A	A	A	C	C	E	A	E	E	A	E
Approach Vol, veh/h		1233			2610			28			104	
Approach Delay, s/veh		3.0			21.2			71.7			75.4	
Approach LOS		A			C			E			E	

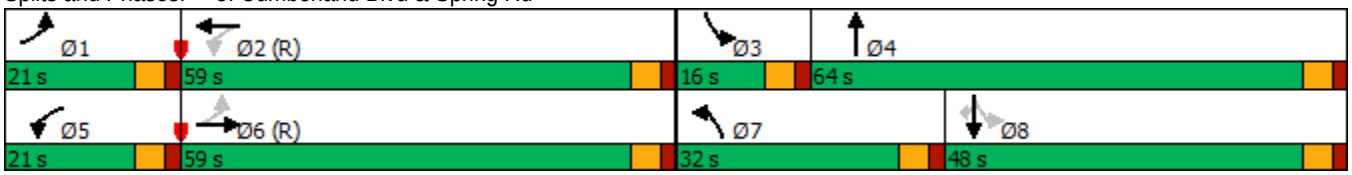
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	136.8		16.9	10.3	132.9		16.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		11.1	3.1	86.7		6.9				
Green Ext Time (p_c), s	0.0	68.7		0.3	0.0	20.7		0.1				

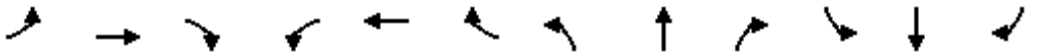
Intersection Summary												
HCM 6th Ctrl Delay			17.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	179	601	282	1579	592	483	102	565	516
Future Volume (vph)	179	601	282	1579	592	483	102	565	516
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	23.5
Total Split (s)	21.0	59.0	21.0	59.0	32.0	64.0	16.0	48.0	48.0
Total Split (%)	13.1%	36.9%	13.1%	36.9%	20.0%	40.0%	10.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	Min	C-Min	None	None	None	None	None
Act Effct Green (s)	68.4	53.5	70.8	54.9	26.5	58.5	51.6	41.8	41.8
Actuated g/C Ratio	0.43	0.33	0.44	0.34	0.17	0.37	0.32	0.26	0.26
v/c Ratio	0.89	0.51	0.95	1.05	1.10	0.70	0.51	0.64	0.98
Control Delay	101.3	28.2	70.9	87.0	126.7	39.5	35.7	56.1	71.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.3	28.2	70.9	87.0	126.7	39.5	35.7	56.1	71.2
LOS	F	C	E	F	F	D	D	E	E
Approach Delay		41.3		84.7		75.0		61.0	
Approach LOS		D		F		E		E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 69.6	Intersection LOS: E
Intersection Capacity Utilization 96.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	601	216	282	1579	150	592	483	376	102	565	516
Future Volume (veh/h)	179	601	216	282	1579	150	592	483	376	102	565	516
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	633	0	297	1662	158	623	508	396	107	595	543
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	2109		480	2067	196	572	555	432	174	664	296
Arrive On Green	0.07	0.41	0.00	0.10	0.44	0.44	0.17	0.29	0.29	0.06	0.19	0.19
Sat Flow, veh/h	1781	5274	0	1781	4743	450	3456	1900	1480	1781	3554	1585
Grp Volume(v), veh/h	188	633	0	297	1192	628	623	475	429	107	595	543
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1789	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	9.7	13.3	0.0	15.5	48.6	48.8	26.5	41.3	41.4	7.7	26.2	29.9
Cycle Q Clear(g_c), s	9.7	13.3	0.0	15.5	48.6	48.8	26.5	41.3	41.4	7.7	26.2	29.9
Prop In Lane	1.00		0.00	1.00		0.25	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	211	2109		480	1483	780	572	519	468	174	664	296
V/C Ratio(X)	0.89	0.30		0.62	0.80	0.81	1.09	0.92	0.92	0.62	0.90	1.83
Avail Cap(c_a), veh/h	251	2109		480	1483	780	572	650	586	182	944	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	31.5	0.0	24.0	39.2	39.2	66.8	54.8	54.8	50.5	63.5	65.0
Incr Delay (d2), s/veh	27.4	0.4	0.0	2.4	4.7	8.7	63.9	15.5	16.9	5.7	8.3	387.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	9.3	0.0	11.1	28.2	30.5	24.4	28.1	25.9	6.7	18.4	68.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	31.8	0.0	26.4	43.9	47.9	130.7	70.3	71.7	56.1	71.8	452.8
LnGrp LOS	E	C		C	D	D	F	E	E	E	E	F
Approach Vol, veh/h		821	A		2117			1527			1245	
Approach Delay, s/veh		38.9			42.6			95.3			236.6	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	75.2	15.2	52.2	21.0	71.6	32.0	35.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	15.5	53.5	10.5	58.5	15.5	53.5	26.5	42.5
Max Q Clear Time (g_c+I1), s	11.7	50.8	9.7	43.4	17.5	15.3	28.5	28.2
Green Ext Time (p_c), s	0.2	2.6	0.0	3.3	0.0	13.3	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	98.5
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	11	0	27	0	295	27	46	436	0
Future Vol, veh/h	0	0	0	11	0	27	0	295	27	46	436	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	150	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	13	0	33	0	360	33	56	532	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1021	1004	532	1004	1004	360	532	0	0	360	0	0
Stage 1	644	644	-	360	360	-	-	-	-	-	-	-
Stage 2	377	360	-	644	644	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	215	242	547	220	242	684	1036	-	-	1199	-	-
Stage 1	461	468	-	658	626	-	-	-	-	-	-	-
Stage 2	644	626	-	461	468	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	231	547	212	231	684	1036	-	-	1199	-	-
Mov Cap-2 Maneuver	197	231	-	212	231	-	-	-	-	-	-	-
Stage 1	461	446	-	658	626	-	-	-	-	-	-	-
Stage 2	613	626	-	439	446	-	-	-	-	-	-	-

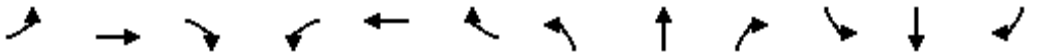
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	14.7	0	0.8
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1036	-	-	-	416	1199	-	-
HCM Lane V/C Ratio	-	-	-	-	0.111	0.047	-	-
HCM Control Delay (s)	0	-	-	0	14.7	8.2	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.4	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	108	935	2	1445	328	6	4	452	3	161
Future Volume (vph)	108	935	2	1445	328	6	4	452	3	161
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	17.0	69.0	52.0	52.0	52.0	51.0	51.0	51.0	51.0	51.0
Total Split (%)	14.2%	57.5%	43.3%	43.3%	43.3%	42.5%	42.5%	42.5%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	64.9	64.9	50.2	50.2	50.2		44.1		44.1	44.1
Actuated g/C Ratio	0.54	0.54	0.42	0.42	0.42		0.37		0.37	0.37
v/c Ratio	0.56	0.51	0.01	1.01	0.41		0.02		0.96	0.24
Control Delay	29.5	18.9	22.5	60.4	5.9		19.9		68.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	29.5	18.9	22.5	60.4	5.9		19.9		68.4	4.6
LOS	C	B	C	E	A		B		E	A
Approach Delay		20.0		50.3			19.9		51.7	
Approach LOS		B		D			B		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 41.2	Intersection LOS: D
Intersection Capacity Utilization 91.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	935	5	2	1445	328	6	4	3	452	3	161
Future Volume (veh/h)	108	935	5	2	1445	328	6	4	3	452	3	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	964	5	2	1490	0	6	4	3	466	3	166
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	1918	10	268	1541		44	27	8	386	2	601
Arrive On Green	0.05	0.53	0.53	0.43	0.43	0.00	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3625	19	580	3554	1585	0	71	21	861	6	1585
Grp Volume(v), veh/h	111	473	496	2	1490	0	13	0	0	469	0	166
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	580	1777	1585	92	0	0	867	0	1585
Q Serve(g_s), s	4.0	20.5	20.5	0.3	49.1	0.0	0.0	0.0	0.0	0.0	0.0	8.7
Cycle Q Clear(g_c), s	4.0	20.5	20.5	9.3	49.1	0.0	45.5	0.0	0.0	45.5	0.0	8.7
Prop In Lane	1.00		0.01	1.00		1.00	0.46		0.23	0.99		1.00
Lane Grp Cap(c), veh/h	157	940	988	268	1541		79	0	0	388	0	601
V/C Ratio(X)	0.71	0.50	0.50	0.01	0.97		0.17	0.00	0.00	1.21	0.00	0.28
Avail Cap(c_a), veh/h	239	940	988	268	1541		79	0	0	388	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	18.1	18.1	24.8	33.1	0.0	31.1	0.0	0.0	40.8	0.0	25.8
Incr Delay (d2), s/veh	5.7	1.9	1.8	0.1	16.3	0.0	1.0	0.0	0.0	115.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	13.0	13.5	0.1	31.0	0.0	0.5	0.0	0.0	36.3	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	20.0	19.9	24.8	49.4	0.0	32.0	0.0	0.0	156.0	0.0	26.1
LnGrp LOS	C	C	B	C	D		C	A	A	F	A	C
Approach Vol, veh/h		1080			1492	A		13			635	
Approach Delay, s/veh		21.4			49.4			32.0			122.0	
Approach LOS		C			D			C			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.5	57.5		51.0		69.0		51.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	11.5	46.5		45.5		63.5		45.5				
Max Q Clear Time (g_c+I1), s	6.0	51.1		47.5		22.5		47.5				
Green Ext Time (p_c), s	0.1	0.0		0.0		29.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			54.3									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	14	311	11	32	475
Future Vol, veh/h	6	14	311	11	32	475
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	15	338	12	35	516

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	924	338	0	0	350	0
Stage 1	338	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	299	704	-	-	1209	-
Stage 1	722	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	290	704	-	-	1209	-
Mov Cap-2 Maneuver	290	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	493	1209	-
HCM Lane V/C Ratio	-	-	0.044	0.029	-
HCM Control Delay (s)	-	-	12.6	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1161	11	0	2449	0	12
Future Vol, veh/h	1161	11	0	2449	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1262	12	0	2662	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	631
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	0	-	0	363
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	363
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

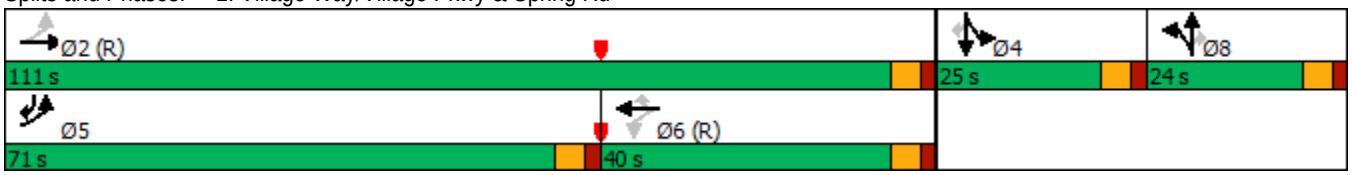
Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.3
HCM LOS			C

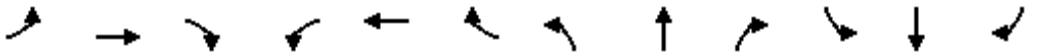
Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	363	-	-
HCM Lane V/C Ratio	0.036	-	-
HCM Control Delay (s)	15.3	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	625	1679	7	431	107	6	23	85	5	231
Future Volume (vph)	625	1679	7	431	107	6	23	85	5	231
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		6		8		4	4	5
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	5
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	10.5
Total Split (s)	71.0	111.0	40.0	40.0	40.0	24.0	24.0	25.0	25.0	71.0
Total Split (%)	44.4%	69.4%	25.0%	25.0%	25.0%	15.0%	15.0%	15.6%	15.6%	44.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					Lead
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	125.7	125.7	83.8	83.8	83.8	7.4	7.4	12.7	12.7	50.1
Actuated g/C Ratio	0.79	0.79	0.52	0.52	0.52	0.05	0.05	0.08	0.08	0.31
v/c Ratio	0.74	0.61	0.05	0.23	0.12	0.23	0.14	0.58	0.57	0.22
Control Delay	12.5	9.2	31.6	22.7	10.9	79.5	1.9	87.6	25.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	9.2	31.6	22.7	10.9	79.5	1.9	87.6	25.6	3.4
LOS	B	A	C	C	B	E	A	F	C	A
Approach Delay		10.1		20.5		37.0			31.9	
Approach LOS		B		C		D			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	625	1679	2	7	431	107	13	6	23	85	5	231
Future Volume (veh/h)	625	1679	2	7	431	107	13	6	23	85	5	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	631	1696	2	7	435	108	13	6	23	59	0	265
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	811	3005	4	234	2325	1037	33	15	42	81	0	577
Arrive On Green	0.14	0.83	0.83	0.65	0.65	0.65	0.03	0.03	0.03	0.05	0.00	0.05
Sat Flow, veh/h	1781	3642	4	289	3554	1585	1237	571	1585	1781	0	3170
Grp Volume(v), veh/h	631	827	871	7	435	108	19	0	23	59	0	265
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	289	1777	1585	1808	0	1585	1781	0	1585
Q Serve(g_s), s	17.3	24.4	24.4	1.4	7.7	4.0	1.7	0.0	2.3	5.2	0.0	7.2
Cycle Q Clear(g_c), s	17.3	24.4	24.4	1.4	7.7	4.0	1.7	0.0	2.3	5.2	0.0	7.2
Prop In Lane	1.00		0.00	1.00		1.00	0.68		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	811	1466	1543	234	2325	1037	48	0	42	81	0	577
V/C Ratio(X)	0.78	0.56	0.56	0.03	0.19	0.10	0.40	0.00	0.55	0.73	0.00	0.46
Avail Cap(c_a), veh/h	1297	1466	1543	234	2325	1037	209	0	183	217	0	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	4.6	4.6	9.8	10.9	10.3	76.6	0.0	76.9	75.4	0.0	58.4
Incr Delay (d2), s/veh	1.6	1.6	1.5	0.2	0.2	0.2	5.3	0.0	10.7	11.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	11.6	12.0	0.2	5.4	2.6	1.5	0.0	1.9	4.8	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	6.2	6.1	10.0	11.1	10.5	81.9	0.0	87.7	87.3	0.0	59.0
LnGrp LOS	A	A	A	B	B	B	F	A	F	F	A	E
Approach Vol, veh/h		2329			550			42			324	
Approach Delay, s/veh		6.5			10.9			85.1			64.2	
Approach LOS		A			B			F			E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		137.5		12.7	27.4	110.2		9.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		105.5		19.5	65.5	34.5		18.5				
Max Q Clear Time (g_c+I1), s		26.4		7.2	19.3	9.7		3.7				
Green Ext Time (p_c), s		66.0		0.0	2.6	6.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

