

TRAFFIC IMPACT STUDY

Briargate Multifamily

City of Colorado Springs, Colorado

Prepared for:

Blackburn Communities, LLC

Kimley»Horn

T R A F F I C I M P A C T S T U D Y

Briargate Multifamily

City of Colorado Springs, Colorado

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1.0 EXECUTIVE SUMMARY

Briargate Multifamily is proposed to be located on the northeast corner of the Briargate Parkway and Voyager Parkway intersection in the City of Colorado Springs, Colorado.. The project is proposed to include 223 multifamily dwelling units. However, 250 units were conservatively assumed in this analysis. It is expected that the project will be completed in the next several years. Therefore, analysis was conducted for the 2029 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City of Colorado Springs, Colorado standards and requirements:

- Springcrest Road and Voyager Parkway
- Briargate Parkway and Voyager Parkway

In addition, the proposed right-in/right-out access along Voyager Parkway and the proposed full movement access along Springcrest Road were evaluated. Negligible project traffic is anticipated to be distributed through the Springcrest Road and Otero Avenue intersection to the east as this would distribute residential traffic to a residential area. Independent of this project, there are recommendations documented later in Section 5.4 that would improve the intersections to the east based observations and recommendations associated with the existing Classical Academy elementary school student pick-up operations.

Regional access to the site will be provided Interstate 25 (I-25) and Powers Boulevard (SH-21). Primary access will be provided by Voyager Parkway and Briargate Parkway. Direct access will be provided by a right-in/right-out access along Voyager Parkway approximately 675 feet south of the Springcrest Road intersection (measured center to center) and a full movement access along Springcrest Road at the existing driveway cutout, 300 feet east of the Voyager Parkway intersection (measured center to center).

Briargate Multifamily is expected to generate approximately 1,148 weekday daily trips, with 100 of these trips occurring during the morning peak hour and 98 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes Briargate Multifamily will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

2029 Buildout Recommendations

- With completion of the project, access will be provided by a right-in/right-out access along Voyager Parkway, approximately 675 feet south of the Springcrest Road intersection (measured center to center), and a full movement access along Springcrest Road at the existing driveway cutout, 300 feet east of the Voyager Parkway intersection (measured center to center). It is recommended that a R1-1 “STOP” sign be installed on the approach exiting the development at both accesses. Since the access along Voyager Parkway is restricted to only right turning movements, an R3-2 “NO LEFT TURN” sign could be placed under the R1-1 signs while an R6-1R “ONE WAY” sign could be placed in the center median to further identify the restricted left turn movement. A northbound right turn movement should be provided within the existing acceleration/deceleration lane along Voyager Parkway at the right-in/right-out access. In addition, an eastbound right turn lane with 115 feet of length plus an approximate 50-foot taper should be implemented at the proposed access along Springcrest Road. It is recommended that a striped chevron area be provided north of the existing southeast quadrant curb return of the Springcrest Road and Voyager Parkway intersection to allow for a taper to be introduced prior to the new right turn lane. The introduced taper will prevent a vehicle weave that could be caused by a continuous right turn lane extending from the intersection.
- Without project traffic volumes, the timing splits for the eastbound and westbound approaches for the morning peak hour at the Briargate Parkway and Voyager Parkway are recommended to be optimized in order for the overall intersection to operate at LOS D in 2029.

2045 Planning Level Recommendations

- Without project traffic volumes and if 2045 traffic volume projections are realized, dual southbound right turn lanes may be needed at the Briargate Parkway and Voyager Parkway intersection in order to provide acceptable operations during the peak hours in 2045. Of note, the project only contributes six (6) percent of traffic to this turn movement. If and when dual right turn lanes are implemented, signal modifications including new signal heads, mast arm adjustments, and detection updates may be necessary to maintain proper visibility, phasing, and compliance with applicable design standards.

School Pick-up Evaluation

- The property to the east of the proposed Briargate Multifamily development is occupied by Classical Academy elementary school. Access to the school's drop-off/pick-up queue is located approximately 450 feet to the east of the proposed Springcrest Road Access (#4), measured from center to center. Independent of the proposed Briargate Multifamily development, drop-off/pick-up queues are known to extend off the school property and into the Springcrest Road eastbound through lane and extending back into the intersection of Springcrest Road and Voyager Parkway. Of note, Briargate Multifamily development only adds six (6) trips and nine (9) trips eastbound on Springcrest Road during the morning and midday analysis periods.
- Both school start time, 8:15 AM, and the school end time, 3:30 PM, are captured in the morning and midday analysis periods, respectively. While both these analysis periods show acceptable levels of service based on volumes and predicted queues, the Synchro model does not account for the gridlock independently caused by the school traffic backing up into public streets. The traffic volumes suggest the intersection should be operating acceptably but not if vehicles are being blocked along both Springcrest Road and Voyager Parkway preventing the ability to reach saturation flow rates along these roadways. This is trend in the traffic engineering industry with public charter and private schools in urban areas because these schools typically do not have bus operations or students walking to school and the majority of student pick-ups occurs from passenger vehicles.

- It is recommended that Classical Academy elementary school and the City of Colorado Springs work together to create a solution to keep all potential drop-off/pick-up queues within the school's property. This could include a combination of staggering a grade-dependent bell schedule, or other technology-based solutions to reduce the time it takes each student to load into their respective vehicle. The most efficient method for improving vehicle queue issues at schools is to implement a staggered bell time to reduce the vehicle demand for each release period. This would likely mitigate all vehicle queue issues to the external public street system. In addition, there are school application programs for more efficient process of releasing students and effectively having students enter vehicles in the designated pick-up areas. This consists of flaggers at the school scanning codes on vehicles approaching the designated pick-up area which transmits a message and displays on a screen which students can be released from the classroom. With this process, there are only limited students outside, and they know their parent/guardian is close to approaching the pick-up area. The flaggers also assist with supporting students into vehicles to reduce the time vehicles are in the designated pick-up area. Once the gridlock on the streets is removed from the school queues, the volumes are reported to operate acceptably at the study area intersections.

General Recommendations

- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Colorado Springs and the Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition, 2023.

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study for Briargate Multifamily proposed to be located on the northeast corner of the Briargate Parkway and Voyager Parkway intersection in the City of Colorado Springs, Colorado. A vicinity map illustrating the project development location is shown in **Figure 1**. The project is proposed to include 223 multifamily dwelling units. However, 250 units were conservatively assumed in this analysis. A conceptual site plan is attached in **Appendix A**. It is expected that the project will be completed in the next several years; therefore, analysis was conducted for the 2029 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City of Colorado Springs, Colorado standards and requirements:

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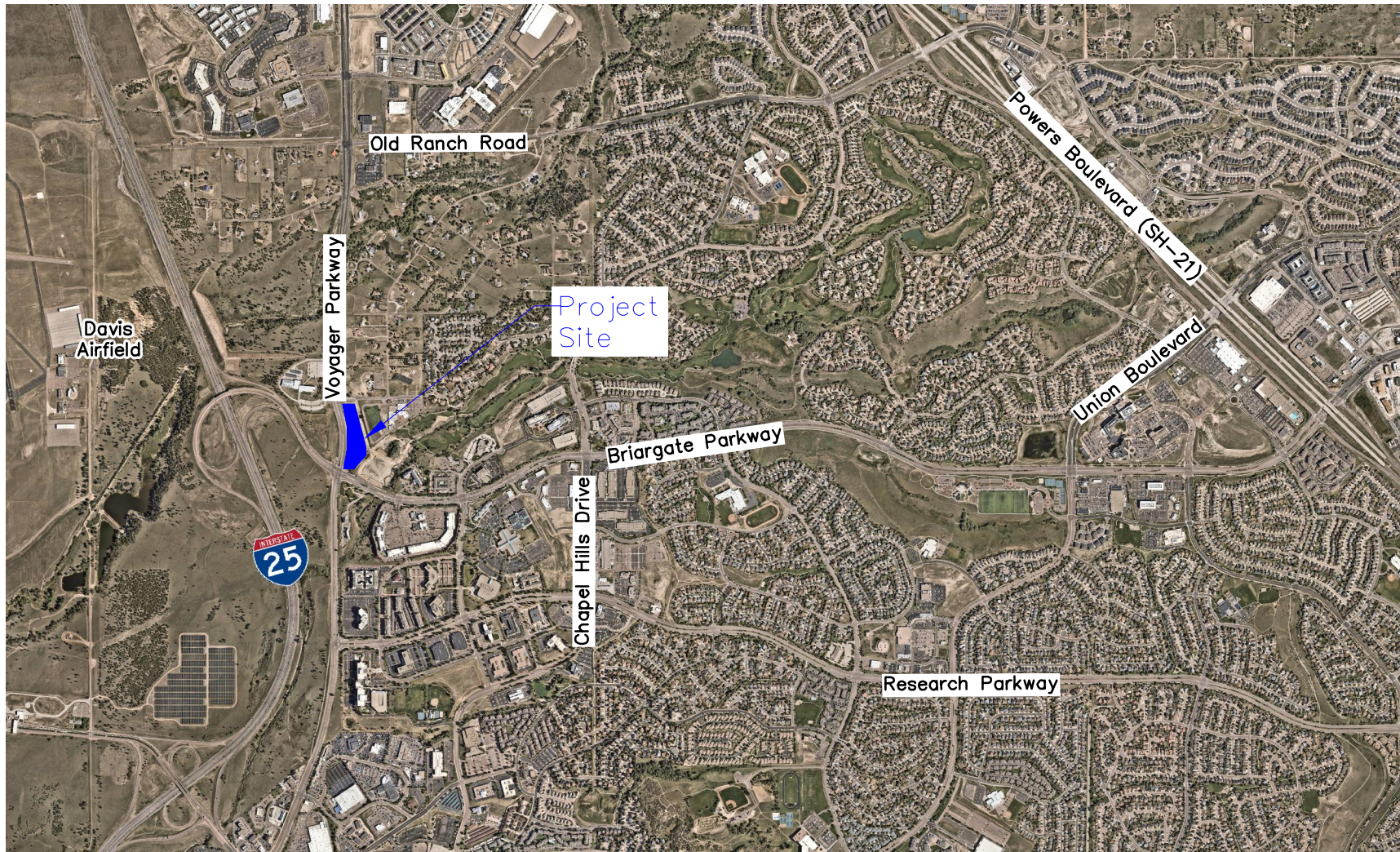


FIGURE 1
Briargate Multifamily
Colorado Springs, CO
Vicinity Map

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

The existing site is comprised of vacant land. Extending to the north and east are residential homes and to the west is the I-25 interchange with Briargate Parkway. The site is located approximately nine (9) miles from the Town of Monument and the City of Colorado Springs downtown areas. Directly north of the site is a church while the Classical Academy campus is located directly east of the site. Directly south of the site are retail and office uses.