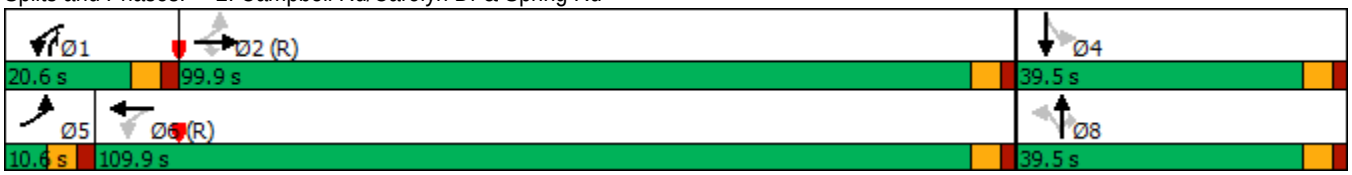
Notes

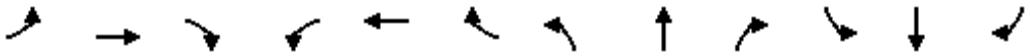
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	1621	58	100	595	58	6	188	60	10
Future Volume (vph)	25	1621	58	100	595	58	6	188	60	10
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2		1	6		8	1		4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	1	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	10.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	20.6	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	12.9%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead		
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	124.7	119.6	119.6	134.2	128.2		14.4	29.4		14.4
Actuated g/C Ratio	0.78	0.75	0.75	0.84	0.80		0.09	0.18		0.09
v/c Ratio	0.04	0.63	0.05	0.41	0.22		0.53	0.63		0.64
Control Delay	4.4	22.9	3.4	11.9	2.0		83.5	60.8		90.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	4.4	22.9	3.4	11.9	2.0		83.5	60.8		90.4
LOS	A	C	A	B	A		F	E		F
Approach Delay		21.9			3.4		66.6			90.4
Approach LOS		C			A		E			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 75.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1621	58	100	595	15	58	6	188	60	10	6
Future Volume (veh/h)	25	1621	58	100	595	15	58	6	188	60	10	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	1671	60	103	613	15	60	6	194	62	10	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	564	2602	1161	238	2629	64	223	20	261	136	21	10
Arrive On Green	0.02	0.73	0.73	0.01	0.24	0.24	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3545	87	1342	152	1585	713	156	72
Grp Volume(v), veh/h	26	1671	60	103	307	321	66	0	194	78	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1855	1494	0	1585	941	0	0
Q Serve(g_s), s	0.6	38.0	1.7	2.3	22.1	22.2	0.0	0.0	18.6	8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.6	38.0	1.7	2.3	22.1	22.2	6.3	0.0	18.6	15.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.91		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	564	2602	1161	238	1318	1376	243	0	261	166	0	0
V/C Ratio(X)	0.05	0.64	0.05	0.43	0.23	0.23	0.27	0.00	0.74	0.47	0.00	0.00
Avail Cap(c_a), veh/h	583	2602	1161	352	1318	1376	355	0	386	266	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	10.8	6.0	12.3	24.0	24.0	62.7	0.0	63.6	68.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.1	1.2	0.4	0.4	0.6	0.0	4.2	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	18.8	1.0	2.3	16.1	16.7	4.5	0.0	12.4	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	11.8	6.0	13.5	24.4	24.4	63.3	0.0	67.8	70.8	0.0	0.0
LnGrp LOS	A	B	A	B	C	C	E	A	E	E	A	A
Approach Vol, veh/h		1757			731			260			78	
Approach Delay, s/veh		11.5			22.8			66.7			70.8	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	122.6		26.9	8.9	124.2		26.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	4.3	40.0		17.0	2.6	24.2		20.6				
Green Ext Time (p_c), s	0.2	51.8		0.2	0.0	24.1		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		21.1
HCM 6th LOS		C

Notes

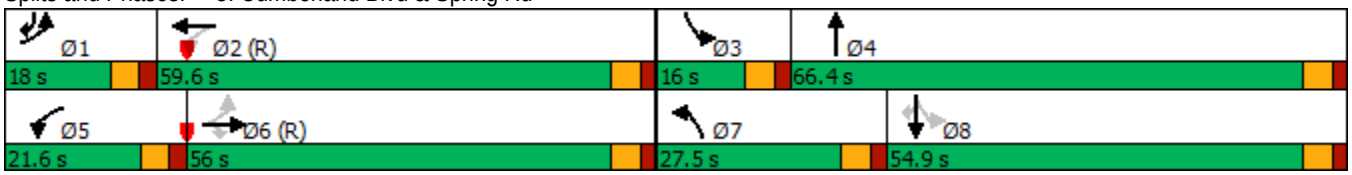
User approved ignoring U-Turning movement.

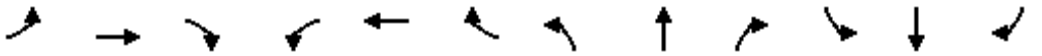
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	214	1567	318	160	270	169	485	97	368	127
Future Volume (vph)	214	1567	318	160	270	169	485	97	368	127
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2	7	4	3	8	1
Permitted Phases	6		6	2				8		8
Detector Phase	1	6	6	5	2	7	4	3	8	1
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	10.5
Total Split (s)	18.0	56.0	56.0	21.6	59.6	27.5	66.4	16.0	54.9	18.0
Total Split (%)	11.3%	35.0%	35.0%	13.5%	37.3%	17.2%	41.5%	10.0%	34.3%	11.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	72.9	59.2	59.2	74.1	59.8	13.4	54.6	60.9	51.0	70.3
Actuated g/C Ratio	0.46	0.37	0.37	0.46	0.37	0.08	0.34	0.38	0.32	0.44
v/c Ratio	0.41	0.85	0.41	0.80	0.16	0.60	0.93dr	0.64	0.33	0.17
Control Delay	35.8	60.3	14.9	65.8	33.9	79.2	50.4	49.8	41.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	60.3	14.9	65.8	33.9	79.2	50.4	49.8	41.9	4.2
LOS	D	E	B	E	C	E	D	D	D	A
Approach Delay		51.0			45.2		54.2		35.1	
Approach LOS		D			D		D		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 49.2	Intersection LOS: D
Intersection Capacity Utilization 96.4%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	1567	318	160	270	22	169	485	625	97	368	127
Future Volume (veh/h)	214	1567	318	160	270	22	169	485	625	97	368	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	1599	0	163	276	22	172	495	638	99	376	130
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	527	1857		195	1722	135	223	676	603	129	1291	700
Arrive On Green	0.08	0.36	0.00	0.07	0.36	0.36	0.06	0.38	0.38	0.05	0.36	0.36
Sat Flow, veh/h	1781	5106	1585	1781	4828	379	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	218	1599	0	163	193	105	172	495	638	99	376	130
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1802	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.5	46.4	0.0	9.2	6.2	6.4	7.8	38.3	60.9	5.6	12.1	8.0
Cycle Q Clear(g_c), s	12.5	46.4	0.0	9.2	6.2	6.4	7.8	38.3	60.9	5.6	12.1	8.0
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	527	1857		195	1214	643	223	676	603	129	1291	700
V/C Ratio(X)	0.41	0.86		0.83	0.16	0.16	0.77	0.73	1.06	0.77	0.29	0.19
Avail Cap(c_a), veh/h	527	1857		248	1214	643	475	676	603	162	1291	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	47.2	0.0	38.2	35.1	35.1	73.7	42.5	49.6	40.0	36.3	27.2
Incr Delay (d2), s/veh	0.5	5.5	0.0	17.5	0.3	0.5	5.6	4.1	52.8	15.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	27.5	0.0	8.5	4.7	5.2	6.6	24.4	43.7	5.4	9.1	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	52.7	0.0	55.6	35.4	35.7	79.3	46.6	102.3	55.8	36.4	27.3
LnGrp LOS	C	D		E	D	D	E	D	F	E	D	C
Approach Vol, veh/h		1817	A		461			1305			605	
Approach Delay, s/veh		50.0			42.6			78.2			37.6	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	62.6	13.0	66.4	16.9	63.7	15.8	63.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	12.5	54.1	10.5	60.9	16.1	50.5	22.0	49.4
Max Q Clear Time (g_c+I1), s	14.5	8.4	7.6	62.9	11.2	48.4	9.8	14.1
Green Ext Time (p_c), s	0.0	5.8	0.1	0.0	0.2	2.0	0.5	1.0

Intersection Summary	
HCM 6th Ctrl Delay	56.2
HCM 6th LOS	E

Notes

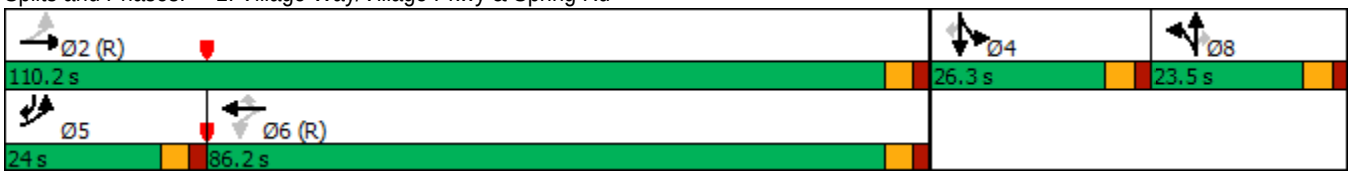
User approved ignoring U-Turning movement.

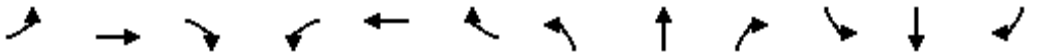
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	258	760	27	1788	204	24	14	246	12	491
Future Volume (vph)	258	760	27	1788	204	24	14	246	12	491
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	pm+ov
Protected Phases	5	2		6		8		4	4	5
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	5
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	10.5
Total Split (s)	24.0	110.2	86.2	86.2	86.2	23.5	23.5	26.3	26.3	24.0
Total Split (%)	15.0%	68.9%	53.9%	53.9%	53.9%	14.7%	14.7%	16.4%	16.4%	15.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					Lead
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	116.3	116.3	82.8	82.8	82.8	8.6	8.6	20.8	20.8	49.9
Actuated g/C Ratio	0.73	0.73	0.52	0.52	0.52	0.05	0.05	0.13	0.13	0.31
v/c Ratio	0.75	0.32	0.08	1.02	0.25	0.37	0.09	1.06	0.85	0.46
Control Delay	59.5	8.6	32.2	73.1	24.0	82.5	1.0	140.2	51.7	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	8.6	32.2	73.1	24.0	82.5	1.0	140.2	51.7	13.0
LOS	E	A	C	E	C	F	A	F	D	B
Approach Delay		21.2		67.6		58.5			64.4	
Approach LOS		C		E		E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 54.4	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	760	20	27	1788	204	11	24	14	246	12	491
Future Volume (veh/h)	258	760	20	27	1788	204	11	24	14	246	12	491
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	269	792	21	28	1862	212	11	25	15	175	0	606
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	2678	71	453	2158	963	17	38	47	196	0	715
Arrive On Green	0.12	0.76	0.76	0.61	0.61	0.61	0.03	0.03	0.03	0.11	0.00	0.11
Sat Flow, veh/h	1781	3537	94	671	3554	1585	563	1279	1585	1781	0	3170
Grp Volume(v), veh/h	269	398	415	28	1862	212	36	0	15	175	0	606
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	671	1777	1585	1842	0	1585	1781	0	1585
Q Serve(g_s), s	16.7	11.2	11.2	2.7	69.1	9.7	3.1	0.0	1.5	15.5	0.0	17.6
Cycle Q Clear(g_c), s	16.7	11.2	11.2	2.7	69.1	9.7	3.1	0.0	1.5	15.5	0.0	17.6
Prop In Lane	1.00		0.05	1.00		1.00	0.31		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1346	1404	453	2158	963	55	0	47	196	0	715
V/C Ratio(X)	0.94	0.30	0.30	0.06	0.86	0.22	0.66	0.00	0.32	0.89	0.00	0.85
Avail Cap(c_a), veh/h	286	1346	1404	453	2158	963	207	0	178	232	0	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.41	0.41	0.41	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.0	6.1	6.1	12.9	25.9	14.2	76.8	0.0	76.0	70.3	0.0	59.3
Incr Delay (d2), s/veh	37.5	0.6	0.5	0.1	2.1	0.2	12.6	0.0	3.8	29.6	0.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.7	7.1	7.4	0.8	33.3	5.4	3.0	0.0	1.2	13.4	0.0	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.6	6.6	6.6	13.0	28.0	14.5	89.5	0.0	79.9	99.9	0.0	67.5
LnGrp LOS	F	A	A	B	C	B	F	A	E	F	A	E
Approach Vol, veh/h		1082			2102			51			781	
Approach Delay, s/veh		27.5			26.4			86.6			74.8	
Approach LOS		C			C			F			E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		126.7		23.1	24.0	102.7		10.3				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		104.7		20.8	18.5	80.7		18.0				
Max Q Clear Time (g_c+I1), s		13.2		17.5	18.7	71.1		5.1				
Green Ext Time (p_c), s		22.7		0.1	0.0	9.3		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			36.9									
HCM 6th LOS			D									