3.2 Existing Roadway Network

Springcrest Road is an eastbound and westbound roadway with one through lane in each direction. The roadway extends from Voyager Parkway and terminates at a residential cul-de-sac. The speed limit along Springcrest Road is 25 miles per hour.

Voyager Parkway extends in the north-south direction as a four-lane divided roadway. Turn lanes are provided along the roadway at all major intersections. North of Briargate Parkway the speed limit is 55 miles per hour and south of Briargate Parkway the posted speed limit is 50 miles per hour. The City classifies the roadway as a *Principal Arterial*.

Briargate Parkway is an east-west roadway with three through lanes in each direction. East of Voyager Parkway, the posted speed limit of 45 miles per hour. West of Voyager Parkway are the on and off-ramps of I-25. The City classifies the roadway as a *Principal Arterial*.

The signalized intersection of Springcrest Road and Voyager Parkway operates with protected-only left turn phasing on the northbound approach and protected-permissive left turn phasing on the southbound approach. Additionally, the east/west approaches of Springcrest Road operate with split phasing. The northbound and southbound Voyager Parkway approaches provide a left turn lane, two through lanes, and a right turn lane. The eastbound approach provides a shared left/through lane and a right turn lane while the westbound approach provides a left turn lane, a shared left/through lane, and a right turn lane. An aerial photo of the existing intersection configuration is below.



Springcrest Road & Voyager Parkway

The signalized intersection of Briargate Parkway and Voyager Parkway operates with protected-only left turn phasing on all four approaches. The northbound and southbound approaches of Voyager Parkway provide dual left turn lanes, two through lanes, and a right turn lane. The northbound right turn movement operates under yield condition with a 175-foot northbound to eastbound acceleration lane. The southbound right turn movement operates with protected-overlap phasing under signal control. The eastbound Briargate Parkway approach provides dual left turn lanes, three through lanes, and a right turn lane. The westbound approach provides a left turn lane, three through lanes, and a right turn lane. The westbound right turn movement operates under free conditions with a westbound to northbound acceleration lane provided along Voyager Parkway. An aerial photo of the existing intersection configuration is below.



Briargate Parkway & Voyager Parkway

The intersection lane configuration and control for the study area intersections are shown in Figure 2.

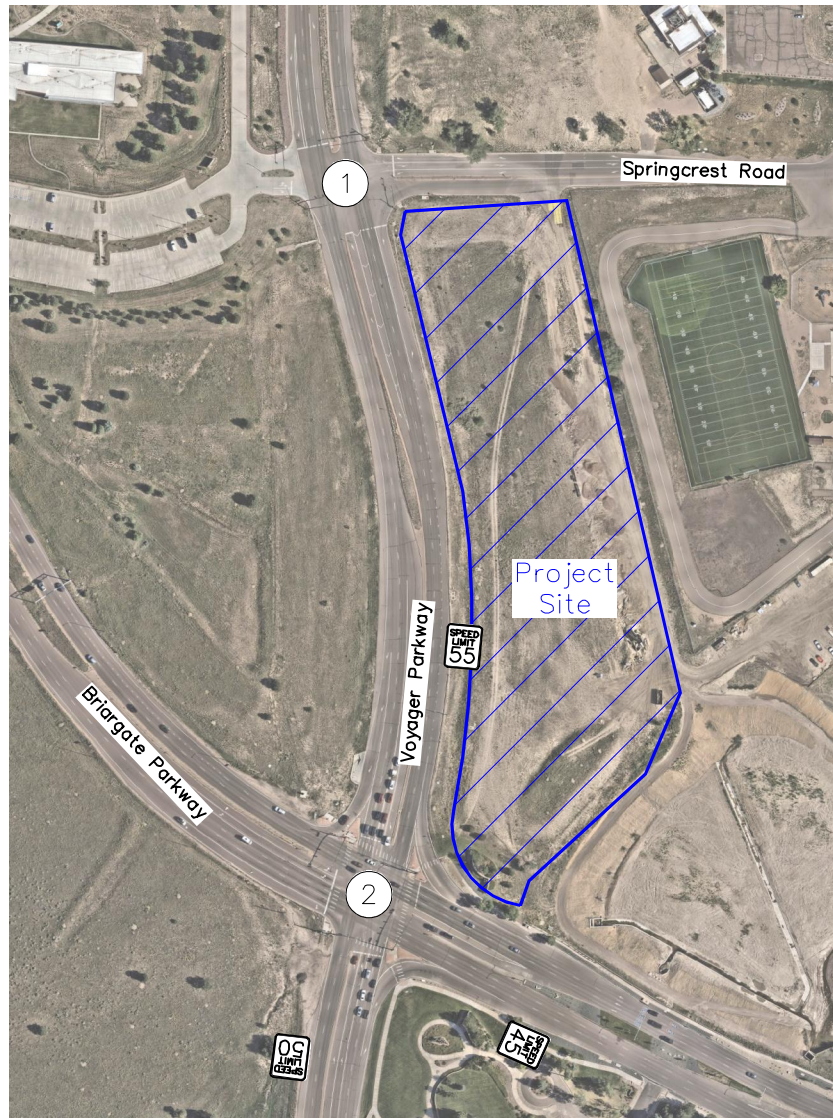
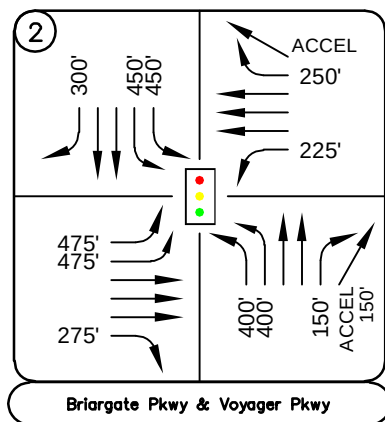
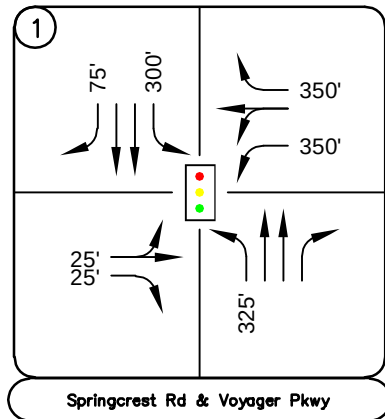
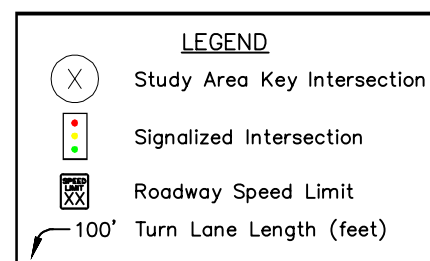


FIGURE 2
 Briargate Multifamily
 Colorado Springs, CO
 Existing Geometry and Control



3.3 Existing Traffic Volumes

Existing turning movement counts were conducted at the study intersections on Tuesday, March 18, 2025 during the weekday morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on this count date. As requested to align with the student release of the adjacent Classical Academy school, turning movement counts were also collected on Tuesday, February 3, 2026. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix B**.

3.4 Unspecified Development Traffic Growth

According to information provided on the website for the Colorado Department of Transportation (CDOT), the 20-year growth factor along Interstate 25 (I-25) and Powers Boulevard (SH-21) in the vicinity of the site is between 1.30 and 1.31. The 20-year growth factor equates to an average annual growth rate of 1.33 percent. Traffic information from the CDOT Online Transportation Information System (OTIS) website is included in **Appendix C**. This annual growth rate was used to estimate near-term 2029 and long-term 2045 traffic volume projections at the key intersections. Background traffic volumes for 2029 and 2045 are shown in **Figure 4** and **Figure 5**, respectively.

1	
0/1/0 887/1070/1141 74/73/16	55/50/9 0/1/0 249/254/37
0/2/1 0/1/0 3/2/9	8/1/7 822/902/1019 253/222/52

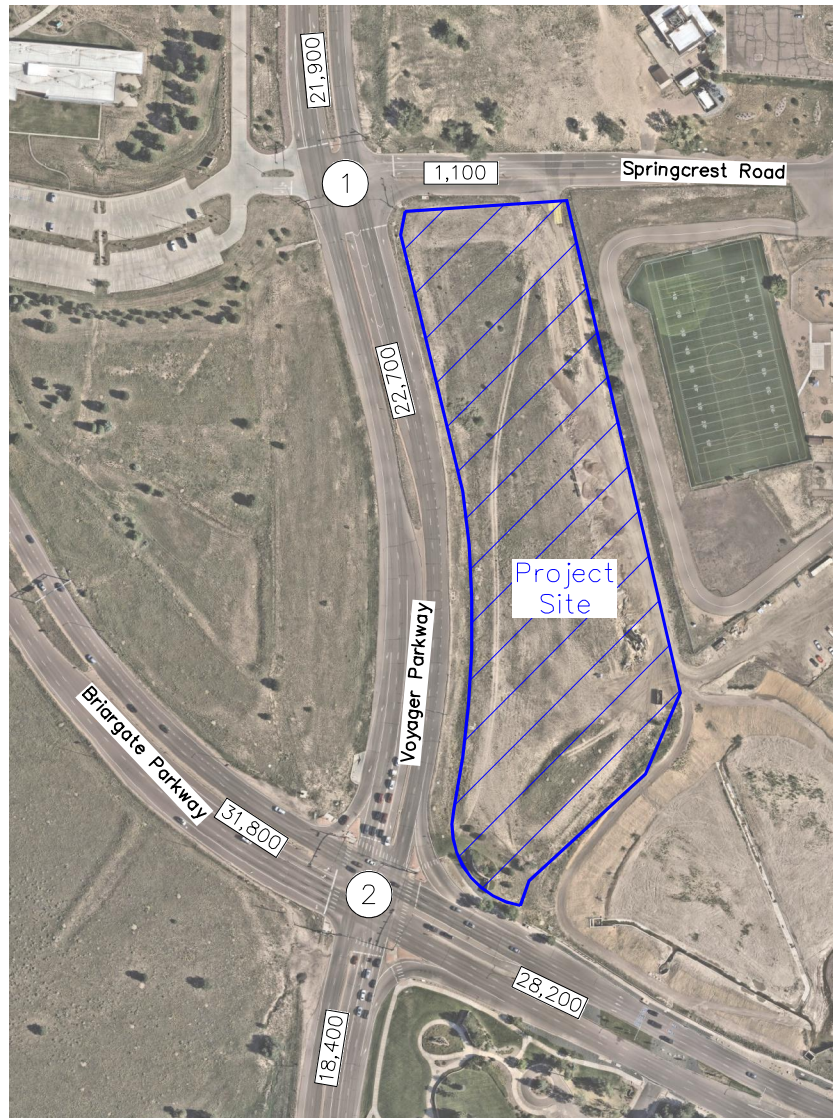
Springcrest Rd & Voyager Pkwy

Tuesday, March 18, 2025
 7:30 to 8:30AM
 (4:45 to 5:45PM)
 Tuesday, February 3, 2026
 3:00 to 4:00PM