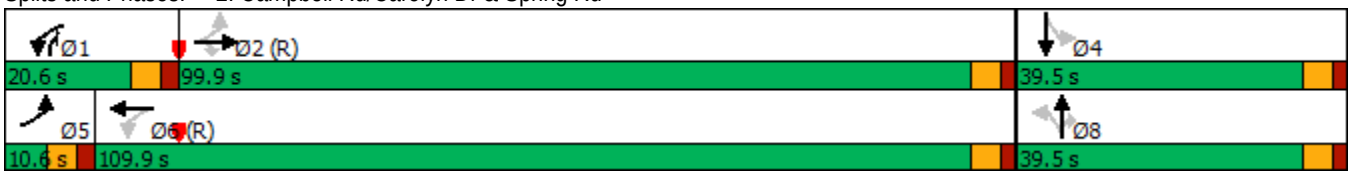
Notes

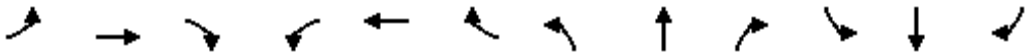
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	852	203	568	2032	168	19	231	27	4
Future Volume (vph)	25	852	203	568	2032	168	19	231	27	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2		1	6		8	1		4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	1	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	10.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	20.6	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	12.9%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead		
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	106.0	100.9	100.9	121.5	115.2		27.5	48.1		27.5
Actuated g/C Ratio	0.66	0.63	0.63	0.76	0.72		0.17	0.30		0.17
v/c Ratio	0.25	0.40	0.20	1.24	0.85		0.83	0.42		0.20
Control Delay	16.2	17.6	3.0	136.3	15.2		90.2	18.1		52.2
Queue Delay	0.0	0.0	0.0	0.4	18.2		0.0	0.0		0.0
Total Delay	16.2	17.6	3.0	136.8	33.4		90.2	18.1		52.2
LOS	B	B	A	F	C		F	B		D
Approach Delay		14.9			55.8		50.3			52.2
Approach LOS		B			E		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 44.6	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	852	203	568	2032	24	168	19	231	27	4	5
Future Volume (veh/h)	25	852	203	568	2032	24	168	19	231	27	4	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	897	214	598	2139	25	177	20	243	28	4	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	2257	1007	473	2547	30	261	25	415	73	11	7
Arrive On Green	0.02	0.64	0.64	0.13	0.94	0.94	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	3554	1585	1781	3598	42	1303	147	1585	202	67	42
Grp Volume(v), veh/h	26	897	214	598	1054	1110	197	0	243	37	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1451	0	1585	311	0	0
Q Serve(g_s), s	0.8	19.7	9.1	15.1	26.3	26.8	0.0	0.0	21.4	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.8	19.7	9.1	15.1	26.3	26.8	20.9	0.0	21.4	24.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	182	2257	1007	473	1258	1319	286	0	415	92	0	0
V/C Ratio(X)	0.14	0.40	0.21	1.26	0.84	0.84	0.69	0.00	0.59	0.40	0.00	0.00
Avail Cap(c_a), veh/h	201	2257	1007	473	1258	1319	351	0	486	146	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	14.3	12.3	19.1	2.1	2.1	64.2	0.0	51.5	71.6	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.5	0.4	135.3	6.8	6.6	4.3	0.0	1.3	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	12.0	5.8	42.4	8.1	8.4	12.7	0.0	13.5	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	14.7	12.7	154.3	8.9	8.8	68.4	0.0	52.8	74.5	0.0	0.0
LnGrp LOS	B	B	B	F	A	A	E	A	D	E	A	A
Approach Vol, veh/h		1137			2762			440			37	
Approach Delay, s/veh		14.3			40.3			59.8			74.5	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	107.1		32.3	8.9	118.8		32.3				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	17.1	21.7		26.8	2.8	28.8		23.4				
Green Ext Time (p_c), s	0.0	43.2		0.0	0.0	75.1		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		35.8	
HCM 6th LOS		D	

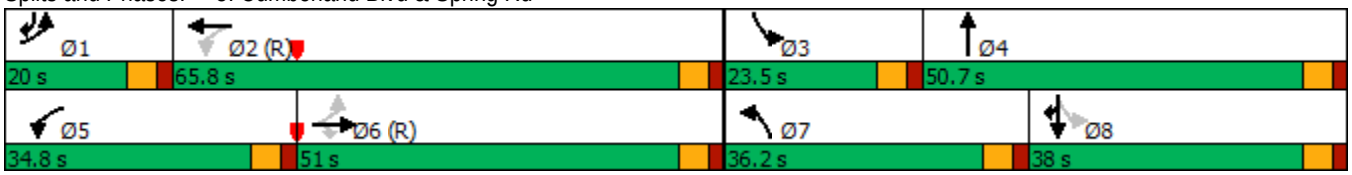
Notes

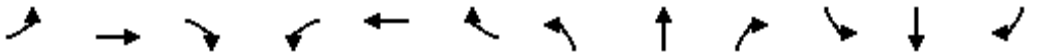
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	179	601	216	282	1579	592	483	102	565	516
Future Volume (vph)	179	601	216	282	1579	592	483	102	565	516
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	pt+ov
Protected Phases	1	6		5	2	7	4	3	8	8 1
Permitted Phases	6		6	2				8		
Detector Phase	1	6	6	5	2	7	4	3	8	8 1
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	
Total Split (s)	20.0	51.0	51.0	34.8	65.8	36.2	50.7	23.5	38.0	
Total Split (%)	12.5%	31.9%	31.9%	21.8%	41.1%	22.6%	31.7%	14.7%	23.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	Min	C-Min	None	None	None	None	
Act Effct Green (s)	67.3	53.1	53.1	79.3	60.5	30.5	51.5	44.5	32.7	52.5
Actuated g/C Ratio	0.42	0.33	0.33	0.50	0.38	0.19	0.32	0.28	0.20	0.33
v/c Ratio	0.92	0.38	0.34	0.68	0.96	0.95	0.79	0.55	0.82	0.90
Control Delay	98.2	29.5	4.6	32.5	60.5	88.9	48.5	41.3	71.4	57.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.2	29.5	4.6	32.5	60.5	88.9	48.5	41.3	71.4	57.1
LOS	F	C	A	C	E	F	D	D	E	E
Approach Delay		36.4			56.6		65.0		62.6	
Approach LOS		D			E		E		E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 56.4	Intersection LOS: E
Intersection Capacity Utilization 96.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	601	216	282	1579	150	592	483	376	102	565	516
Future Volume (veh/h)	179	601	216	282	1579	150	592	483	376	102	565	516
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	633	0	297	1662	158	623	508	396	107	595	543
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	1909		479	1954	185	660	589	459	191	643	411
Arrive On Green	0.08	0.37	0.00	0.12	0.41	0.41	0.19	0.31	0.31	0.06	0.18	0.18
Sat Flow, veh/h	1781	5106	1585	1781	4743	450	3456	1900	1480	1781	3554	1585
Grp Volume(v), veh/h	188	633	0	297	1192	628	623	475	429	107	595	543
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1789	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	10.5	14.2	0.0	15.9	50.7	50.9	28.5	40.3	40.3	7.7	26.4	29.0
Cycle Q Clear(g_c), s	10.5	14.2	0.0	15.9	50.7	50.9	28.5	40.3	40.3	7.7	26.4	29.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	209	1909		479	1402	737	660	551	497	191	643	411
V/C Ratio(X)	0.90	0.33		0.62	0.85	0.85	0.94	0.86	0.86	0.56	0.92	1.32
Avail Cap(c_a), veh/h	231	1909		598	1402	737	663	551	497	281	722	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	35.8	0.0	25.0	42.6	42.6	63.9	52.0	52.0	50.2	64.4	59.2
Incr Delay (d2), s/veh	32.1	0.5	0.0	1.3	6.6	11.9	22.2	13.2	14.4	2.6	16.7	160.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	9.9	0.0	11.0	29.7	32.4	20.8	27.2	25.1	6.5	19.4	50.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.7	36.3	0.0	26.3	49.2	54.6	86.1	65.2	66.4	52.8	81.1	219.3
LnGrp LOS	E	D		C	D	D	F	E	E	D	F	F
Approach Vol, veh/h		821	A		2117			1527			1245	
Approach Delay, s/veh		43.9			47.6			74.0			139.0	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	71.4	15.4	55.1	24.2	65.3	36.0	34.5
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	14.5	60.3	18.0	45.2	29.3	45.5	30.7	32.5
Max Q Clear Time (g_c+I1), s	12.5	52.9	9.7	42.3	17.9	16.2	30.5	28.4
Green Ext Time (p_c), s	0.1	7.2	0.2	1.2	0.8	11.8	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	74.1
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

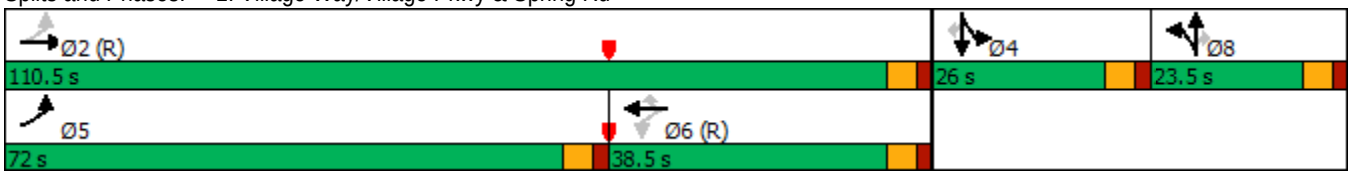
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

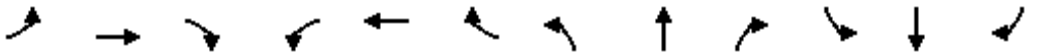
FUTURE "BUILD" ANALYSIS 2032

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	690	1854	8	475	118	7	25	94	6	255
Future Volume (vph)	690	1854	8	475	118	7	25	94	6	255
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	72.0	110.5	38.5	38.5	38.5	23.5	23.5	26.0	26.0	26.0
Total Split (%)	45.0%	69.1%	24.1%	24.1%	24.1%	14.7%	14.7%	16.3%	16.3%	16.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	127.4	127.4	72.0	72.0	72.0	7.5	7.5	10.8	10.8	10.8
Actuated g/C Ratio	0.80	0.80	0.45	0.45	0.45	0.05	0.05	0.07	0.07	0.07
v/c Ratio	0.77	0.67	0.08	0.30	0.16	0.25	0.16	0.44	0.45	0.74
Control Delay	14.8	9.7	44.5	34.4	15.7	80.0	2.0	82.5	82.6	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	9.7	44.5	34.4	15.7	80.0	2.0	82.5	82.6	20.9
LOS	B	A	D	C	B	E	A	F	F	C
Approach Delay		11.1		30.9		37.6			38.3	
Approach LOS		B		C		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 78.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	690	1854	2	8	475	118	14	7	25	94	6	255
Future Volume (veh/h)	690	1854	2	8	475	118	14	7	25	94	6	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	697	1873	2	8	480	119	14	7	25	99	0	258
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	800	3021	3	201	2275	1015	33	16	43	143	0	64
Arrive On Green	0.15	0.83	0.83	0.64	0.64	0.64	0.03	0.03	0.03	0.04	0.00	0.04
Sat Flow, veh/h	1781	3643	4	243	3554	1585	1207	603	1585	3563	0	1585
Grp Volume(v), veh/h	697	913	962	8	480	119	21	0	25	99	0	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	243	1777	1585	1810	0	1585	1781	0	1585
Q Serve(g_s), s	19.8	28.9	28.9	2.0	9.0	4.7	1.8	0.0	2.5	4.4	0.0	6.4
Cycle Q Clear(g_c), s	19.8	28.9	28.9	2.0	9.0	4.7	1.8	0.0	2.5	4.4	0.0	6.4
Prop In Lane	1.00		0.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	800	1474	1551	201	2275	1015	49	0	43	143	0	64
V/C Ratio(X)	0.87	0.62	0.62	0.04	0.21	0.12	0.43	0.00	0.58	0.69	0.00	4.04
Avail Cap(c_a), veh/h	1264	1474	1551	201	2275	1015	204	0	178	456	0	203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	4.8	4.8	10.7	12.0	11.2	76.6	0.0	76.9	75.8	0.0	76.8
Incr Delay (d2), s/veh	4.2	2.0	1.9	0.4	0.2	0.2	5.7	0.0	11.7	5.8	0.0	1406.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.9	13.1	13.6	0.2	6.3	3.0	1.7	0.0	2.1	3.8	0.0	42.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	6.8	6.7	11.1	12.2	11.4	82.3	0.0	88.6	81.6	0.0	1483.3
LnGrp LOS	B	A	A	B	B	B	F	A	F	F	A	F
Approach Vol, veh/h		2572			607			46			357	
Approach Delay, s/veh		8.0			12.0			85.8			1094.6	
Approach LOS		A			B			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		138.2		11.9	30.3	107.9		9.9				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		105.0		20.5	66.5	33.0		18.0				
Max Q Clear Time (g_c+I1), s		30.9		6.4	21.8	11.0		3.8				
Green Ext Time (p_c), s		67.3		0.1	3.0	6.9		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	118.0	
HCM 6th LOS	F	

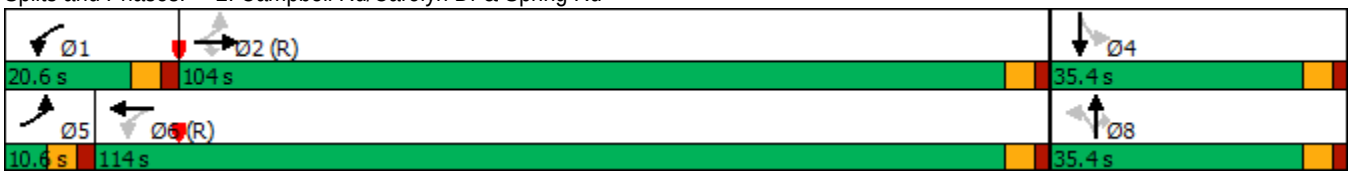
Notes

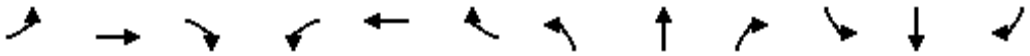
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	27	1790	64	109	657	63	7	206	66	11
Future Volume (vph)	27	1790	64	109	657	63	7	206	66	11
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	104.0	104.0	20.6	114.0	35.4	35.4	35.4	35.4	35.4
Total Split (%)	6.6%	65.0%	65.0%	12.9%	71.3%	22.1%	22.1%	22.1%	22.1%	22.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	121.1	116.0	116.0	132.3	126.0		16.7	16.7		16.7
Actuated g/C Ratio	0.76	0.72	0.72	0.83	0.79		0.10	0.10		0.10
v/c Ratio	0.05	0.72	0.06	0.51	0.25		0.51	0.79		0.63
Control Delay	6.3	28.6	4.4	26.6	2.2		78.2	52.4		85.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	6.3	28.6	4.4	26.6	2.2		78.2	52.4		85.8
LOS	A	C	A	C	A		E	D		F
Approach Delay		27.5			5.6		58.9			85.8
Approach LOS		C			A		E			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1790	64	109	657	17	63	7	206	66	11	7
Future Volume (veh/h)	27	1790	64	109	657	17	63	7	206	66	11	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	1845	66	112	677	18	65	7	212	68	11	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	2552	1138	197	2571	68	239	24	234	144	22	11
Arrive On Green	0.02	0.72	0.72	0.01	0.24	0.24	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3536	94	1329	160	1585	705	152	76
Grp Volume(v), veh/h	28	1845	66	112	340	355	72	0	212	86	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1853	1490	0	1585	933	0	0
Q Serve(g_s), s	0.7	48.7	2.0	2.6	24.8	24.9	0.0	0.0	21.1	9.7	0.0	0.0
Cycle Q Clear(g_c), s	0.7	48.7	2.0	2.6	24.8	24.9	6.8	0.0	21.1	16.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.90		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	513	2552	1138	197	1292	1347	263	0	234	178	0	0
V/C Ratio(X)	0.05	0.72	0.06	0.57	0.26	0.26	0.27	0.00	0.91	0.48	0.00	0.00
Avail Cap(c_a), veh/h	530	2552	1138	310	1292	1347	319	0	296	227	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.3	13.2	6.6	20.2	26.0	26.1	61.0	0.0	67.1	67.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.3	0.1	2.5	0.5	0.5	0.6	0.0	25.5	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	23.5	1.2	4.3	17.7	18.3	4.8	0.0	15.4	6.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	14.5	6.7	22.8	26.5	26.5	61.5	0.0	92.6	69.6	0.0	0.0
LnGrp LOS	A	B	A	C	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1939			807			284			86	
Approach Delay, s/veh		14.1			26.0			84.7			69.6	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	120.4		29.1	9.1	121.8		29.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	98.5		29.9	5.1	108.5		29.9				
Max Q Clear Time (g_c+I1), s	4.6	50.7		18.5	2.7	26.9		23.1				
Green Ext Time (p_c), s	0.2	46.7		0.2	0.0	28.0		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		25.2	
HCM 6th LOS		C	