2	
435/305/244 430/729/656 222/294/247	284/226/243 1274/836/1022 38/69/83
230/298/246 1079/1068/1135 239/195/282	332/255/255 550/601/477 49/121/88

Briargate Pkwy & Voyager Pkwy

Tuesday, March 18, 2025
 7:15 to 8:15AM
 (4:00 to 5:00PM)
 Tuesday, February 3, 2026
 3:00 to 4:00PM



LEGEND

- (X) Study Area Key Intersection
- XX/XX/XX Weekday AM/MID/PM Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 3
 Briargate Multifamily
 Colorado Springs, CO
 Existing Traffic Volumes

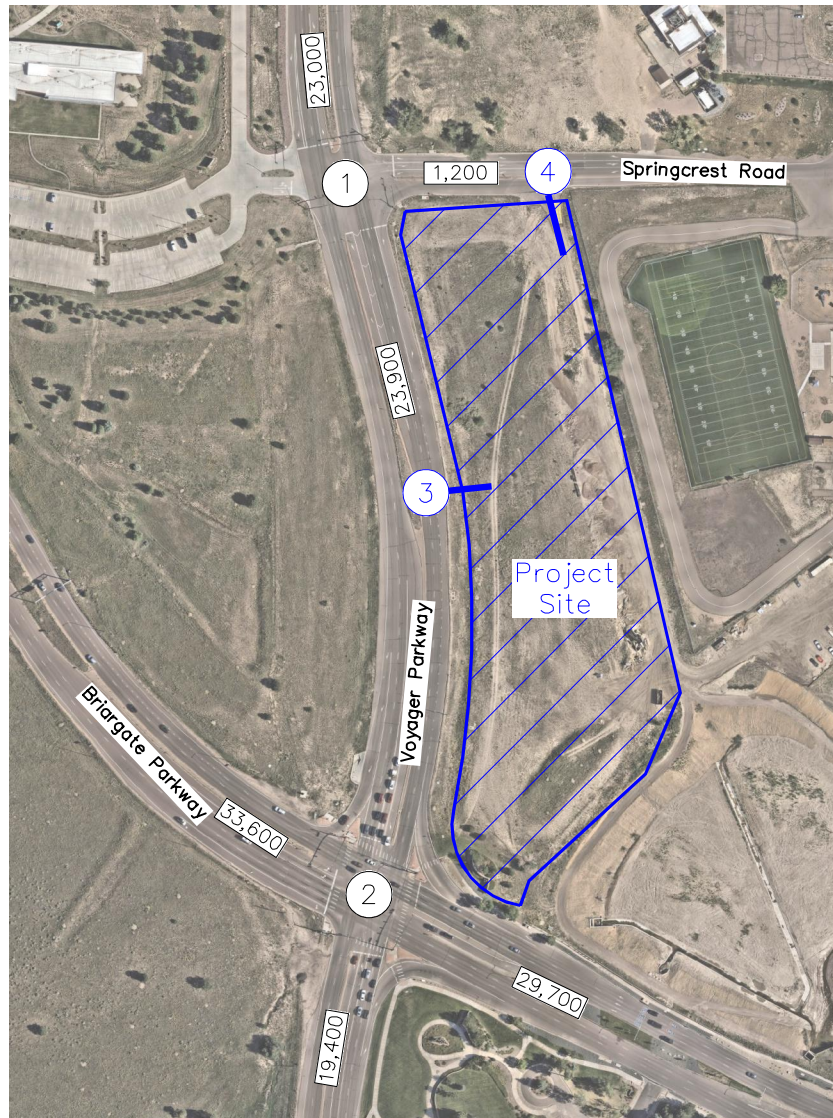
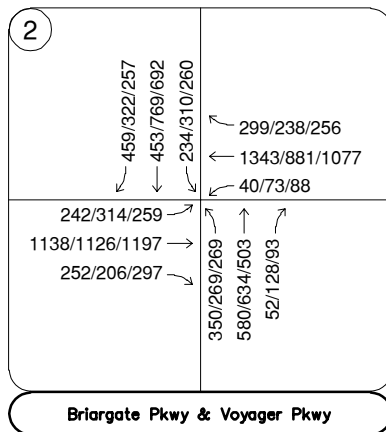
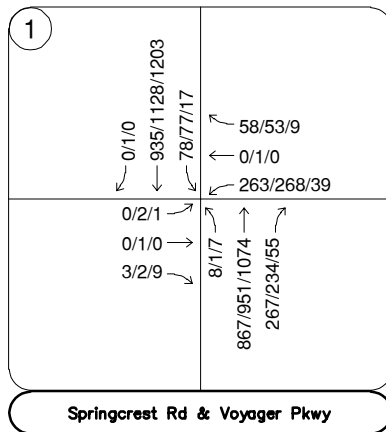


FIGURE 4
 Briargate Multifamily
 Colorado Springs, CO
 2029 Background Traffic Volumes

LEGEND	
(X)	Study Area Key Intersection
XX/XX/XX	Weekday AM/MID/PM Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

1 0/1/0 1155/1394/1486 96/95/21	72/65/12 0/1/0 324/331/48
0/3/1 0/1/0 4/3/12	10/1/9 1071/1175/1327 330/289/68

Springcrest Rd & Voyager Pkwy

2 567/397/318 560/949/854 289/383/322	370/294/316 1659/1089/1331 49/90/108
300/388/320 1405/1391/1478 311/254/367	432/332/332 716/783/621 64/158/115

Briargate Pkwy & Voyager Pkwy

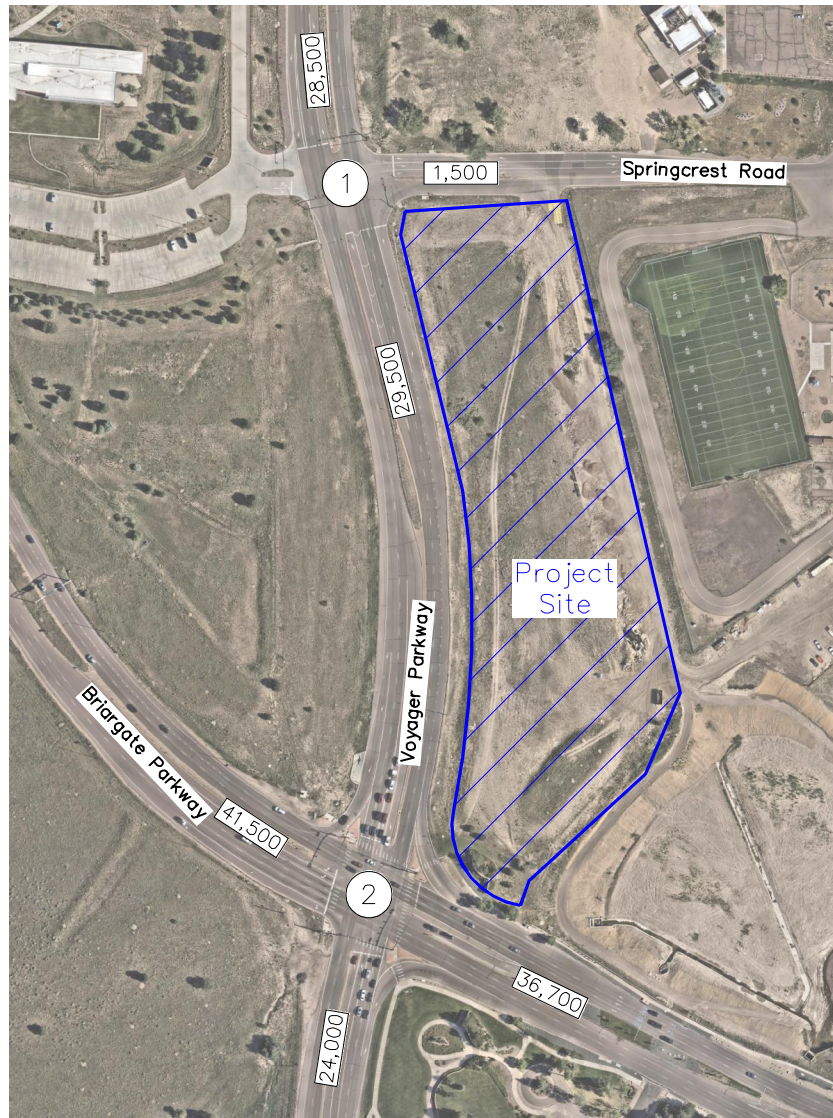


FIGURE 5
 Briargate Multifamily
 Colorado Springs, CO
 2045 Background Traffic Volumes

LEGEND	
(X)	Study Area Key Intersection
XX/XX/XX	Weekday AM/MID/PM Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report fitted curve equations that apply to Multifamily Mid-Rise Housing (ITE Land Use Code 221) for traffic associated with the development.

Briargate Multifamily is expected to generate approximately 1,148 weekday daily trips, with 100 of these trips occurring during the morning peak hour and 98 of these trips occurring during the afternoon peak hour of the commuter adjacent street traffic.

With residential traffic having a high volume commuting during the typical 4:00 PM to 6:00 PM commuter peak hours, ITE time of day factors were utilized to estimate project traffic during the 3:00 PM to 4:00 PM time period which aligns with the student release of the adjacent school. The project is anticipated to generate 56 trips during the weekday from 3:00 PM to 4:00 PM. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User's Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for the site. The trip generation worksheets are included in **Appendix D**.