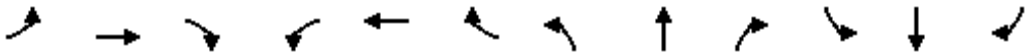
Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	28	2166	11	1	631	47	2	97	18
Future Volume (vph)	28	2166	11	1	631	47	2	97	18
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	129.4	128.4	128.4	126.0	122.0	18.5	18.5	18.5	18.5
Actuated g/C Ratio	0.81	0.80	0.80	0.79	0.76	0.12	0.12	0.12	0.12
v/c Ratio	0.05	0.82	0.01	0.01	0.26	0.33	0.36	0.75	0.28
Control Delay	3.6	10.6	0.0	3.0	3.4	68.9	28.4	98.3	26.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	10.7	0.0	3.0	3.4	68.9	28.4	98.3	26.2
LOS	A	B	A	A	A	E	C	F	C
Approach Delay		10.6			3.4		43.6		70.6
Approach LOS		B			A		D		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	2166	11	1	631	14	47	2	77	97	18	43
Future Volume (veh/h)	28	2166	11	1	631	14	47	2	77	97	18	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	2329	12	1	678	15	51	2	83	104	19	46
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	589	2680	1196	160	2604	58	187	5	219	167	69	166
Arrive On Green	0.03	1.00	1.00	0.00	0.73	0.73	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	79	1337	37	1553	1313	485	1174
Grp Volume(v), veh/h	30	2329	12	1	339	354	51	0	85	104	0	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1856	1337	0	1591	1313	0	1659
Q Serve(g_s), s	0.7	0.0	0.0	0.0	10.1	10.1	5.7	0.0	7.8	12.5	0.0	5.6
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.0	10.1	10.1	11.3	0.0	7.8	20.2	0.0	5.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.98	1.00		0.71
Lane Grp Cap(c), veh/h	589	2680	1196	160	1302	1360	187	0	225	167	0	234
V/C Ratio(X)	0.05	0.87	0.01	0.01	0.26	0.26	0.27	0.00	0.38	0.62	0.00	0.28
Avail Cap(c_a), veh/h	605	2680	1196	213	1302	1360	257	0	308	236	0	321
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	0.0	5.7	7.1	7.1	66.4	0.0	62.3	71.5	0.0	61.4
Incr Delay (d2), s/veh	0.0	4.2	0.0	0.0	0.5	0.5	0.8	0.0	1.0	3.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.8	0.0	0.0	6.6	6.9	3.6	0.0	5.9	7.9	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	4.2	0.0	5.7	7.6	7.5	67.2	0.0	63.4	75.3	0.0	62.0
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2371			694			136			169	
Approach Delay, s/veh		4.2			7.5			64.8			70.2	
Approach LOS		A			A			E			E	

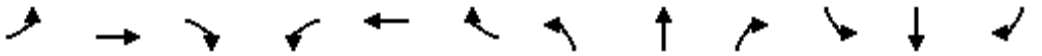
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	126.2		28.1	9.2	122.7		28.1				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.0	2.0		22.2	2.7	12.1		13.3				
Green Ext Time (p_c), s	0.0	104.7		0.4	0.0	29.0		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	236	1727	177	297	187	536	107	407	140
Future Volume (vph)	236	1727	177	297	187	536	107	407	140
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	23.5
Total Split (s)	40.0	70.0	25.0	55.0	20.0	45.0	20.0	45.0	45.0
Total Split (%)	25.0%	43.8%	15.6%	34.4%	12.5%	28.1%	12.5%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	85.5	68.8	82.5	67.3	13.3	42.2	52.5	40.7	40.7
Actuated g/C Ratio	0.53	0.43	0.52	0.42	0.08	0.26	0.33	0.25	0.25
v/c Ratio	0.40	0.99	0.85	0.15	0.67	1.26	0.62	0.46	0.28
Control Delay	22.0	61.7	73.8	28.8	83.1	163.1	50.3	52.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	61.7	73.8	28.8	83.1	163.1	50.3	52.6	8.2
LOS	C	E	E	C	F	F	D	D	A
Approach Delay		57.7		44.8		152.5		42.7	
Approach LOS		E		D		F		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 81.8	Intersection LOS: F
Intersection Capacity Utilization 112.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	1727	351	177	297	24	187	536	690	107	407	140
Future Volume (veh/h)	236	1727	351	177	297	24	187	536	690	107	407	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	1762	0	181	303	24	191	547	704	109	415	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	656	2502		224	2273	177	236	439	391	149	843	376
Arrive On Green	0.09	0.49	0.00	0.07	0.47	0.47	0.07	0.25	0.25	0.06	0.24	0.24
Sat Flow, veh/h	1781	5274	0	1781	4830	377	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	241	1762	0	181	212	115	191	547	704	109	415	143
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1803	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.1	43.0	0.0	8.4	5.6	5.8	8.7	39.5	39.5	7.3	16.1	12.1
Cycle Q Clear(g_c), s	11.1	43.0	0.0	8.4	5.6	5.8	8.7	39.5	39.5	7.3	16.1	12.1
Prop In Lane	1.00		0.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	656	2502		224	1602	848	236	439	391	149	843	376
V/C Ratio(X)	0.37	0.70		0.81	0.13	0.14	0.81	1.25	1.80	0.73	0.49	0.38
Avail Cap(c_a), veh/h	887	2502		322	1602	848	313	439	391	206	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	31.8	0.0	30.9	23.9	24.0	73.5	60.3	60.3	46.8	52.7	51.2
Incr Delay (d2), s/veh	0.3	1.7	0.0	9.4	0.2	0.3	11.0	129.0	369.7	7.9	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	24.4	0.0	7.2	4.1	4.6	7.6	48.4	87.2	6.5	11.7	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	33.5	0.0	40.3	24.1	24.3	84.5	189.2	429.9	54.7	53.2	51.8
LnGrp LOS	B	C		D	C	C	F	F	F	D	D	D
Approach Vol, veh/h		2003	A		508			1442			667	
Approach Delay, s/veh		31.7			29.9			292.9			53.1	
Approach LOS		C			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	80.8	14.9	45.0	16.2	83.9	16.4	43.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	34.5	49.5	14.5	39.5	19.5	64.5	14.5	39.5
Max Q Clear Time (g_c+I1), s	13.1	7.8	9.3	41.5	10.4	45.0	10.7	18.1
Green Ext Time (p_c), s	0.7	6.3	0.1	0.0	0.3	18.3	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	116.1
HCM 6th LOS	F

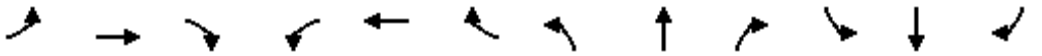
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	195	1846	2	1152	164	2	4	166	0	71
Future Volume (vph)	195	1846	2	1152	164	2	4	166	0	71
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	22.0	86.4	64.4	64.4	64.4	33.6	33.6	33.6	33.6	33.6
Total Split (%)	18.3%	72.0%	53.7%	53.7%	53.7%	28.0%	28.0%	28.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	88.9	88.9	72.7	72.7	72.7		20.1		20.1	20.1
Actuated g/C Ratio	0.74	0.74	0.61	0.61	0.61		0.17		0.17	0.17
v/c Ratio	0.58	0.74	0.02	0.56	0.17		0.02		0.74	0.23
Control Delay	12.6	12.1	15.0	17.0	2.6		35.6		65.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	12.6	12.1	15.0	17.0	2.6		35.6		65.2	10.3
LOS	B	B	B	B	A		D		E	B
Approach Delay		12.1		15.2			35.6		48.8	
Approach LOS		B		B			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1846	9	2	1152	164	2	4	1	166	0	71
Future Volume (veh/h)	195	1846	9	2	1152	164	2	4	1	166	0	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1923	9	2	1200	0	2	4	1	173	0	74
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	2445	11	130	2000		39	65	11	195	0	371
Arrive On Green	0.07	0.67	0.67	0.56	0.56	0.00	0.23	0.23	0.23	0.23	0.00	0.23
Sat Flow, veh/h	1781	3627	17	230	3554	1585	0	276	46	576	0	1585
Grp Volume(v), veh/h	203	941	991	2	1200	0	7	0	0	173	0	74
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	230	1777	1585	322	0	0	576	0	1585
Q Serve(g_s), s	5.5	44.0	44.2	0.7	26.8	0.0	0.0	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear(g_c), s	5.5	44.0	44.2	31.6	26.8	0.0	28.1	0.0	0.0	28.1	0.0	4.5
Prop In Lane	1.00		0.01	1.00		1.00	0.29		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	335	1198	1259	130	2000		114	0	0	195	0	371
V/C Ratio(X)	0.61	0.79	0.79	0.02	0.60		0.06	0.00	0.00	0.89	0.00	0.20
Avail Cap(c_a), veh/h	463	1198	1259	130	2000		114	0	0	195	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	13.5	13.6	29.2	17.3	0.0	37.6	0.0	0.0	49.0	0.0	36.9
Incr Delay (d2), s/veh	1.8	5.2	5.0	0.2	1.3	0.0	0.2	0.0	0.0	35.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	23.0	24.0	0.1	15.6	0.0	0.3	0.0	0.0	11.5	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	18.8	18.6	29.4	18.7	0.0	37.8	0.0	0.0	84.4	0.0	37.2
LnGrp LOS	B	B	B	C	B		D	A	A	F	A	D
Approach Vol, veh/h		2135			1202	A		7			247	
Approach Delay, s/veh		18.5			18.7			37.8			70.3	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.4	73.0		33.6		86.4		33.6				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	16.5	58.9		28.1		80.9		28.1				
Max Q Clear Time (g_c+I1), s	7.5	33.6		30.1		46.2		30.1				
Green Ext Time (p_c), s	0.4	22.5		0.0		34.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		22.1	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	24	325	3	10	120
Future Vol, veh/h	11	24	325	3	10	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	26	353	3	11	130

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	505	353	0	0	356	0
Stage 1	353	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	527	691	-	-	1203	-
Stage 1	711	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	522	691	-	-	1203	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	627	1203	-
HCM Lane V/C Ratio	-	-	0.061	0.009	-
HCM Control Delay (s)	-	-	11.1	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱		↑↑		↱
Traffic Vol, veh/h	2185	3	0	722	0	20
Future Vol, veh/h	2185	3	0	722	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2375	3	0	785	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	1188
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	0	-	0	155
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	155
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

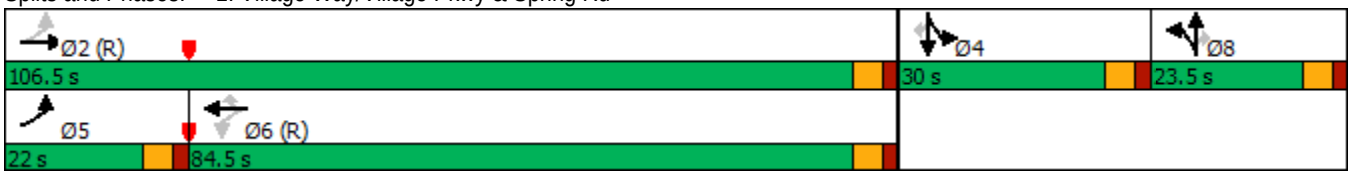
Approach	EB	WB	NB
HCM Control Delay, s	0	0	32
HCM LOS			D

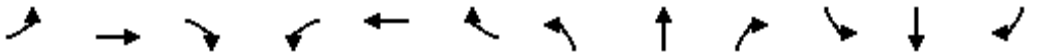
Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	155	-	-
HCM Lane V/C Ratio	0.14	-	-
HCM Control Delay (s)	32	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	0.5	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	285	838	30	1974	225	27	15	272	13	542
Future Volume (vph)	285	838	30	1974	225	27	15	272	13	542
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases	2		6		6		8			4
Detector Phase	5	2	6	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Total Split (s)	22.0	106.5	84.5	84.5	84.5	23.5	23.5	30.0	30.0	30.0
Total Split (%)	13.8%	66.6%	52.8%	52.8%	52.8%	14.7%	14.7%	18.8%	18.8%	18.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	112.2	112.2	79.0	79.0	79.0	9.1	9.1	24.5	24.5	24.5
Actuated g/C Ratio	0.70	0.70	0.49	0.49	0.49	0.06	0.06	0.15	0.15	0.15
v/c Ratio	0.84	0.36	0.11	1.18	0.28	0.39	0.09	0.57	0.58	1.12
Control Delay	68.8	10.6	33.4	130.3	25.6	83.0	1.0	72.6	72.8	103.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.8	10.6	33.4	130.3	25.6	83.0	1.0	72.6	72.8	103.8
LOS	E	B	C	F	C	F	A	E	E	F
Approach Delay		25.1		118.4		60.0			93.1	
Approach LOS		C		F		E			F	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 87.6	Intersection LOS: F
Intersection Capacity Utilization 106.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	838	22	30	1974	225	12	27	15	272	13	542
Future Volume (veh/h)	285	838	22	30	1974	225	12	27	15	272	13	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	297	873	23	31	2056	234	12	28	16	293	0	565
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	2723	72	438	2247	1002	18	42	52	337	0	150
Arrive On Green	0.10	0.77	0.77	0.63	0.63	0.63	0.03	0.03	0.03	0.09	0.00	0.09
Sat Flow, veh/h	1781	3537	93	621	3554	1585	553	1290	1585	3563	0	1585
Grp Volume(v), veh/h	297	439	457	31	2056	234	40	0	16	293	0	565
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	621	1777	1585	1843	0	1585	1781	0	1585
Q Serve(g_s), s	16.5	12.1	12.1	3.1	80.8	10.2	3.4	0.0	1.6	13.0	0.0	15.1
Cycle Q Clear(g_c), s	16.5	12.1	12.1	3.1	80.8	10.2	3.4	0.0	1.6	13.0	0.0	15.1
Prop In Lane	1.00		0.05	1.00		1.00	0.30		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	1368	1427	438	2247	1002	60	0	52	337	0	150
V/C Ratio(X)	1.19	0.32	0.32	0.07	0.91	0.23	0.67	0.00	0.31	0.87	0.00	3.77
Avail Cap(c_a), veh/h	249	1368	1427	438	2247	1002	207	0	178	546	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.15	0.15	0.15	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	5.6	5.6	11.4	25.7	12.7	76.5	0.0	75.6	71.5	0.0	72.4
Incr Delay (d2), s/veh	118.6	0.6	0.6	0.0	1.3	0.1	12.1	0.0	3.4	8.6	0.0	1263.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.1	7.4	7.7	0.8	35.2	4.7	3.3	0.0	1.3	10.4	0.0	89.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	176.7	6.2	6.2	11.4	26.9	12.8	88.6	0.0	79.0	80.0	0.0	1335.6
LnGrp LOS	F	A	A	B	C	B	F	A	E	F	A	F
Approach Vol, veh/h		1193			2321			56			858	
Approach Delay, s/veh		48.7			25.3			85.9			906.8	
Approach LOS		D			C			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		128.7		20.6	22.0	106.7		10.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		101.0		24.5	16.5	79.0		18.0				
Max Q Clear Time (g_c+I1), s		14.1		15.0	18.5	82.8		5.4				
Green Ext Time (p_c), s		26.5		0.1	0.0	0.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		203.2
HCM 6th LOS		F