Table 1 – Briargate Multifamily Traffic Generation

Land Use and Size	Weekday Vehicle Trips									
	Daily	AM Peak Hour			3-4 PM School Hr			PM Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Multifamily Mid-Rise Housing (ITE 221) – 250 Dwelling Units	1,148	23	77	100	34	22	56	60	38	98

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

4.2 Trip Distribution

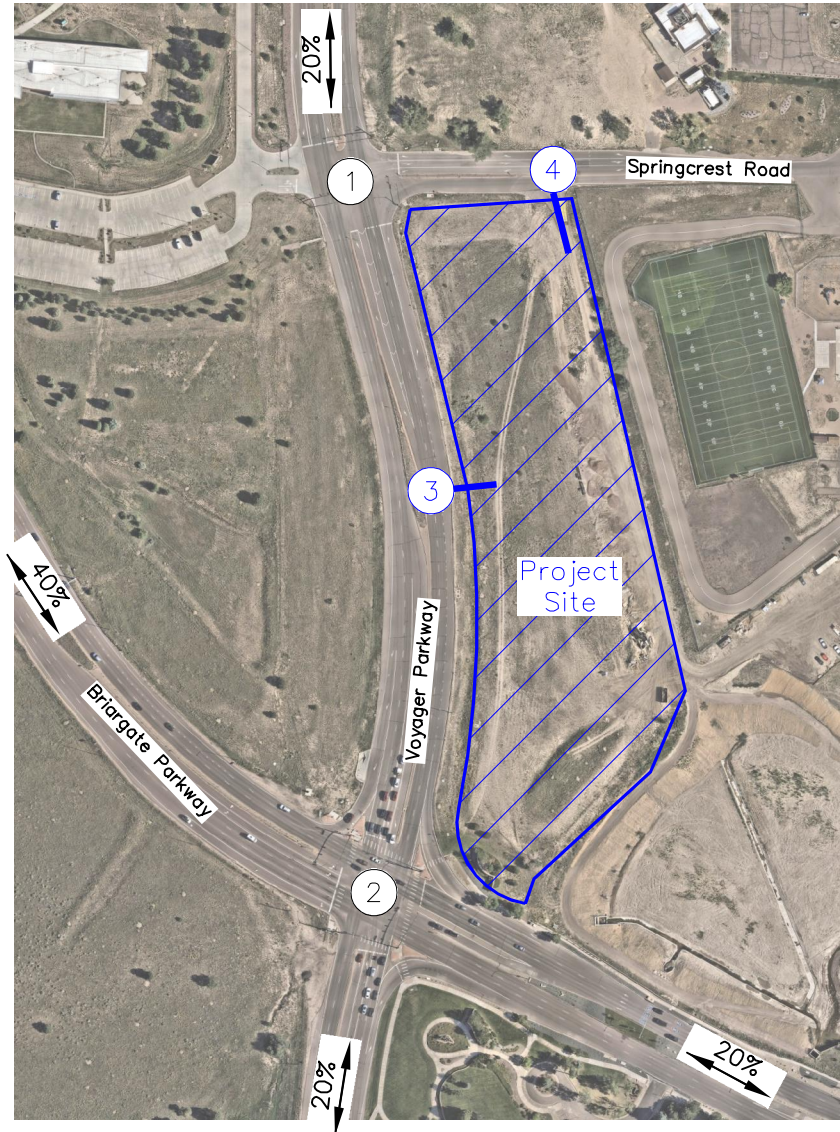
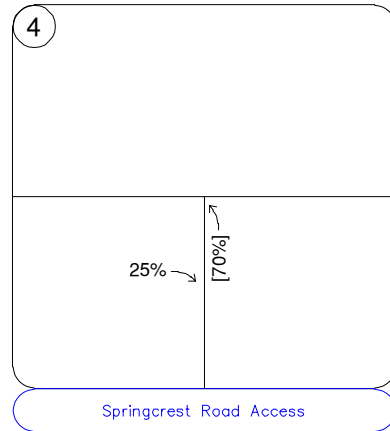
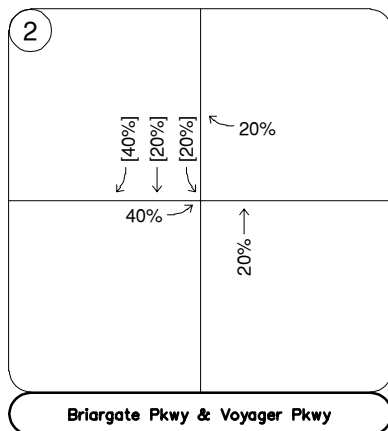
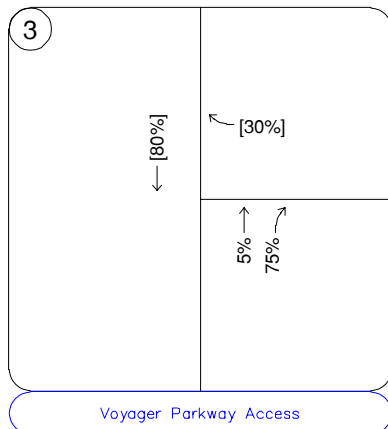
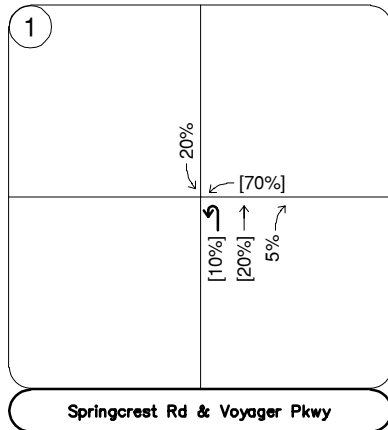
Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding employment, school, and attraction information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution for the proposed development is illustrated in **Figure 6**.

4.3 Traffic Assignment

The project's traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Traffic assignment is shown in **Figure 7**.

4.4 Total (Background Plus Project) Traffic

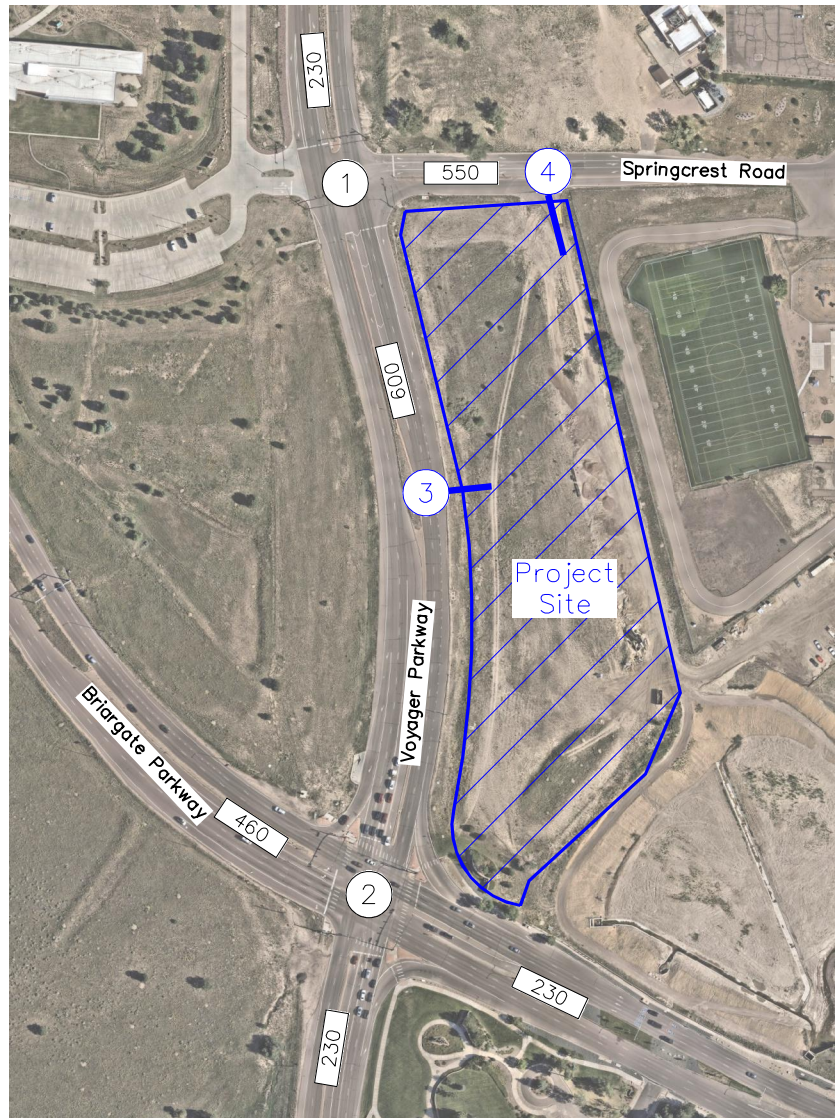
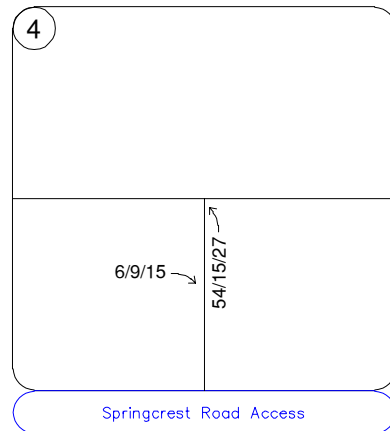
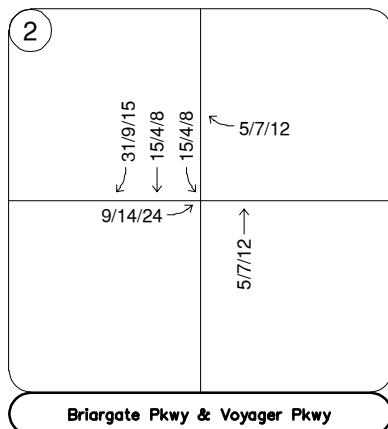
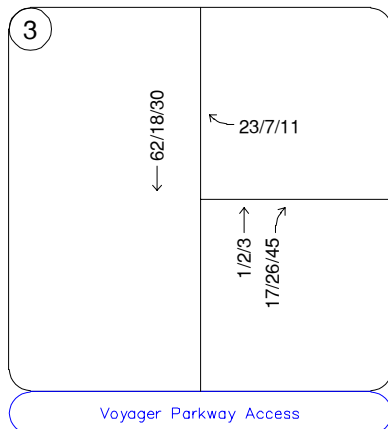
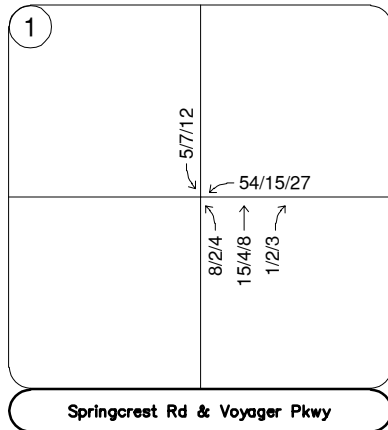
Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2029 buildout horizon and long-term 2045 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2029 and 2045 horizon years in **Figure 8** and **Figure 9**, respectively.



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 6
 Briargate Multifamily
 Colorado Springs, CO
 Project Trip Distribution



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XX/XX/XX Weekday AM/MID/PM Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 7
 Briargate Multifamily
 Colorado Springs, CO
 Project Traffic Assignment

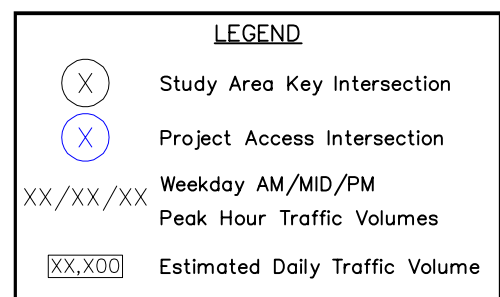
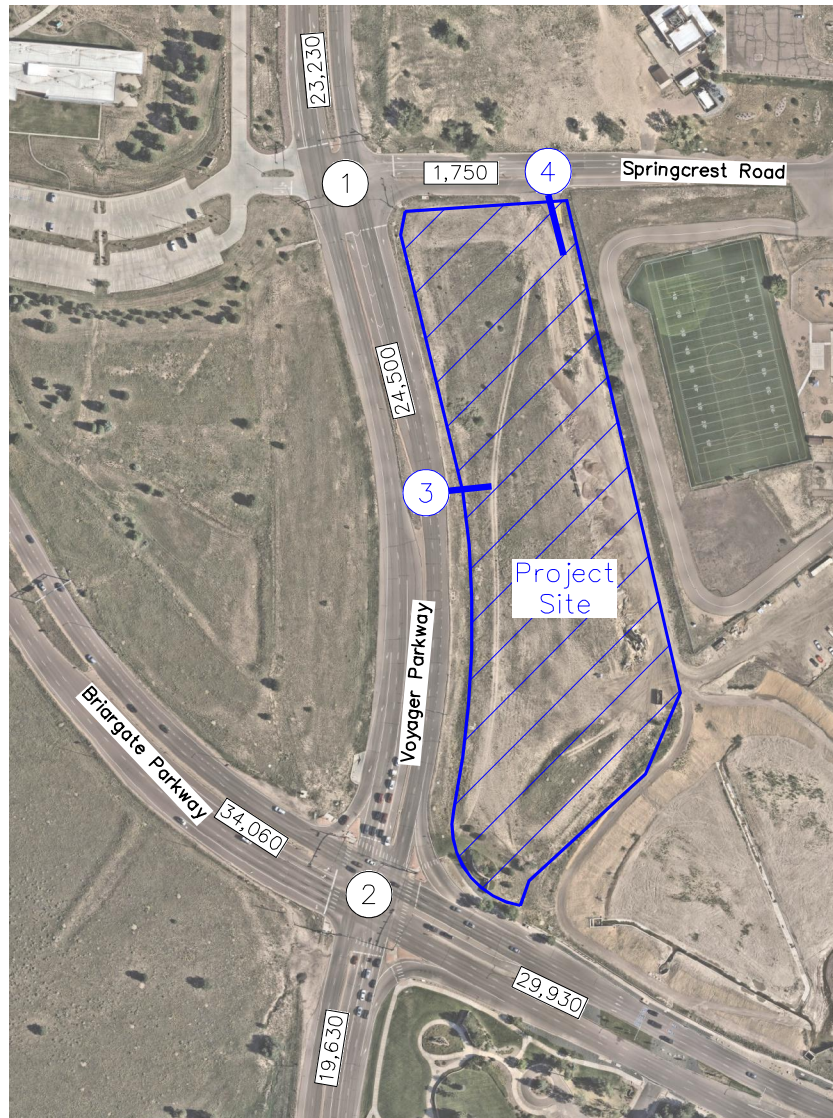
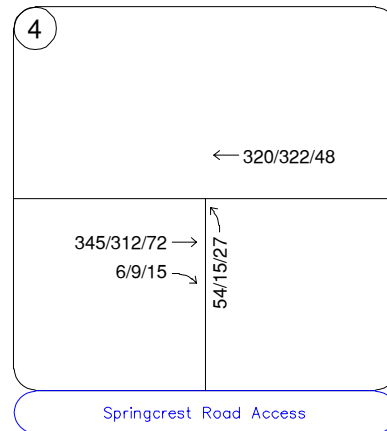
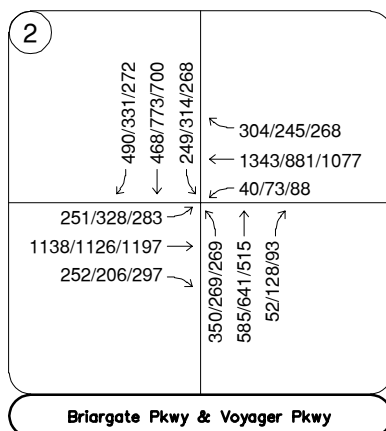
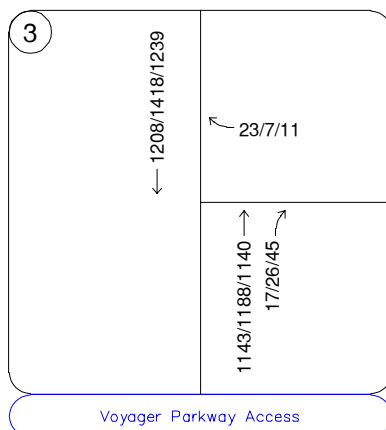
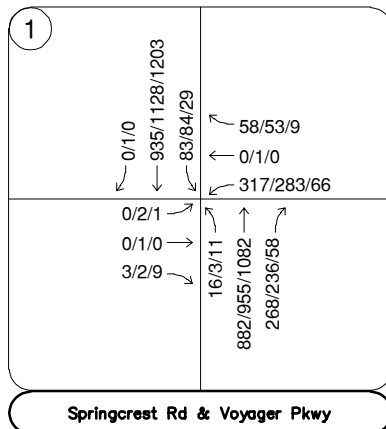


FIGURE 8
 Briargate Multifamily
 Colorado Springs, CO
 2029 Total Traffic Volumes

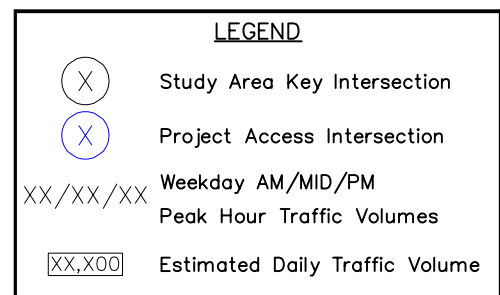
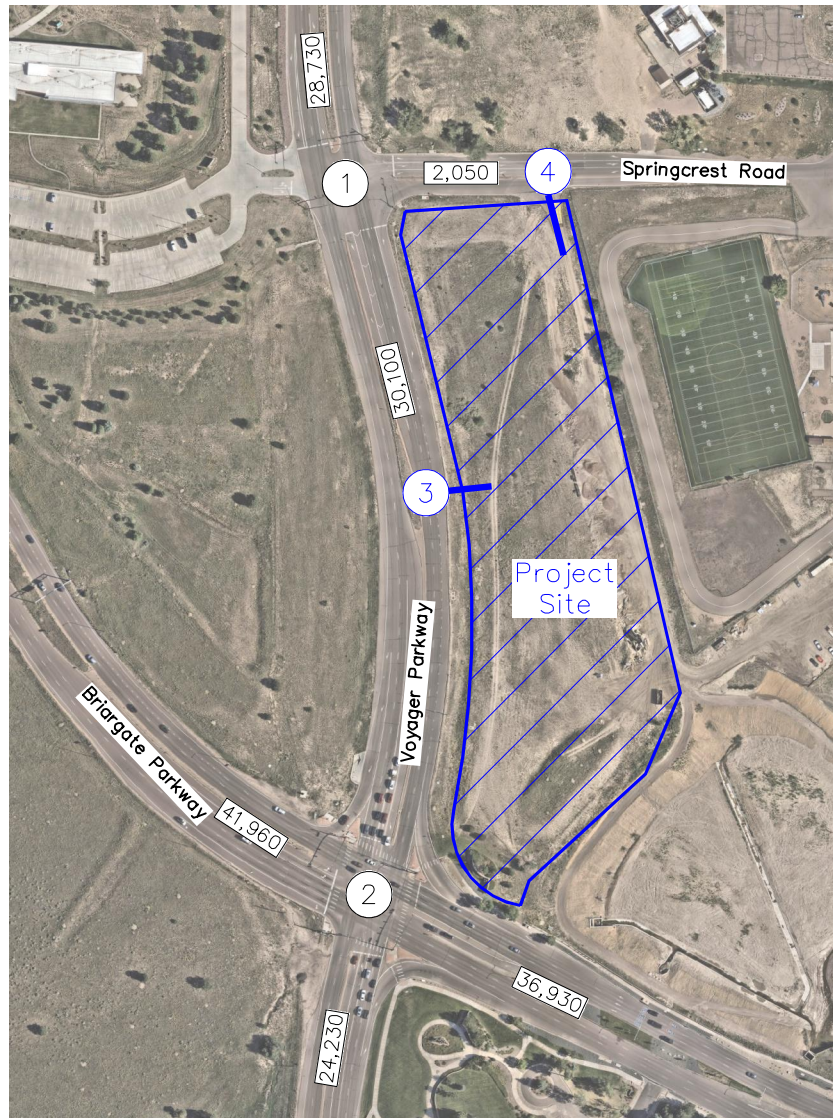
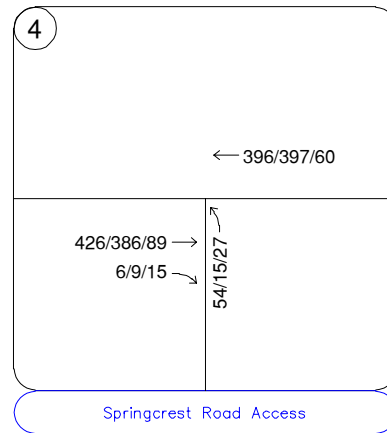
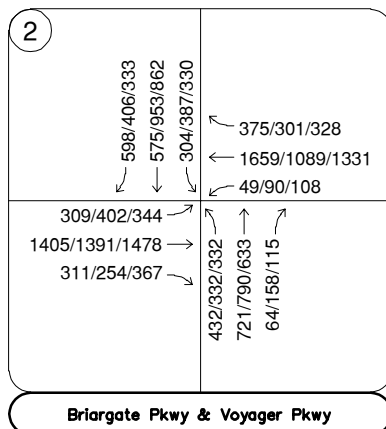
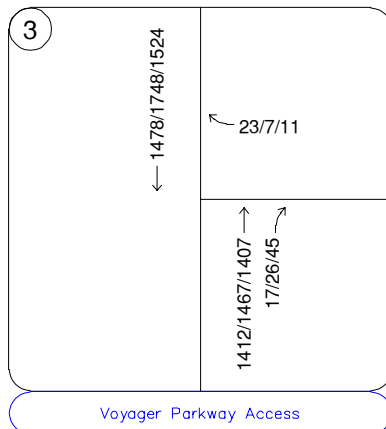
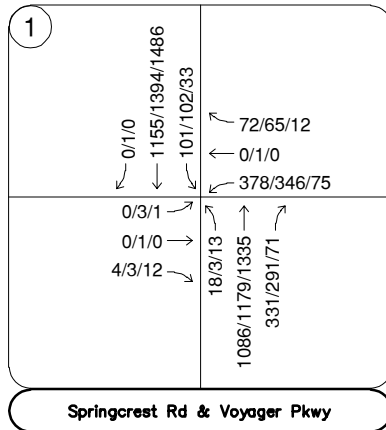


FIGURE 9
 Briargate Multifamily
 Colorado Springs, CO
 2045 Total Traffic Volumes

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2029 and 2045 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, standard traffic engineering practice recommends overall intersection LOS D and movement/approach LOS E as the minimum desirable thresholds for acceptable operations. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Seventh Edition, Transportation Research Board, 2022.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

² Transportation Research Board, *Highway Capacity Manual*, Seventh Edition, Washington DC, 2022.