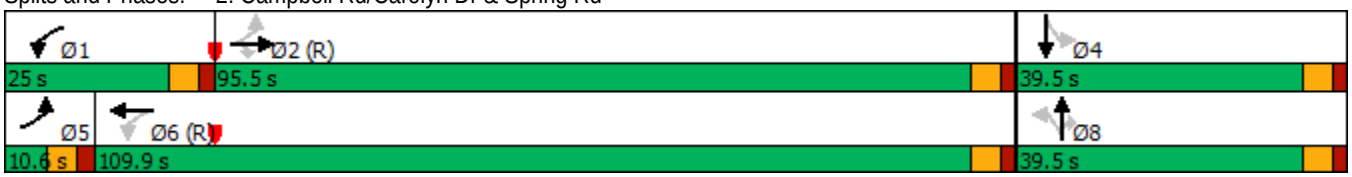
Notes

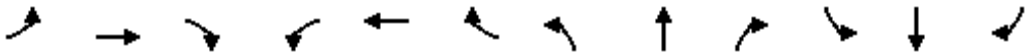
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	53	940	224	624	2245	185	21	254	30	4
Future Volume (vph)	53	940	224	624	2245	185	21	254	30	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	39.5	39.5	39.5
Total Split (s)	10.6	95.5	95.5	25.0	109.9	39.5	39.5	39.5	39.5	39.5
Total Split (%)	6.6%	59.7%	59.7%	15.6%	68.7%	24.7%	24.7%	24.7%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	99.9	94.8	94.8	119.8	111.3		29.2	29.2		29.2
Actuated g/C Ratio	0.62	0.59	0.59	0.75	0.70		0.18	0.18		0.18
v/c Ratio	0.55	0.47	0.23	1.42	0.97		0.86	0.55		0.24
Control Delay	44.1	21.8	3.6	216.5	20.0		92.8	13.5		51.1
Queue Delay	0.0	0.0	0.0	0.3	42.2		0.0	0.0		0.0
Total Delay	44.1	21.8	3.6	216.8	62.2		92.8	13.5		51.1
LOS	D	C	A	F	E		F	B		D
Approach Delay		19.4			95.5		49.1			51.1
Approach LOS		B			F		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 70.4	Intersection LOS: E
Intersection Capacity Utilization 94.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	940	224	624	2245	27	185	21	254	30	4	6
Future Volume (veh/h)	53	940	224	624	2245	27	185	21	254	30	4	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	989	236	657	2363	28	195	22	267	32	4	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	2100	937	459	2461	29	284	27	292	77	11	8
Arrive On Green	0.03	0.59	0.59	0.16	0.91	0.91	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3597	43	1311	148	1585	205	59	44
Grp Volume(v), veh/h	56	989	236	657	1165	1226	217	0	267	42	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1459	0	1585	308	0	0
Q Serve(g_s), s	2.0	25.2	11.4	19.5	73.7	76.1	0.0	0.0	26.4	4.6	0.0	0.0
Cycle Q Clear(g_c), s	2.0	25.2	11.4	19.5	73.7	76.1	22.8	0.0	26.4	27.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	127	2100	937	459	1216	1275	311	0	292	96	0	0
V/C Ratio(X)	0.44	0.47	0.25	1.43	0.96	0.96	0.70	0.00	0.92	0.44	0.00	0.00
Avail Cap(c_a), veh/h	132	2100	937	459	1216	1275	352	0	337	130	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.8	18.5	15.7	23.8	5.6	5.7	62.6	0.0	64.1	71.5	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.7	0.6	205.9	17.5	17.6	5.1	0.0	26.6	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	15.3	7.5	53.5	15.4	16.1	13.8	0.0	18.7	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	19.2	16.3	229.7	23.1	23.3	67.7	0.0	90.7	74.6	0.0	0.0
LnGrp LOS	C	B	B	F	C	C	E	A	F	E	A	A
Approach Vol, veh/h		1281			3048			484			42	
Approach Delay, s/veh		19.3			67.7			80.4			74.6	
Approach LOS		B			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	100.1		34.9	10.1	115.0		34.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	19.5	90.0		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	21.5	27.2		29.4	4.0	78.1		28.4				
Green Ext Time (p_c), s	0.0	43.9		0.0	0.0	26.3		1.0				

Intersection Summary		
HCM 6th Ctrl Delay		56.3
HCM 6th LOS		E

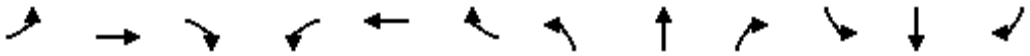
Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	73	1218	2	4	2651	13	0	72	0
Future Volume (vph)	73	1218	2	4	2651	13	0	72	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases	2		2	6		8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	34.5	34.5	10.5	26.5	35.5	35.5	36.5	36.5
Total Split (s)	10.6	113.0	113.0	10.5	112.9	36.5	36.5	36.5	36.5
Total Split (%)	6.6%	70.6%	70.6%	6.6%	70.6%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?									
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	133.7	132.7	132.7	129.2	124.2	14.2	14.2	14.2	14.2
Actuated g/C Ratio	0.84	0.83	0.83	0.81	0.78	0.09	0.09	0.09	0.09
v/c Ratio	0.75	0.44	0.00	0.01	1.05	0.12	0.06	0.62	0.21
Control Delay	73.1	3.4	0.0	2.8	60.0	66.6	0.5	90.4	9.9
Queue Delay	0.0	0.1	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Total Delay	73.1	3.5	0.0	2.8	81.0	66.6	0.5	90.4	9.9
LOS	E	A	A	A	F	E	A	F	A
Approach Delay		7.4			80.9		31.3		62.6
Approach LOS		A			F		C		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 159 (99%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 57.3	Intersection LOS: E
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 3: Spring Rd & Park Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1218	2	4	2651	81	13	0	15	72	0	38
Future Volume (veh/h)	73	1218	2	4	2651	81	13	0	15	72	0	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1282	2	4	2791	85	14	0	16	76	0	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	2894	1291	394	2779	84	118	0	123	140	0	123
Arrive On Green	0.06	1.00	1.00	0.01	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3521	107	1367	0	1585	1397	0	1585
Grp Volume(v), veh/h	77	1282	2	4	1401	1475	14	0	16	76	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1851	1367	0	1585	1397	0	1585
Q Serve(g_s), s	2.7	0.0	0.0	0.1	125.8	126.3	1.6	0.0	1.5	8.6	0.0	3.8
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.1	125.8	126.3	5.4	0.0	1.5	10.1	0.0	3.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	2894	1291	394	1402	1461	118	0	123	140	0	123
V/C Ratio(X)	0.78	0.44	0.00	0.01	1.00	1.01	0.12	0.00	0.13	0.54	0.00	0.33
Avail Cap(c_a), veh/h	102	2894	1291	440	1402	1461	277	0	307	303	0	307
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	0.0	0.0	3.4	16.8	16.9	72.4	0.0	68.8	73.5	0.0	69.9
Incr Delay (d2), s/veh	30.4	0.5	0.0	0.0	23.8	25.9	0.4	0.0	0.5	3.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	0.4	0.0	0.0	59.3	63.2	1.0	0.0	1.1	5.8	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.2	0.5	0.0	3.4	40.7	42.8	72.8	0.0	69.3	76.7	0.0	71.4
LnGrp LOS	F	A	A	A	D	F	E	A	E	E	A	E
Approach Vol, veh/h		1361			2880			30			116	
Approach Delay, s/veh		5.4			41.7			70.9			74.9	
Approach LOS		A			D			E			E	

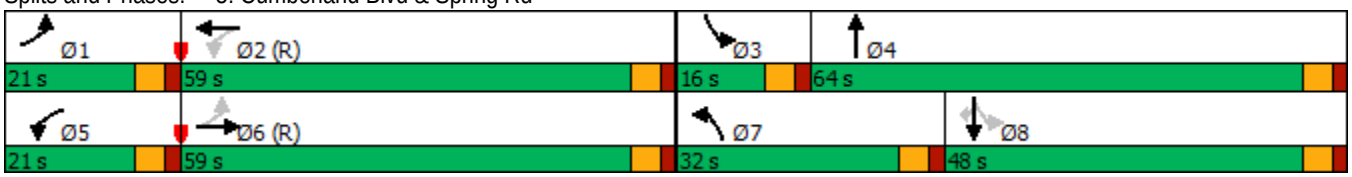
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	135.8		17.9	10.3	131.8		17.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	107.5		31.0	5.1	107.4		31.0				
Max Q Clear Time (g_c+I1), s	2.1	2.0		12.1	4.7	128.3		7.4				
Green Ext Time (p_c), s	0.0	77.4		0.3	0.0	0.0		0.1				

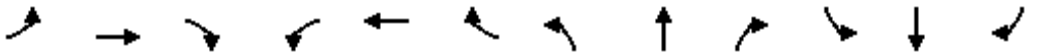
Intersection Summary			
HCM 6th Ctrl Delay		31.5	
HCM 6th LOS		C	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	198	662	312	1741	654	534	113	624	570
Future Volume (vph)	198	662	312	1741	654	534	113	624	570
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	pm+pt	NA	Perm
Protected Phases	1	6	5	2	7	4	3	8	
Permitted Phases	6		2				8		8
Detector Phase	1	6	5	2	7	4	3	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	23.5
Total Split (s)	21.0	59.0	21.0	59.0	32.0	64.0	16.0	48.0	48.0
Total Split (%)	13.1%	36.9%	13.1%	36.9%	20.0%	40.0%	10.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	None	C-Min	Min	C-Min	None	None	None	None	None
Act Effct Green (s)	69.0	53.5	69.0	53.5	26.5	59.0	52.5	42.5	42.5
Actuated g/C Ratio	0.43	0.33	0.43	0.33	0.17	0.37	0.33	0.27	0.27
v/c Ratio	0.95	0.57	1.15	1.19	1.21	0.76	0.64	0.70	1.07
Control Delay	112.1	27.5	131.5	137.8	164.6	42.6	43.4	57.7	96.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.1	27.5	131.5	137.8	164.6	42.6	43.4	57.7	96.3
LOS	F	C	F	F	F	D	D	E	F
Approach Delay		42.7		136.9		92.3		73.3	
Approach LOS		D		F		F		E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 95.5	Intersection LOS: F
Intersection Capacity Utilization 105.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	662	239	312	1741	166	654	534	415	113	624	570
Future Volume (veh/h)	198	662	239	312	1741	166	654	534	415	113	624	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	697	0	328	1833	175	688	562	437	119	657	600
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1956		431	1817	173	572	606	471	177	771	344
Arrive On Green	0.10	0.38	0.00	0.10	0.38	0.38	0.17	0.32	0.32	0.06	0.22	0.22
Sat Flow, veh/h	1781	5274	0	1781	4742	451	3456	1902	1479	1781	3554	1585
Grp Volume(v), veh/h	208	697	0	328	1313	695	688	525	474	119	657	600
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1702	1789	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	14.5	15.6	0.0	15.5	61.3	61.3	26.5	45.7	45.7	8.2	28.4	34.7
Cycle Q Clear(g_c), s	14.5	15.6	0.0	15.5	61.3	61.3	26.5	45.7	45.7	8.2	28.4	34.7
Prop In Lane	1.00		0.00	1.00		0.25	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	218	1956		431	1304	685	572	566	511	177	771	344
V/C Ratio(X)	0.96	0.36		0.76	1.01	1.01	1.20	0.93	0.93	0.67	0.85	1.74
Avail Cap(c_a), veh/h	218	1956		431	1304	685	572	650	587	180	944	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	35.3	0.0	30.8	49.4	49.4	66.8	52.7	52.7	47.7	60.2	62.6
Incr Delay (d2), s/veh	48.5	0.5	0.0	7.7	26.7	37.8	106.8	18.2	19.7	9.1	6.4	347.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.8	10.7	0.0	6.8	39.2	43.7	30.0	31.0	28.6	7.4	19.5	73.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	35.8	0.0	38.5	76.1	87.1	173.6	71.0	72.4	56.8	66.6	409.7
LnGrp LOS	F	D		D	F	F	F	E	E	E	E	F
Approach Vol, veh/h		905	A		2336			1687			1376	
Approach Delay, s/veh		50.7			74.1			113.2			215.3	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	66.8	15.7	56.5	21.0	66.8	32.0	40.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	15.5	53.5	10.5	58.5	15.5	53.5	26.5	42.5
Max Q Clear Time (g_c+I1), s	16.5	63.3	10.2	47.7	17.5	17.6	28.5	30.4
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	14.4	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	112.0
HCM 6th LOS	F