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the analysis. The existing heavy vehicle percentages obtained from the turning movement counts were also used in each horizon year. The signal timing sheets for the signalized intersections were provided by the City and included in the analysis. The signal timing sheets are provided in **Appendix F**. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

Springcrest Road and Voyager Parkway

The signalized intersection of Springcrest Road and Voyager Parkway operates with protected-only left turn phasing on the northbound approach and protected-permissive left turn phasing on the southbound approach. Additionally, the east/west approaches of Springcrest Road operate with split phasing. The intersection operates acceptably at LOS B or better during all peak hours under existing conditions. With project traffic, the intersection is anticipated to continue operating at an acceptable level of service throughout the 2045 horizon.

It is understood that the adjacent Classical Academy school is known to have vehicles backing up into the intersection of Springcrest Road and Voyager Parkway intersection coinciding with the student dismissal and pick-up creating a gridlock situation at this intersection. The traffic volumes suggest the intersection should be operating acceptably but not if vehicles are being blocked along both Springcrest Road and Voyager Parkway preventing the ability to reach saturation flow rates along these roadways. The considerations for the school drop-off time period are evaluated in more detail later in Section 5.4. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – Springcrest Road & Voyager Parkway LOS Results

Scenario	AM Peak Hour		MID School Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2025 Existing	14.5	B	16.7	B	5.5	A
2029 Background	14.9	B	17.0	B	5.6	A
2029 Background Plus Project	21.6	C	33.4	C	7.0	A
2045 Background	21.4	C	19.7	B	6.6	A
2045 Background Plus Project	29.8	C	40.0	D	8.0	A

Briargate Parkway and Voyager Parkway

The signalized intersection of Briargate Parkway and Voyager Parkway operates with protected-only left turn phasing on all four approaches. The intersection operates acceptably at LOS D during all peak hours under existing conditions. However, the morning peak hour is nearing the threshold of unacceptable operations. The morning and midday peak hours coincide with the arrival and dismissal of students at the Classical Academy elementary school. Therefore, a high volume of vehicles are exiting the school after drop-off and pick-up and utilizing the southbound right turn lane. Based on existing traffic volumes and future growth, the morning peak hour is reported to operate with LOS E with or without the project traffic through the 2029 buildout year with improved signal timing. By increasing the eastbound and westbound through green time and decreasing the eastbound left and westbound left green time, the morning peak hour is reported to operate acceptably with LOS D.

If 2045 traffic volume projections are realized, dual southbound right turn lanes may be needed at this intersection in order to provide acceptable operations during the peak hours. This lane improvement is in addition to optimizing the splits and providing lead/lag left turn phasing on the north-south approaches. If and when dual right turn lanes are implemented, signal modifications including new signal heads, mast arm adjustments, and detection updates may be necessary to maintain proper visibility, phasing, and compliance with applicable design standards. **Table 4** provides the results of the LOS analysis conducted at this intersection.

Table 4 – Briargate Parkway & Voyager Parkway LOS Results

Scenario	AM Peak Hour		MID School Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2025 Existing	51.7	D	51.6	D	50.3	D
2029 Background	57.1	E	-	-	47.2	D
2029 Background ¹	46.5	D	49.1	D	-	-
2029 Background Plus Project	58.8	E	-	-	46.7	D
2029 Background Plus Project ¹	48.5	D	50.6	D	-	-
2045 Background	84.6	F	-	-	62.1	E
2045 Background ¹	69.0	E	55.6	E	52.5	D
2045 Background Plus Project	78.4	E	-	-	59.4	E
2045 Background Plus Project ^{1,2}	54.2	D	52.6	D	51.7	D

¹Improved Timing Splits; ²Lead NBL, Lag SBL, Dual SBR Turn Lanes

Project Accesses

With completion of the project, access will be provided by a right-in/right-out access along Voyager Parkway, approximately 675 feet south of the Springcrest Road intersection (measured center to center), and full movement access along Springcrest Road at the existing driveway cutout, 300 feet east of the Voyager Parkway intersection (measured center to center). It is recommended that a R1-1 "STOP" sign be installed on the approach exiting the development at both accesses. Since the access along Voyager Parkway is restricted to only right turning movements, an R3-2 "NO LEFT TURN" sign could be placed under the R1-1 signs while an R6-1R "ONE WAY" sign could be placed in the center median y to further identify the restricted left turn movement. A northbound right turn movement should be provided within the existing acceleration/deceleration lane along Voyager Parkway at the right-in/right-out access. In addition, an eastbound right turn lane with 115 feet of length plus an approximate 50-foot taper should be implemented at the proposed access along Springcrest Road. It is recommended that a striped chevron area be provided north of the existing southeast quadrant curb return of the Springcrest Road and Voyager Parkway intersection to allow for a taper to be introduced prior to the new right turn lane. The introduced taper will prevent a vehicle weave that could be caused by a continuous right turn lane extending from the intersection. **Table 5** provides the results of the level of service for the project access intersections. As shown in the table, the project access intersections are anticipated to have all movements operating with acceptable LOS D or better during the peak hours in both the buildout year 2029 and the 2045 long-term horizons.

Table 5 – Project Access Level of Service Results

Intersection	2029 Total						2045 Total					
	AM Peak Hour		MID School Hour		PM Peak Hour		AM Peak Hour		MID School Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Voyager Parkway Access WB Right	9.9	A	9.9	A	9.8	A	10.5	B	19.0	C	10.4	B
Springcrest Road Access NB Approach	15.8	C	21.7	C	13.2	B	19.2	C	29.8	D	14.9	B

5.3 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 6** with calculations provided within the level of service operational sheets of **Appendix E** for unsignalized intersections and **Appendix G** for signalized intersections.

Table 6 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length	2029 Calculated Queue (AM/MID/PM)	2029 Recommended Length	2045 Calculated Queue (AM/MID/PM) (AM/PM)	2045 Recommended Length
Springcrest & Voyager					
Eastbound Left/Through	25'	25'/25'/25'	25'	25'/25'/25'	25'
Eastbound Right	25'	25'/25'/25'	25'	25'/25'/25'	25'
Westbound Left	350'	222'/166'/71'	350'	251'/187'/77'	350'
Westbound Right	350'	25'/25'/25'	350'	25'/25'/25'	350'
Northbound Left	325'	29'/25'/26'	325'	30'/25'/26'	325'
Northbound Right	C	153'/132'/25'	C	206'/175'/25'	C
Southbound Left	300'	52'/74'/25'	300'	73'/140'/25'	300'
Briargate & Voyager					
Eastbound Left	475' DL	170'/178'	475' DL	204'/215'	475' DL
Eastbound Right	275'	79'/90'	275'	140'/173'	275'
Westbound Left	225'	80'/137'	225'	92'/160'	225'
Westbound Right	250'	25'/25'	250'	25'/25'	250'
Northbound Left	400' DL	236'/171'	400' DL	323'/208'	400' DL
Northbound Right	150'	25'/37'	150'	25'/58'	150'
Southbound Left	450' DL	179'/177'	450' DL	225'/241'	450' DL
Southbound Right	300'	501'/237'	300'	322'/322'	300'
Briargate & Voyager^{1,2}					
Eastbound Left	475' DL			236'/310'/256'	475' DL
Eastbound Right	275'			120'/101'/144'	275'
Westbound Left	225'			92'/148'/209'	225'
Westbound Right	250'			25'/25'/25'	250'
Northbound Left	400' DL			323'/310'/247'	400' DL
Northbound Right	150'			25'/112'/56'	150'
Southbound Left	450' DL			262'/231'/228'	450' DL
Southbound Right	300'			297'/115'/106'	300' DR

DL = Dual Left; C = Continuous Lane; **Red** Text = Turn Lane Constraint; **Blue** Text = Recommendation;

¹Improved Timing Splits; ²Lead NBL, Lag SBL, Dual SBR Turn Lanes

All queues are anticipated to remain within the existing or recommended turn lane lengths through 2045 except the southbound right turn movement at the Briargate Parkway and Voyager Parkway intersection. Dual lanes may need to be provided on the southbound approach of the Briargate Parkway and Voyager Parkway intersection to accommodate right turning demands in the future. Of note, the project only contributes six (6) percent to the right turn movement.

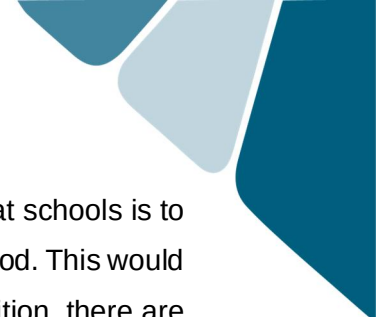
Of note, the westbound left turn reported queue is 222 feet along Springcrest Road at the intersection with Voyager Parkway. The proposed access along Springcrest Road is located 200 feet east of the westbound approach stop bar and may be blocked by one vehicle in the westbound left turn lane queue during the morning peak hour for the peak 15-minutes of school traffic. However, this will only occur a few times during the day with the school dismissal of The Classical Academy and should only occur for a few seconds of each peak 15-minute signal cycle.

5.4 Classical Academy Elementary School Peak Hour Analysis

The property to the east of the proposed Briargate Multifamily development is occupied by Classical Academy elementary school. Access to the school's drop-off/pick-up queue is located approximately 450 feet to the east of the proposed Springcrest Road Access (#4), measured from center to center. Independent of the proposed Briargate Multifamily development, drop-off/pick-up queues are known to extend off the school property and into the Springcrest Road eastbound through lane and extending back into the intersection of Springcrest Road and Voyager Parkway. Of note, Briargate Multifamily development only adds six (6) trips and nine (9) trips eastbound on Springcrest Road during the morning and midday analysis periods.

Both school start time, 8:15 AM, and the school end time, 3:30 PM, are captured in the morning and midday analysis periods, respectively. While both these analysis periods show acceptable levels of service based on volumes and predicted queues, the Synchro model does not account for the gridlock independently caused by the school traffic backing up into public streets. The traffic volumes suggest the intersection should be operating acceptably but not if vehicles are being blocked along both Springcrest Road and Voyager Parkway preventing the ability to reach saturation flow rates along these roadways. This is trend in the traffic engineering industry with public charter and private schools in urban areas because these schools typically do not have bus operations or students walking to school and the majority of student pick-ups occurs from passenger vehicles.

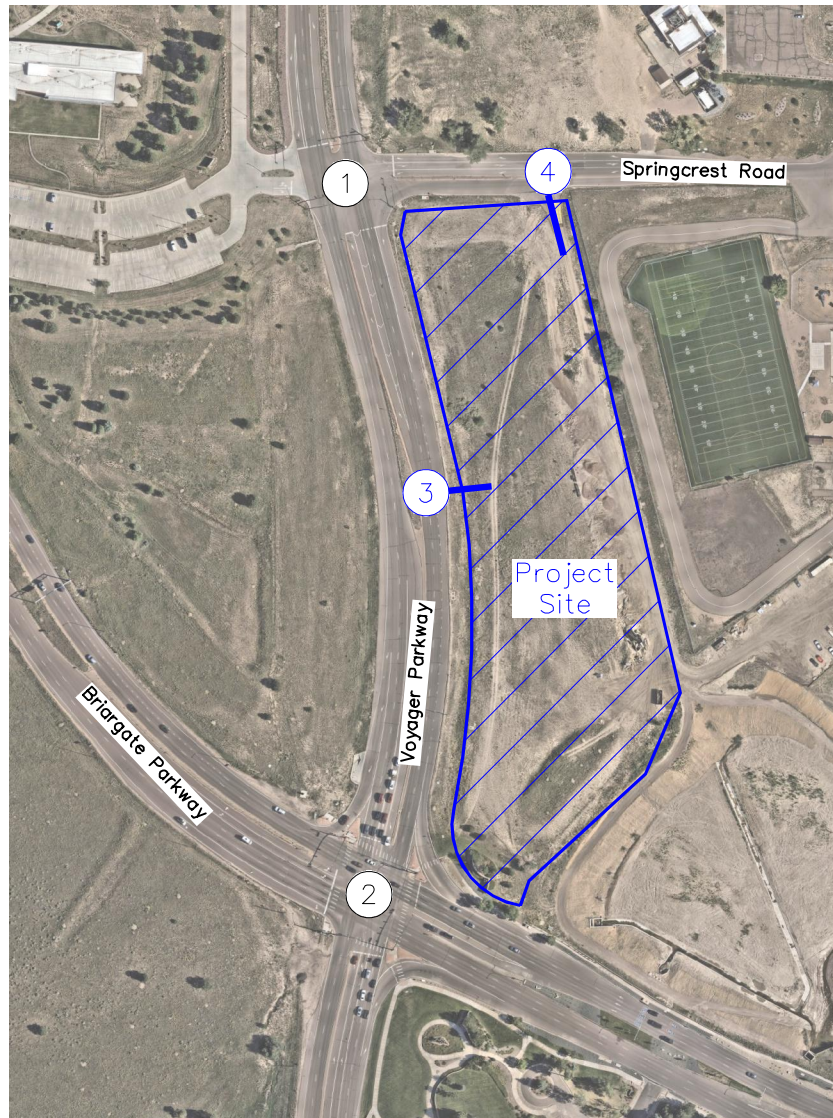
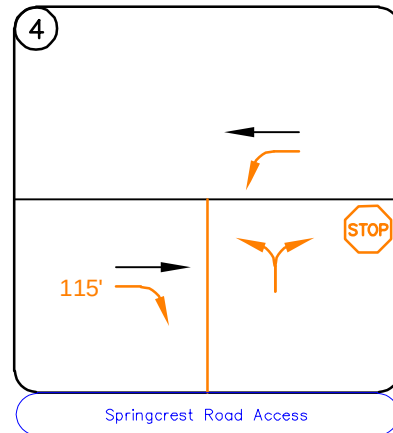
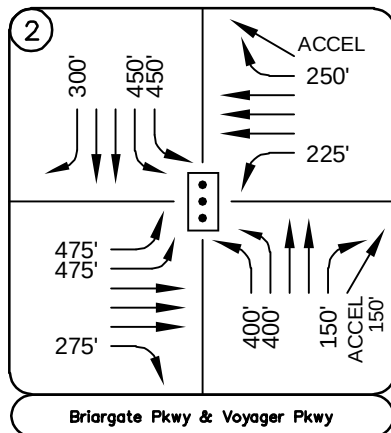
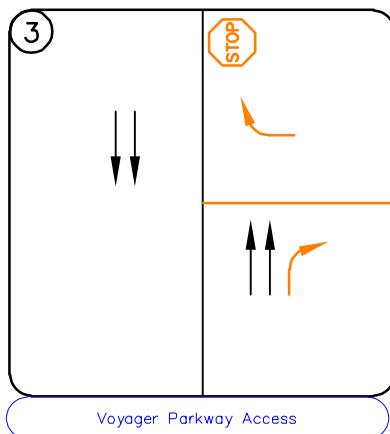
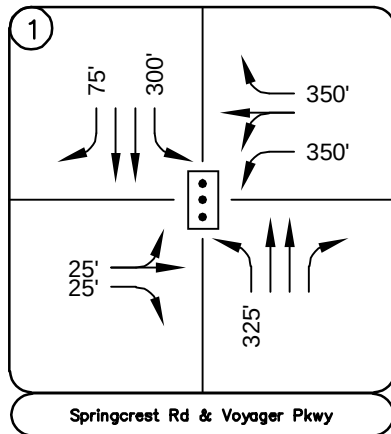
It is recommended that Classical Academy elementary school and the City of Colorado Springs work together to create a solution to keep all potential drop-off/pick-up queues within the school's property. This could include a combination of staggering a grade-dependent bell schedule, or other technology-based solutions to reduce the time it takes each student to load into their



respective vehicle. The most efficient method for improving vehicle queue issues at schools is to implement a staggered bell time to reduce the vehicle demand for each release period. This would likely mitigate all vehicle queue issues to the external public street system. In addition, there are school application programs for more efficient process of releasing students and effectively having students enter vehicles in the designated pick-up areas. This consists of flaggers at the school scanning codes on vehicles approaching the designated pick-up area which transmits a message and displays on a screen which students can be released from the classroom. With this process, there are only limited students outside, and they know their parent/guardian is close to approaching the pick-up area. The flaggers also assist with supporting students into vehicles to reduce the time vehicles are in the designated pick-up area. Once the gridlock on the streets is removed from the school queues, the volumes are reported to operate acceptably at the study area intersections.

5.5 Improvement Summary

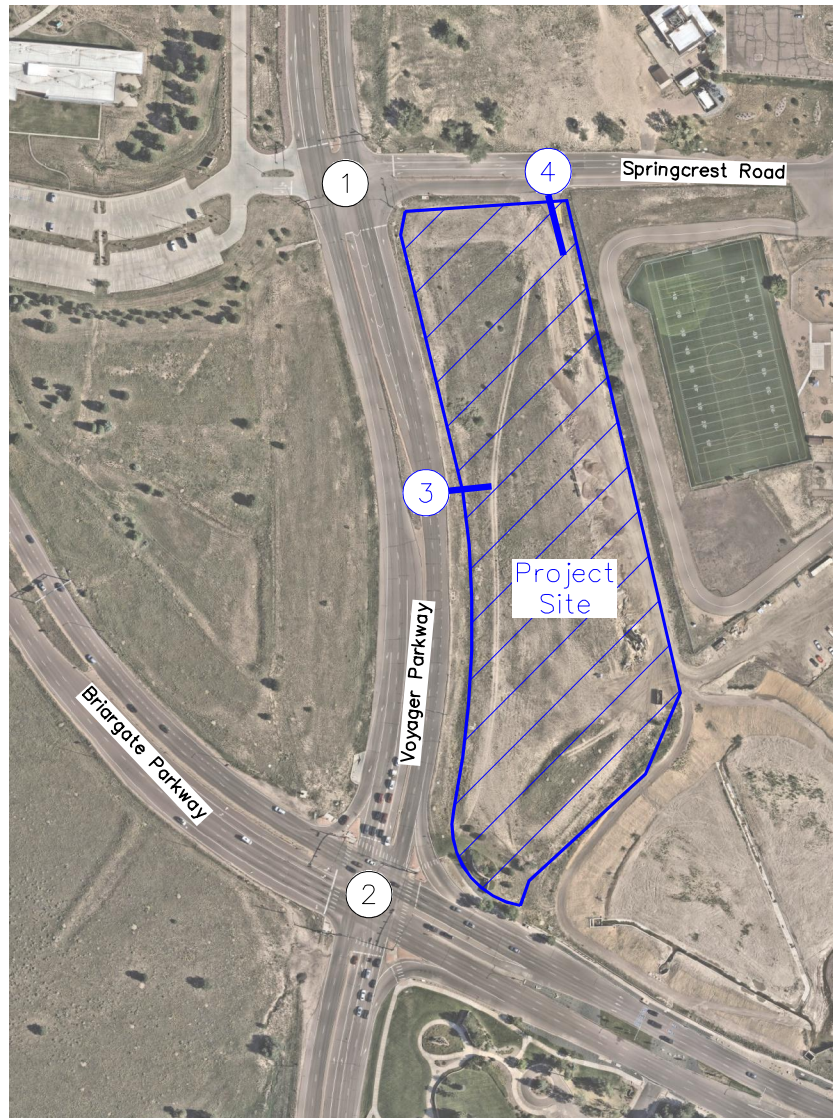
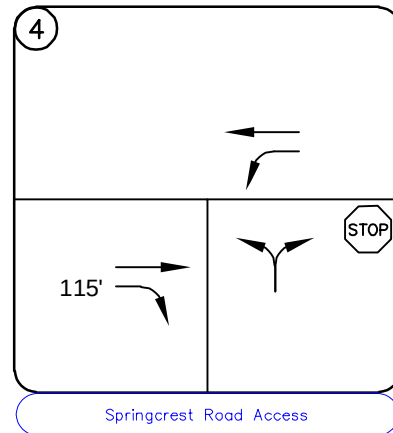
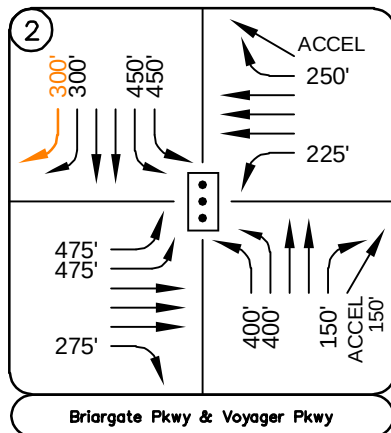
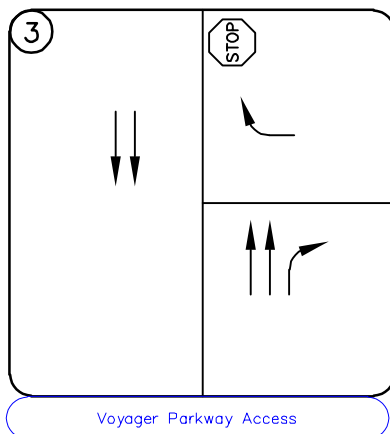
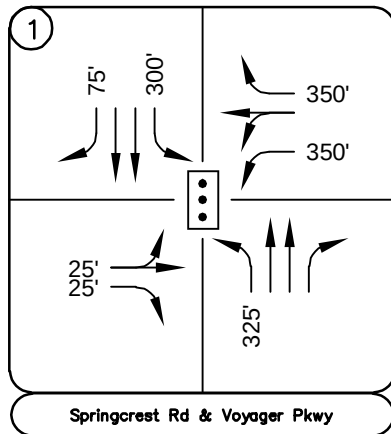
Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 10** for the 2029 horizon and **Figure 11** for the 2045 horizon.