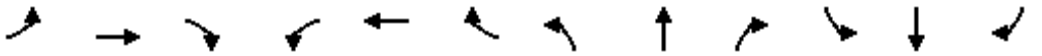
Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	119	1033	2	1596	362	7	4	499	3	178
Future Volume (vph)	119	1033	2	1596	362	7	4	499	3	178
Turn Type	pm+pt	NA	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	1	6		2			4		8	
Permitted Phases	6		2		2	4		8		8
Detector Phase	1	6	2	2	2	4	4	8	8	8
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	15.0	15.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	10.5	23.5	31.5	31.5	31.5	33.5	33.5	31.5	31.5	31.5
Total Split (s)	17.0	70.0	53.0	53.0	53.0	50.0	50.0	50.0	50.0	50.0
Total Split (%)	14.2%	58.3%	44.2%	44.2%	44.2%	41.7%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	64.5	64.5	49.4	49.4	49.4		44.5		44.5	44.5
Actuated g/C Ratio	0.54	0.54	0.41	0.41	0.41		0.37		0.37	0.37
v/c Ratio	0.61	0.56	0.01	1.13	0.45		0.02		1.04	0.26
Control Delay	32.2	19.8	22.5	101.1	7.5		20.7		90.0	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	32.2	19.8	22.5	101.1	7.5		20.7		90.0	4.6
LOS	C	B	C	F	A		C		F	A
Approach Delay		21.1		83.7			20.7		67.6	
Approach LOS		C		F			C		E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 61.6	Intersection LOS: E
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Atlanta Rd & Campbell Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	1033	6	2	1596	362	7	4	3	499	3	178
Future Volume (veh/h)	119	1033	6	2	1596	362	7	4	3	499	3	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	1065	6	2	1645	0	7	4	3	514	3	184
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1947	11	242	1558		45	24	6	406	2	588
Arrive On Green	0.05	0.54	0.54	0.44	0.44	0.00	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	3623	20	527	3554	1585	0	64	17	933	5	1585
Grp Volume(v), veh/h	123	522	549	2	1645	0	14	0	0	517	0	184
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	527	1777	1585	81	0	0	938	0	1585
Q Serve(g_s), s	4.4	23.1	23.1	0.3	52.6	0.0	0.0	0.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	4.4	23.1	23.1	11.5	52.6	0.0	44.5	0.0	0.0	44.5	0.0	9.9
Prop In Lane	1.00		0.01	1.00		1.00	0.50		0.21	0.99		1.00
Lane Grp Cap(c), veh/h	155	955	1003	242	1558		75	0	0	408	0	588
V/C Ratio(X)	0.79	0.55	0.55	0.01	1.06		0.19	0.00	0.00	1.27	0.00	0.31
Avail Cap(c_a), veh/h	231	955	1003	242	1558		75	0	0	408	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	18.2	18.2	25.8	33.7	0.0	31.5	0.0	0.0	41.0	0.0	26.9
Incr Delay (d2), s/veh	10.7	2.2	2.1	0.1	39.2	0.0	1.2	0.0	0.0	138.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	14.4	14.9	0.1	40.0	0.0	0.5	0.0	0.0	42.4	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	20.4	20.3	25.9	72.9	0.0	32.6	0.0	0.0	179.8	0.0	27.2
LnGrp LOS	D	C	C	C	F		C	A	A	F	A	C
Approach Vol, veh/h		1194			1647	A		14			701	
Approach Delay, s/veh		22.3			72.9			32.6			139.7	
Approach LOS		C			E			C			F	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.9	58.1		50.0		70.0		50.0				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	11.5	47.5		44.5		64.5		44.5				
Max Q Clear Time (g_c+I1), s	6.4	54.6		46.5		25.1		46.5				
Green Ext Time (p_c), s	0.1	0.0		0.0		30.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		68.9	
HCM 6th LOS		E	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	14	344	11	32	525
Future Vol, veh/h	6	14	344	11	32	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	100	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	15	374	12	35	571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1015	374	0	0	386	0
Stage 1	374	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	264	672	-	-	1172	-
Stage 1	696	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	672	-	-	1172	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	452	1172	-
HCM Lane V/C Ratio	-	-	0.048	0.03	-
HCM Control Delay (s)	-	-	13.4	8.2	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1282	11	0	2702	0	12
Future Vol, veh/h	1282	11	0	2702	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1393	12	0	2937	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	697
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	0	-	0	329
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	329
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

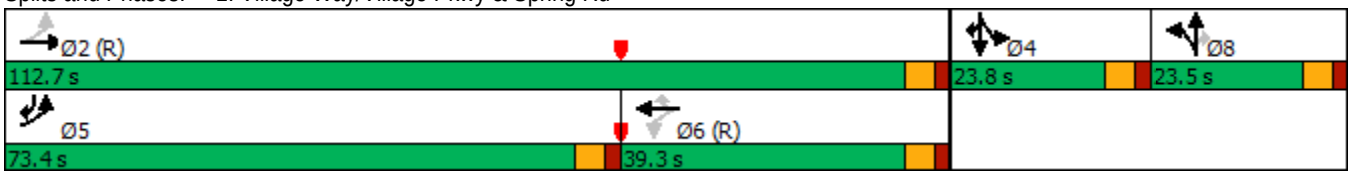
Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.4
HCM LOS			C

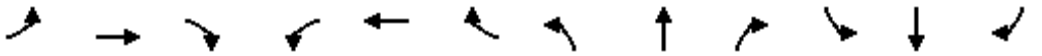
Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	329	-	-
HCM Lane V/C Ratio	0.04	-	-
HCM Control Delay (s)	16.4	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	690	1854	8	475	118	7	25	94	6	255
Future Volume (vph)	690	1854	8	475	118	7	25	94	6	255
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	pt+ov
Protected Phases	5	2		6		8		4	4	4 5
Permitted Phases	2		6		6		8			
Detector Phase	5	2	6	6	6	8	8	4	4	4 5
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	
Total Split (s)	73.4	112.7	39.3	39.3	39.3	23.5	23.5	23.8	23.8	
Total Split (%)	45.9%	70.4%	24.6%	24.6%	24.6%	14.7%	14.7%	14.9%	14.9%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	
Act Effct Green (s)	124.9	124.9	69.6	69.6	69.6	7.5	7.5	13.3	13.3	64.2
Actuated g/C Ratio	0.78	0.78	0.44	0.44	0.44	0.05	0.05	0.08	0.08	0.40
v/c Ratio	0.79	0.68	0.08	0.31	0.16	0.25	0.16	0.61	0.59	0.20
Control Delay	16.6	11.0	46.2	32.5	16.4	80.0	2.0	88.2	25.1	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	11.0	46.2	32.5	16.4	80.0	2.0	88.2	25.1	2.3
LOS	B	B	D	C	B	E	A	F	C	A
Approach Delay		12.5		29.5		37.6			31.3	
Approach LOS		B		C		D			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	690	1854	2	8	475	118	14	7	25	94	6	255
Future Volume (veh/h)	690	1854	2	8	475	118	14	7	25	94	6	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	697	1873	2	8	480	119	14	7	25	65	0	294
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	796	2991	3	197	2226	993	33	16	43	87	0	662
Arrive On Green	0.16	0.82	0.82	0.63	0.63	0.63	0.03	0.03	0.03	0.05	0.00	0.05
Sat Flow, veh/h	1781	3643	4	243	3554	1585	1207	603	1585	1781	0	3170
Grp Volume(v), veh/h	697	913	962	8	480	119	21	0	25	65	0	294
Grp Sat Flow(s),veh/h/ln	1781	1777	1870	243	1777	1585	1810	0	1585	1781	0	1585
Q Serve(g_s), s	20.7	30.3	30.3	2.0	9.3	4.9	1.8	0.0	2.5	5.8	0.0	7.8
Cycle Q Clear(g_c), s	20.7	30.3	30.3	2.0	9.3	4.9	1.8	0.0	2.5	5.8	0.0	7.8
Prop In Lane	1.00		0.00	1.00		1.00	0.67		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	796	1459	1535	197	2226	993	49	0	43	87	0	662
V/C Ratio(X)	0.88	0.63	0.63	0.04	0.22	0.12	0.43	0.00	0.58	0.75	0.00	0.44
Avail Cap(c_a), veh/h	1266	1459	1535	197	2226	993	204	0	178	204	0	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	5.3	5.3	11.5	12.9	12.1	76.6	0.0	76.9	75.2	0.0	55.2
Incr Delay (d2), s/veh	4.4	2.0	1.9	0.4	0.2	0.2	5.7	0.0	11.7	12.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	14.1	14.6	0.2	6.6	3.1	1.7	0.0	2.1	5.2	0.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	7.3	7.2	11.9	13.1	12.3	82.3	0.0	88.6	87.3	0.0	55.6
LnGrp LOS	B	A	A	B	B	B	F	A	F	F	A	E
Approach Vol, veh/h		2572			607			46			359	
Approach Delay, s/veh		8.6			13.0			85.8			61.4	
Approach LOS		A			B			F			E	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		136.9		13.3	31.2	105.7		9.9				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		107.2		18.3	67.9	33.8		18.0				
Max Q Clear Time (g_c+I1), s		32.3		7.8	22.7	11.3		3.8				
Green Ext Time (p_c), s		67.9		0.0	3.0	7.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									

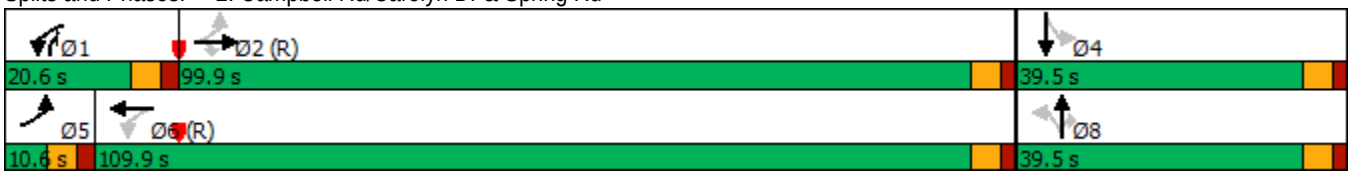
Notes

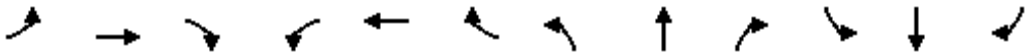
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	41	1790	64	109	657	63	7	206	66	11
Future Volume (vph)	41	1790	64	109	657	63	7	206	66	11
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2		1	6		8	1		4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	1	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	10.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	20.6	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	12.9%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead		
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	122.0	116.9	116.9	133.3	125.2		15.4	32.1		15.4
Actuated g/C Ratio	0.76	0.73	0.73	0.83	0.78		0.10	0.20		0.10
v/c Ratio	0.07	0.71	0.06	0.50	0.25		0.55	0.64		0.68
Control Delay	4.6	27.4	3.3	22.6	2.4		83.0	61.8		92.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	4.6	27.5	3.3	22.6	2.4		83.0	61.8		92.6
LOS	A	C	A	C	A		F	E		F
Approach Delay		26.1			5.2		67.1			92.6
Approach LOS		C			A		E			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1790	64	109	657	17	63	7	206	66	11	7
Future Volume (veh/h)	41	1790	64	109	657	17	63	7	206	66	11	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1845	66	112	677	18	65	7	212	68	11	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	520	2563	1143	199	2566	68	235	23	279	141	22	11
Arrive On Green	0.03	0.72	0.72	0.01	0.24	0.24	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3536	94	1330	161	1585	698	152	75
Grp Volume(v), veh/h	42	1845	66	112	340	355	72	0	212	86	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1853	1491	0	1585	925	0	0
Q Serve(g_s), s	1.0	48.2	1.9	2.6	24.9	24.9	0.0	0.0	20.4	9.8	0.0	0.0
Cycle Q Clear(g_c), s	1.0	48.2	1.9	2.6	24.9	24.9	6.8	0.0	20.4	16.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.90		1.00	0.79		0.08
Lane Grp Cap(c), veh/h	520	2563	1143	199	1289	1345	259	0	279	174	0	0
V/C Ratio(X)	0.08	0.72	0.06	0.56	0.26	0.26	0.28	0.00	0.76	0.49	0.00	0.00
Avail Cap(c_a), veh/h	529	2563	1143	312	1289	1345	356	0	386	259	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.2	12.9	6.5	19.8	26.1	26.1	61.4	0.0	62.7	68.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.1	2.5	0.5	0.5	0.6	0.0	5.7	2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	23.1	1.1	4.2	17.7	18.3	4.8	0.0	13.5	6.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.2	14.2	6.6	22.3	26.6	26.6	62.0	0.0	68.5	70.2	0.0	0.0
LnGrp LOS	A	B	A	C	C	C	E	A	E	E	A	A
Approach Vol, veh/h		1953			807			284			86	
Approach Delay, s/veh		13.8			26.0			66.8			70.2	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	120.9		28.7	9.7	121.6		28.7				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	4.6	50.2		18.6	3.0	26.9		22.4				
Green Ext Time (p_c), s	0.2	43.3		0.2	0.0	27.6		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		23.3	
HCM 6th LOS		C	

Notes

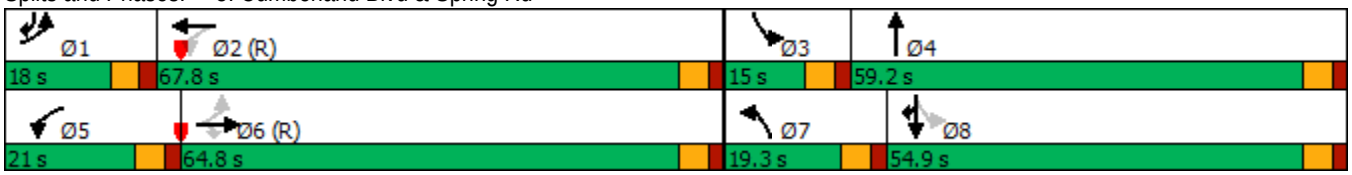
User approved ignoring U-Turning movement.

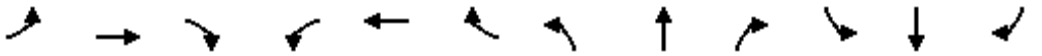
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	236	1727	351	177	297	187	536	107	407	140
Future Volume (vph)	236	1727	351	177	297	187	536	107	407	140
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	pt+ov
Protected Phases	1	6		5	2	7	4	3	8	8 1
Permitted Phases	6		6	2				8		
Detector Phase	1	6	6	5	2	7	4	3	8	8 1
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	23.5	23.5	10.5	23.5	10.5	23.5	10.5	23.5	
Total Split (s)	18.0	64.8	64.8	21.0	67.8	19.3	59.2	15.0	54.9	
Total Split (%)	11.3%	40.5%	40.5%	13.1%	42.4%	12.1%	37.0%	9.4%	34.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	
Act Effct Green (s)	72.6	60.1	60.1	77.0	62.3	12.9	53.9	59.6	50.3	68.3
Actuated g/C Ratio	0.45	0.38	0.38	0.48	0.39	0.08	0.34	0.37	0.31	0.43
v/c Ratio	0.46	0.92	0.46	0.87	0.17	0.69	1.07dr	0.73	0.37	0.19
Control Delay	35.4	64.2	17.7	76.8	31.3	84.9	75.8	60.1	44.0	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	35.4	64.2	17.7	76.8	31.3	84.9	75.8	60.1	44.0	4.6
LOS	D	E	B	E	C	F	E	E	D	A
Approach Delay		54.2			47.5		77.0		38.2	
Approach LOS		D			D		E		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 154 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 58.0	Intersection LOS: E
Intersection Capacity Utilization 104.5%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	1727	351	177	297	24	187	536	690	107	407	140
Future Volume (veh/h)	236	1727	351	177	297	24	187	536	690	107	407	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	1762	0	181	303	24	191	547	704	109	415	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	557	2030		203	1911	149	236	596	532	140	1139	632
Arrive On Green	0.08	0.40	0.00	0.08	0.40	0.40	0.07	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1781	5106	1585	1781	4830	377	3456	1777	1585	1781	3554	1585
Grp Volume(v), veh/h	241	1762	0	181	212	115	191	547	704	109	415	143
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1803	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.5	50.8	0.0	10.0	6.4	6.6	8.7	47.3	53.7	6.5	14.4	9.5
Cycle Q Clear(g_c), s	12.5	50.8	0.0	10.0	6.4	6.6	8.7	47.3	53.7	6.5	14.4	9.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	557	2030		203	1347	713	236	596	532	140	1139	632
V/C Ratio(X)	0.43	0.87		0.89	0.16	0.16	0.81	0.92	1.32	0.78	0.36	0.23
Avail Cap(c_a), veh/h	557	2030		239	1347	713	298	596	532	151	1139	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	44.3	0.0	39.1	31.2	31.2	73.5	51.0	53.2	41.7	41.8	31.8
Incr Delay (d2), s/veh	0.5	5.4	0.0	28.7	0.2	0.5	12.4	19.2	158.2	21.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	29.5	0.0	9.8	4.8	5.3	7.7	32.1	65.5	6.7	10.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	49.7	0.0	67.9	31.4	31.7	86.0	70.2	211.4	63.1	42.0	32.0
LnGrp LOS	C	D		E	C	C	F	E	F	E	D	C
Approach Vol, veh/h		2003	A		508			1442			667	
Approach Delay, s/veh		46.9			44.5			141.2			43.3	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	68.8	14.0	59.2	17.7	69.1	16.4	56.8
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	12.5	62.3	9.5	53.7	15.5	59.3	13.8	49.4
Max Q Clear Time (g_c+I1), s	14.5	8.6	8.5	55.7	12.0	52.8	10.7	16.4
Green Ext Time (p_c), s	0.0	6.6	0.0	0.0	0.2	6.3	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	75.6
HCM 6th LOS	E

Notes

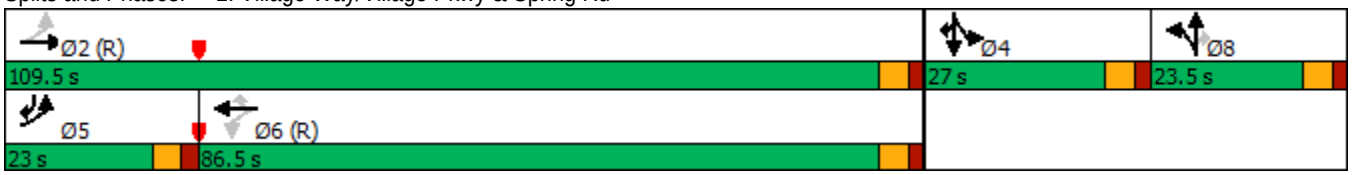
User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	285	838	30	1974	225	27	15	272	13	542
Future Volume (vph)	285	838	30	1974	225	27	15	272	13	542
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Split	NA	pt+ov
Protected Phases	5	2		6		8		4	4	4 5
Permitted Phases	2		6		6		8			
Detector Phase	5	2	6	6	6	8	8	4	4	4 5
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	
Total Split (s)	23.0	109.5	86.5	86.5	86.5	23.5	23.5	27.0	27.0	
Total Split (%)	14.4%	68.4%	54.1%	54.1%	54.1%	14.7%	14.7%	16.9%	16.9%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	None	None	None	None	
Act Effct Green (s)	115.2	115.2	81.0	81.0	81.0	9.1	9.1	21.5	21.5	51.3
Actuated g/C Ratio	0.72	0.72	0.51	0.51	0.51	0.06	0.06	0.13	0.13	0.32
v/c Ratio	0.81	0.35	0.10	1.15	0.28	0.39	0.09	1.13	0.91	0.50
Control Delay	65.2	9.4	31.8	118.9	24.6	83.0	1.0	159.8	61.3	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	9.4	31.8	118.9	24.6	83.0	1.0	159.8	61.3	16.3
LOS	E	A	C	F	C	F	A	F	E	B
Approach Delay		23.3		108.2		60.0			74.8	
Approach LOS		C		F		E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay: 78.2	Intersection LOS: E
Intersection Capacity Utilization 104.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Village Way/Village Pkwy & Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	838	22	30	1974	225	12	27	15	272	13	542
Future Volume (veh/h)	285	838	22	30	1974	225	12	27	15	272	13	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	297	873	23	31	2056	234	12	28	16	193	0	670
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	2634	69	418	2135	952	18	42	52	213	0	726
Arrive On Green	0.11	0.74	0.74	0.60	0.60	0.60	0.03	0.03	0.03	0.12	0.00	0.12
Sat Flow, veh/h	1781	3537	93	621	3554	1585	553	1290	1585	1781	0	3170
Grp Volume(v), veh/h	297	439	457	31	2056	234	40	0	16	193	0	670
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	621	1777	1585	1843	0	1585	1781	0	1585
Q Serve(g_s), s	17.5	13.4	13.4	3.4	87.7	11.1	3.4	0.0	1.6	17.1	0.0	19.2
Cycle Q Clear(g_c), s	17.5	13.4	13.4	3.4	87.7	11.1	3.4	0.0	1.6	17.1	0.0	19.2
Prop In Lane	1.00		0.05	1.00		1.00	0.30		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	1323	1380	418	2135	952	60	0	52	213	0	726
V/C Ratio(X)	1.20	0.33	0.33	0.07	0.96	0.25	0.67	0.00	0.31	0.90	0.00	0.92
Avail Cap(c_a), veh/h	248	1323	1380	418	2135	952	207	0	178	239	0	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.15	0.15	0.15	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	6.9	6.9	13.4	30.2	15.0	76.5	0.0	75.6	69.5	0.0	60.3
Incr Delay (d2), s/veh	120.5	0.7	0.6	0.1	2.8	0.1	12.1	0.0	3.4	31.9	0.0	16.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.3	8.4	8.6	0.8	39.2	5.2	3.3	0.0	1.3	14.7	0.0	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	180.1	7.6	7.6	13.5	33.1	15.0	88.6	0.0	79.0	101.4	0.0	76.2
LnGrp LOS	F	A	A	B	C	B	F	A	E	F	A	E
Approach Vol, veh/h		1193			2321			56			863	
Approach Delay, s/veh		50.5			31.0			85.9			81.9	
Approach LOS		D			C			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		124.6		24.7	23.0	101.6		10.7				
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s		104.0		21.5	17.5	81.0		18.0				
Max Q Clear Time (g_c+I1), s		15.4		19.1	19.5	89.7		5.4				
Green Ext Time (p_c), s		26.6		0.1	0.0	0.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			46.8									
HCM 6th LOS			D									

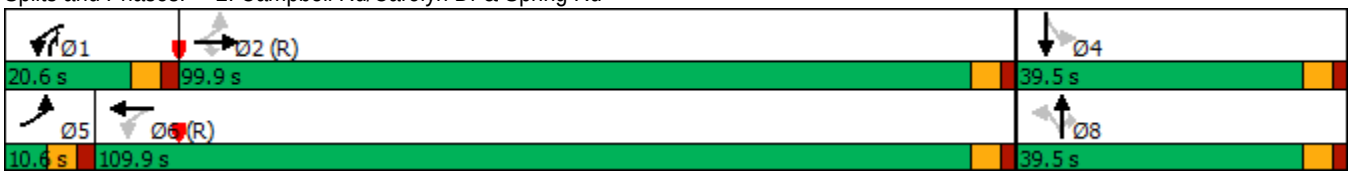
Notes

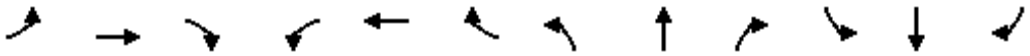
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	53	940	224	624	2245	185	21	254	30	4
Future Volume (vph)	53	940	224	624	2245	185	21	254	30	4
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2		1	6		8	1		4
Permitted Phases	2		2	6		8		8	4	
Detector Phase	5	2	2	1	6	8	8	1	4	4
Switch Phase										
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	10.5	30.5	30.5	10.5	23.5	39.5	39.5	10.5	39.5	39.5
Total Split (s)	10.6	99.9	99.9	20.6	109.9	39.5	39.5	20.6	39.5	39.5
Total Split (%)	6.6%	62.4%	62.4%	12.9%	68.7%	24.7%	24.7%	12.9%	24.7%	24.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead		
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	104.3	99.2	99.2	119.8	111.3		29.2	49.8		29.2
Actuated g/C Ratio	0.65	0.62	0.62	0.75	0.70		0.18	0.31		0.18
v/c Ratio	0.55	0.45	0.22	1.51	0.97		0.86	0.47		0.24
Control Delay	44.2	19.0	2.9	253.3	23.4		92.8	25.7		51.1
Queue Delay	0.0	0.0	0.0	0.0	42.3		0.0	0.0		0.0
Total Delay	44.2	19.0	2.9	253.3	65.6		92.8	25.7		51.1
LOS	D	B	A	F	E		F	C		D
Approach Delay		17.1			106.1		55.8			51.1
Approach LOS		B			F		E			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 32 (20%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay: 77.1	Intersection LOS: E
Intersection Capacity Utilization 94.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Campbell Rd/Carolyn Dr & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	940	224	624	2245	27	185	21	254	30	4	6
Future Volume (veh/h)	53	940	224	624	2245	27	185	21	254	30	4	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	989	236	657	2363	28	195	22	267	32	4	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	2198	980	428	2461	29	284	27	441	77	11	8
Arrive On Green	0.03	0.62	0.62	0.13	0.91	0.91	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3597	43	1311	148	1585	205	59	44
Grp Volume(v), veh/h	56	989	236	657	1165	1226	217	0	267	42	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1863	1459	0	1585	308	0	0
Q Serve(g_s), s	1.8	23.5	10.7	15.1	73.7	76.1	0.0	0.0	23.4	4.6	0.0	0.0
Cycle Q Clear(g_c), s	1.8	23.5	10.7	15.1	73.7	76.1	22.8	0.0	23.4	27.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	0.90		1.00	0.76		0.14
Lane Grp Cap(c), veh/h	127	2198	980	428	1216	1275	311	0	441	96	0	0
V/C Ratio(X)	0.44	0.45	0.24	1.54	0.96	0.96	0.70	0.00	0.61	0.44	0.00	0.00
Avail Cap(c_a), veh/h	132	2198	980	428	1216	1275	352	0	486	130	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.8	16.1	13.7	19.8	5.6	5.7	62.6	0.0	50.1	71.5	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.6	0.5	252.7	17.5	17.6	5.1	0.0	1.8	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	14.0	6.8	58.7	15.4	16.1	13.8	0.0	14.6	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	16.7	14.2	272.5	23.1	23.3	67.7	0.0	51.9	74.6	0.0	0.0
LnGrp LOS	C	B	B	F	C	C	E	A	D	E	A	A
Approach Vol, veh/h		1281			3048			484			42	
Approach Delay, s/veh		17.0			77.0			59.0			74.6	
Approach LOS		B			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.6	104.5		34.9	10.1	115.0		34.9				
Change Period (Y+Rc), s	5.5	5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	15.1	94.4		34.0	5.1	104.4		34.0				
Max Q Clear Time (g_c+I1), s	17.1	25.5		29.4	3.8	78.1		25.4				
Green Ext Time (p_c), s	0.0	46.8		0.0	0.0	26.3		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		59.3	
HCM 6th LOS		E	

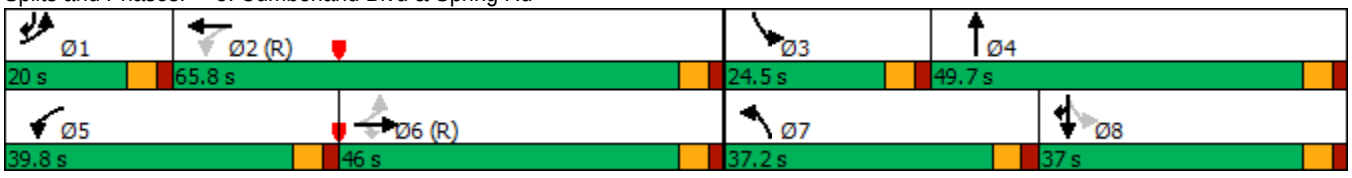
Notes

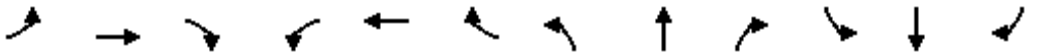
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	198	662	239	312	1741	654	534	113	624	570
Future Volume (vph)	198	662	239	312	1741	654	534	113	624	570
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	pm+pt	NA	pt+ov
Protected Phases	1	6		5	2	7	4	3	8	8 1
Permitted Phases	6		6	2				8		
Detector Phase	1	6	6	5	2	7	4	3	8	8 1
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	23.5	23.5	23.5	23.5	10.5	23.5	23.5	23.5	
Total Split (s)	20.0	46.0	46.0	39.8	65.8	37.2	49.7	24.5	37.0	
Total Split (%)	12.5%	28.8%	28.8%	24.9%	41.1%	23.3%	31.1%	15.3%	23.1%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?										
Recall Mode	None	C-Min	C-Min	Min	C-Min	None	None	None	None	
Act Effct Green (s)	65.2	50.7	50.7	79.6	60.3	31.7	50.6	44.1	31.5	51.5
Actuated g/C Ratio	0.41	0.32	0.32	0.50	0.38	0.20	0.32	0.28	0.20	0.32
v/c Ratio	1.01	0.43	0.37	0.76	1.06	1.01	0.89	0.64	0.94	1.01
Control Delay	114.2	31.5	4.9	36.7	85.1	99.8	56.0	50.5	85.7	79.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.2	31.5	4.9	36.7	85.1	99.8	56.0	50.5	85.7	79.6
LOS	F	C	A	D	F	F	E	D	F	E
Approach Delay		40.6			78.3		73.9		80.0	
Approach LOS		D			E		E		E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 77 (48%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 70.9	Intersection LOS: E
Intersection Capacity Utilization 105.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 5: Cumberland Blvd & Spring Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	662	239	312	1741	166	654	534	415	113	624	570
Future Volume (veh/h)	198	662	239	312	1741	166	654	534	415	113	624	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	697	0	328	1833	175	688	562	437	119	657	600
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	1703		457	1794	171	685	622	484	189	695	454
Arrive On Green	0.09	0.33	0.00	0.14	0.38	0.38	0.20	0.33	0.33	0.07	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	4742	451	3456	1902	1479	1781	3554	1585
Grp Volume(v), veh/h	208	697	0	328	1313	695	688	525	474	119	657	600
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1789	1728	1777	1604	1781	1777	1585
Q Serve(g_s), s	14.5	16.9	0.0	18.7	60.5	60.5	31.7	45.2	45.2	8.5	29.2	31.3
Cycle Q Clear(g_c), s	14.5	16.9	0.0	18.7	60.5	60.5	31.7	45.2	45.2	8.5	29.2	31.3
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.92	1.00		1.00
Lane Grp Cap(c), veh/h	206	1703		457	1288	677	685	581	525	189	695	454
V/C Ratio(X)	1.01	0.41		0.72	1.02	1.03	1.00	0.90	0.90	0.63	0.95	1.32
Avail Cap(c_a), veh/h	206	1703		598	1288	677	685	581	525	282	700	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	41.1	0.0	28.4	49.7	49.7	64.2	51.4	51.4	49.0	63.5	57.1
Incr Delay (d2), s/veh	64.6	0.7	0.0	2.9	30.2	41.5	35.6	17.5	19.0	3.4	21.6	160.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.8	11.5	0.0	12.9	39.9	44.4	24.1	30.6	28.3	7.1	21.7	55.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.7	41.9	0.0	31.2	80.0	91.2	99.7	68.9	70.4	52.4	85.2	217.2
LnGrp LOS	F	D		C	F	F	F	E	E	D	F	F
Approach Vol, veh/h		905	A		2336			1687			1376	
Approach Delay, s/veh		58.8			76.5			81.9			139.9	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	66.0	16.1	57.8	27.2	58.9	37.2	36.8
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	14.5	60.3	19.0	44.2	34.3	40.5	31.7	31.5
Max Q Clear Time (g_c+I1), s	16.5	62.5	10.5	47.2	20.7	18.9	33.7	31.2
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.9	10.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	89.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

TRAFFIC VOLUME WORKSHEETS

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

1. Spring Rd @ Village Pkwy

A.M. Peak Hour

	Village Way Northbound					Village Pkwy Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	12	6	22	40	0	80	5	218	303	0	589	1580	2	2171	0	7	396	101	504
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	13	6	23	42	0	85	5	231	321	0	625	1676	2	2303	0	7	420	107	534
No-Build 2032 Volumes:	0	14	7	25	46	0	94	6	255	355	0	690	1851	2	2543	0	8	464	118	590
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	11	0	11
Build 2022 Volumes:	0	13	6	23	42	0	85	5	231	321	0	625	1679	2	2306	0	7	431	107	545
Build 2032 Volumes:	0	14	7	25	46	0	94	6	255	355	0	690	1854	2	2546	0	8	475	118	601

P.M. Peak Hour

	Village Way Northbound					Village Pkwy Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	10	23	13	46	0	232	11	463	706	0	243	706	19	968	0	25	1680	192	1897
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	11	24	14	49	0	246	12	491	749	0	258	749	20	1027	0	27	1782	204	2013
No-Build 2032 Volumes:	0	12	27	15	54	0	272	13	542	827	0	285	827	22	1134	0	30	1968	225	2223
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	6	0	6
Build 2022 Volumes:	0	11	24	14	49	0	246	12	491	749	0	258	760	20	1038	0	27	1788	204	2019
Build 2032 Volumes:	0	12	27	15	54	0	272	13	542	827	0	285	838	22	1145	0	30	1974	225	2229

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

2. Spring Rd @ Campbell Rd

A.M. Peak Hour

	Campbell Rd Northbound					Carolyn Dr Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	44	6	165	215	0	57	9	6	72	12	11	1525	55	1603	0	85	561	14	660
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	47	6	175	228	0	60	10	6	76	13	12	1618	58	1701	0	90	595	15	700
No-Build 2032 Volumes:	0	52	7	193	252	0	66	11	7	84	14	13	1787	64	1878	0	99	657	17	773
Total New Trips:	0	11	0	13	24	0	0	0	0	0	0	0	3	0	3	0	10	0	0	10
Build 2022 Volumes:	0	58	6	188	252	0	60	10	6	76	13	12	1621	58	1704	0	100	595	15	710
Build 2032 Volumes:	0	63	7	206	276	0	66	11	7	84	14	13	1790	64	1881	0	109	657	17	783

P.M. Peak Hour

	Campbell Rd Northbound					Carolyn Dr Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	153	18	210	381	0	25	4	5	34	22	24	793	191	1030	0	505	1915	23	2443
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	162	19	223	404	0	27	4	5	36	23	25	841	203	1092	0	536	2032	24	2592
No-Build 2032 Volumes:	0	179	21	246	446	0	30	4	6	40	25	28	929	224	1206	0	592	2245	27	2864
Total New Trips:	0	6	0	8	14	0	0	0	0	0	0	0	11	0	11	0	32	0	0	32
Build 2022 Volumes:	0	168	19	231	418	0	27	4	5	36	23	25	852	203	1103	0	568	2032	24	2624
Build 2032 Volumes:	0	185	21	254	460	0	30	4	6	40	25	28	940	224	1217	0	624	2245	27	2896

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

3. Spring Rd @ Park Rd

A.M. Peak Hour

	Argyle Elementary School Drwy					Park Rd					Spring Rd					Spring Rd				
	Northbound					**Southbound**					**Eastbound**					**Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	41	2	66	109	0	83	15	37	135	0	24	1820	9	1853	0	1	530	12	543
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	43	2	70	115	0	88	16	39	143	0	25	1931	10	1966	0	1	562	13	576
No-Build 2032 Volumes:	0	47	2	77	126	0	97	18	43	158	0	28	2133	11	2172	0	1	621	14	636
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33	0	0	10	0	10
Build 2022 Volumes:	0	43	2	70	115	0	88	16	39	143	0	25	1964	10	1999	0	1	572	13	586
Build 2032 Volumes:	0	47	2	77	126	0	97	18	43	158	0	28	2166	11	2205	0	1	631	14	646

P.M. Peak Hour

	Argyle Elementary School Drwy					Park Rd					Spring Rd					Spring Rd				
	Northbound					**Southbound**					**Eastbound**					**Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	11	0	13	24	0	61	0	32	93	0	62	1023	2	1087	0	4	2235	69	2308
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	12	0	14	26	0	65	0	34	99	0	66	1085	2	1153	0	4	2371	73	2448
No-Build 2032 Volumes:	0	13	0	15	28	0	72	0	38	110	0	73	1199	2	1274	0	4	2619	81	2704
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	19	0	19	0	0	32	0	32
Build 2022 Volumes:	0	12	0	14	26	0	65	0	34	99	0	66	1104	2	1172	0	4	2403	73	2480
Build 2032 Volumes:	0	13	0	15	28	0	72	0	38	110	0	73	1218	2	1293	0	4	2651	81	2736

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

5. Spring Rd @ Cumberland Blvd

A.M. Peak Hour

	Cumberland Blvd Northbound					Cumberland Blvd Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	159	457	589	1205	0	91	347	120	558	0	202	1446	300	1948	19	132	245	21	417
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	169	485	625	1279	0	97	368	127	592	0	214	1534	318	2066	20	140	260	22	442
No-Build 2032 Volumes:	0	187	536	690	1413	0	107	407	140	654	0	236	1694	351	2281	22	155	287	24	488
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	33	0	33	0	0	10	0	10
Build 2022 Volumes:	0	169	485	625	1279	0	97	368	127	592	0	214	1567	318	2099	20	140	270	22	452
Build 2032 Volumes:	0	187	536	690	1413	0	107	407	140	654	0	236	1727	351	2314	22	155	297	24	498

P.M. Peak Hour

	Cumberland Blvd Northbound					Cumberland Blvd Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	558	455	354	1367	0	96	533	486	1115	0	169	549	204	922	70	196	1458	141	1865
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	592	483	376	1451	0	102	565	516	1183	0	179	582	216	977	74	208	1547	150	1979
No-Build 2032 Volumes:	0	654	534	415	1603	0	113	624	570	1307	0	198	643	239	1080	82	230	1709	166	2187
Total New Trips:	0	0	0	0	0	0	0	0	0	0	0	0	19	0	19	0	0	32	0	32
Build 2022 Volumes:	0	592	483	376	1451	0	102	565	516	1183	0	179	601	216	996	74	208	1579	150	2011
Build 2032 Volumes:	0	654	534	415	1603	0	113	624	570	1307	0	198	662	239	1099	82	230	1741	166	2219

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

7. Campbell Rd @ Atlanta Rd

A.M. Peak Hour

	Keller Williams Realty Drwy Northbound					Campbell Rd Southbound					Atlanta Rd Eastbound					Atlanta Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	2	4	1	7	0	137	0	56	193	0	165	1575	8	1748	0	2	983	139	1124
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	2	4	1	7	0	145	0	59	204	0	175	1671	8	1854	0	2	1043	147	1192
No-Build 2032 Volumes:	0	2	4	1	7	0	160	0	65	225	0	193	1846	9	2048	0	2	1152	162	1316
Total New Trips:	0	0	0	0	0	0	6	0	6	12	0	2	0	0	2	0	0	0	2	2
Build 2022 Volumes:	0	2	4	1	7	0	151	0	65	216	0	177	1671	8	1856	0	2	1043	149	1194
Build 2032 Volumes:	0	2	4	1	7	0	166	0	71	237	0	195	1846	9	2050	0	2	1152	164	1318

P.M. Peak Hour

	Keller Williams Realty Drwy Northbound					Campbell Rd Southbound					Atlanta Rd Eastbound					Atlanta Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	6	4	3	13	0	423	3	149	575	0	97	881	5	983	0	2	1362	304	1668
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	6	4	3	13	0	449	3	158	610	0	103	935	5	1043	0	2	1445	323	1770
No-Build 2032 Volumes:	0	7	4	3	14	0	496	3	175	674	0	114	1033	6	1153	0	2	1596	357	1955
Total New Trips:	0	0	0	0	0	0	3	0	3	6	0	5	0	0	5	0	0	0	5	5
Build 2022 Volumes:	0	6	4	3	13	0	452	3	161	616	0	108	935	5	1048	0	2	1445	328	1775
Build 2032 Volumes:	0	7	4	3	14	0	499	3	178	680	0	119	1033	6	1158	0	2	1596	362	1960

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

8. Campbell Rd @ Site Drwy

A.M. Peak Hour

	Campbell Rd Northbound					Campbell Rd Southbound					- Eastbound					Site Drwy Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	0	277	0	277	0	0	103	0	103	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	0	294	0	294	0	0	109	0	109	0	0	0	0	0	0	0	0	0	0
No-Build 2032 Volumes:	0	0	325	0	325	0	0	120	0	120	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	3	3	0	10	0	0	10	0	0	0	0	0	0	11	0	24	35
Build 2022 Volumes:	0	0	294	3	297	0	10	109	0	119	0	0	0	0	0	0	11	0	24	35
Build 2032 Volumes:	0	0	325	3	328	0	10	120	0	130	0	0	0	0	0	0	11	0	24	35

P.M. Peak Hour

	Campbell Rd Northbound					Campbell Rd Southbound					- Eastbound					Site Drwy Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	0	293	0	293	0	0	448	0	448	0	0	0	0	0	0	0	0	0	0
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	0	311	0	311	0	0	475	0	475	0	0	0	0	0	0	0	0	0	0
No-Build 2032 Volumes:	0	0	344	0	344	0	0	525	0	525	0	0	0	0	0	0	0	0	0	0
Total New Trips:	0	0	0	11	11	0	32	0	0	32	0	0	0	0	0	0	6	0	14	20
Build 2022 Volumes:	0	0	311	11	322	0	32	475	0	507	0	0	0	0	0	0	6	0	14	20
Build 2032 Volumes:	0	0	344	11	355	0	32	525	0	557	0	0	0	0	0	0	6	0	14	20

19-175 - Residential Development on Campbell Road at Spring Road, Smyrna, GA

Traffic Volumes

A&R Engineering
October 2020

9. Spring Rd @ Site Drwy (RIRO)

A.M. Peak Hour

	Site Drwy (RIRO) Northbound					- Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	1853	0	1853	0	0	608	0	608
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	1966	0	1966	0	0	645	0	645
No-Build 2032 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	2172	0	2172	0	0	712	0	712
Total New Trips:	0	0	0	20	20	0	0	0	0	0	0	0	13	3	16	0	0	10	0	10
Build 2022 Volumes:	0	0	0	20	20	0	0	0	0	0	0	0	1979	3	1982	0	0	655	0	655
Build 2032 Volumes:	0	0	0	20	20	0	0	0	0	0	0	0	2185	3	2188	0	0	722	0	722

P.M. Peak Hour

	Site Drwy (RIRO) Northbound					- Southbound					Spring Rd Eastbound					Spring Rd Westbound				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2020 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	1087	0	1087	0	0	2278	0	2278
Growth Factor (%):	3	3	3	3		3	3	3	3		3	3	3	3		3	3	3	3	
No-Build 2022 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	1153	0	1153	0	0	2417	0	2417
No-Build 2032 Volumes:	0	0	0	0	0	0	0	0	0	0	0	0	1274	0	1274	0	0	2670	0	2670
Total New Trips:	0	0	0	12	12	0	0	0	0	0	0	0	8	11	19	0	0	32	0	32
Build 2022 Volumes:	0	0	0	12	12	0	0	0	0	0	0	0	1161	11	1172	0	0	2449	0	2449
Build 2032 Volumes:	0	0	0	12	12	0	0	0	0	0	0	0	1282	11	1293	0	0	2702	0	2702