LEGEND

- ⊗ Study Area Key Intersection
- ⊗ Project Access Intersection
- ⋮ Signalized Intersection
- STOP Stop-Controlled Approach
- Improvement
- ↪ 100' Turn Lane Length (feet)

FIGURE 10
 Briargate Multifamily
 Colorado Springs, CO
 2029 Recommended
 Geometry and Control



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- Signalized Intersection
- STOP Stop-Controlled Approach
- ← Improvement
- ↪ 100' Turn Lane Length (feet)

FIGURE 11
 Briargate Multifamily
 Colorado Springs, CO
 2045 Recommended
 Geometry and Control

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes Briargate Multifamily will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

2029 Buildout Recommendations

- With completion of the project, access will be provided by a right-in/right-out access along Voyager Parkway, approximately 675 feet south of the Springcrest Road intersection (measured center to center), and a full movement access along Springcrest Road at the existing driveway cutout, 300 feet east of the Voyager Parkway intersection (measured center to center). It is recommended that a R1-1 “STOP” sign be installed on the approach exiting the development at both accesses. Since the access along Voyager Parkway is restricted to only right turning movements, an R3-2 “NO LEFT TURN” sign could be placed under the R1-1 signs while an R6-1R “ONE WAY” sign could be placed in the center median to further identify the restricted left turn movement. A northbound right turn movement should be provided within the existing acceleration/deceleration lane along Voyager Parkway at the right-in/right-out access. In addition, an eastbound right turn lane with 115 feet of length plus an approximate 50-foot taper should be implemented at the proposed access along Springcrest Road. It is recommended that a striped chevron area be provided north of the existing southeast quadrant curb return of the Springcrest Road and Voyager Parkway intersection to allow for a taper to be introduced prior to the new right turn lane. The introduced taper will prevent a vehicle weave that could be caused by a continuous right turn lane extending from the intersection.
- Without project traffic volumes, the timing splits for the eastbound and westbound approaches for the morning peak hour at the Briargate Parkway and Voyager Parkway are recommended to be optimized in order for the overall intersection to operate at LOS D in 2029.

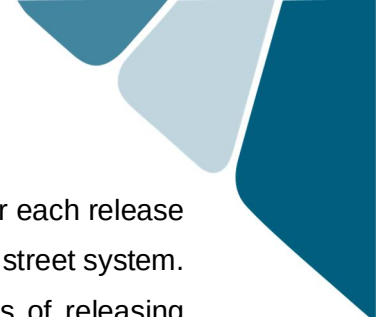
2045 Planning Level Recommendations

- Without project traffic volumes and if 2045 traffic volume projections are realized, dual southbound right turn lanes may be needed at the Briargate Parkway and Voyager Parkway

intersection in order to provide acceptable operations during the peak hours in 2045. Of note, the project only contributes six (6) percent of traffic to this turn movement. If and when dual right turn lanes are implemented, signal modifications including new signal heads, mast arm adjustments, and detection updates may be necessary to maintain proper visibility, phasing, and compliance with applicable design standards.

School Pick-up Gridlock Evaluation

- The property to the east of the proposed Briargate Multifamily development is occupied by Classical Academy elementary school. Access to the school's drop-off/pick-up queue is located approximately 450 feet to the east of the proposed Springcrest Road Access (#4), measured from center to center. Independent of the proposed Briargate Multifamily development, drop-off/pick-up queues are known to extend off the school property and into the Springcrest Road eastbound through lane and extending back into the intersection of Springcrest Road and Voyager Parkway. Of note, Briargate Multifamily development only adds six (6) trips and nine (9) trips eastbound on Springcrest Road during the morning and midday analysis periods.
- Both school start time, 8:15 AM, and the school end time, 3:30 PM, are captured in the morning and midday analysis periods, respectively. While both these analysis periods show acceptable levels of service based on volumes and predicted queues, the Synchro model does not account for the gridlock independently caused by the school traffic backing up into public streets. The traffic volumes suggest the intersection should be operating acceptably but not if vehicles are being blocked along both Springcrest Road and Voyager Parkway preventing the ability to reach saturation flow rates along these roadways. This is trend in the traffic engineering industry with public charter and private schools in urban areas because these schools typically do not have bus operations or students walking to school and the majority of student pick-ups occurs from passenger vehicles.
- It is recommended that Classical Academy elementary school and the City of Colorado Springs work together to create a solution to keep all potential drop-off/pick-up queues within the school's property. This could include a combination of staggering a grade-dependent bell schedule, or other technology-based solutions to reduce the time it takes each student to load into their respective vehicle. The most efficient method for improving vehicle queue issues at



schools is to implement a staggered bell time to reduce the vehicle demand for each release period. This would likely mitigate all vehicle queue issues to the external public street system. In addition, there are school application programs for more efficient process of releasing students and effectively having students enter vehicles in the designated pick-up areas. This consists of flaggers at the school scanning codes on vehicles approaching the designated pick-up area which transmits a message and displays on a screen which students can be released from the classroom. With this process, there are only limited students outside, and they know their parent/guardian is close to approaching the pick-up area. The flaggers also assist with supporting students into vehicles to reduce the time vehicles are in the designated pick-up area. Once the gridlock on the streets is removed from the school queues, the volumes are reported to operate acceptably at the study area intersections.

General Recommendations

- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Colorado Springs and the Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition, 2023.



Appendix A: Conceptual Site Plan

Appendix B: Intersection Count Sheets



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

Location: 1 VOYAGER PKWY & SPRINGCREST BLVD AM

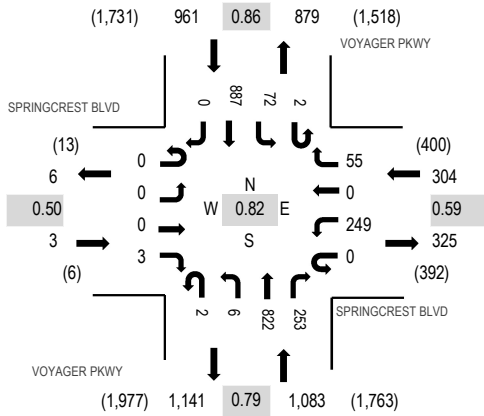
Date: Tuesday, March 18, 2025

Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour

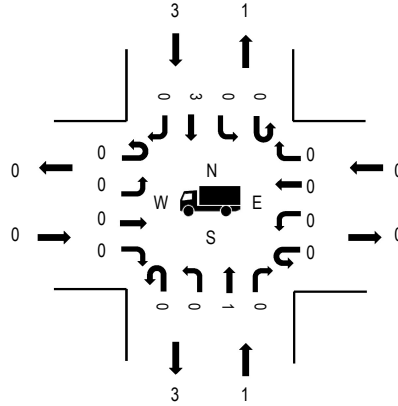
Motorized Vehicles



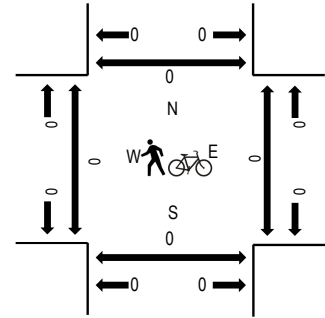
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.50
WB	0.0%	0.59
NB	0.1%	0.79
SB	0.3%	0.86
All	0.2%	0.82

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	SPRINGCREST BLVD Eastbound				SPRINGCREST BLVD Westbound				VOYAGER PKWY Northbound				VOYAGER PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	1	0	7	0	3	0	1	109	10	0	1	145	0	277	1,921
7:15 AM	0	0	0	0	1	18	0	7	0	2	177	24	0	5	215	0	449	2,301
7:30 AM	0	0	0	0	0	25	0	4	0	0	195	41	1	23	191	0	480	2,351
7:45 AM	0	0	0	1	0	71	0	20	0	0	264	80	0	27	252	0	715	2,268
8:00 AM	0	0	0	0	0	108	0	24	2	3	173	119	1	13	214	0	657	1,979
8:15 AM	0	0	0	2	0	45	0	7	0	3	190	13	0	9	230	0	499	
8:30 AM	0	0	0	0	0	35	0	4	0	2	166	13	1	7	168	1	397	
8:45 AM	0	0	0	2	0	17	0	4	2	1	168	5	0	1	226	0	426	
Count Total	0	0	0	6	1	326	0	73	4	12	1,442	305	3	86	1,641	1	3,900	
Peak Hour	0	0	0	3	0	249	0	55	2	6	822	253	2	72	887	0	2,351	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	1	1	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	1	2	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
Count Total	0	2	0	3	5	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	1	0	3	4	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Location: 1 VOYAGER PKWY & SPRINGCREST BLVD PM

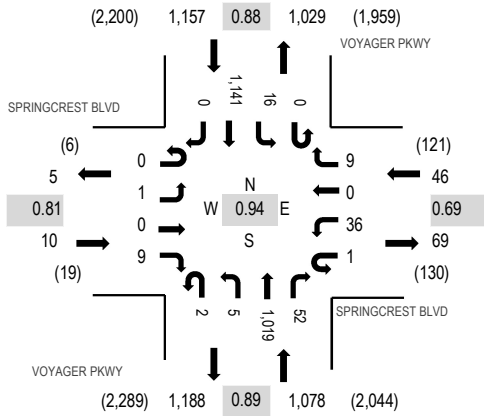
Date: Tuesday, March 18, 2025

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour

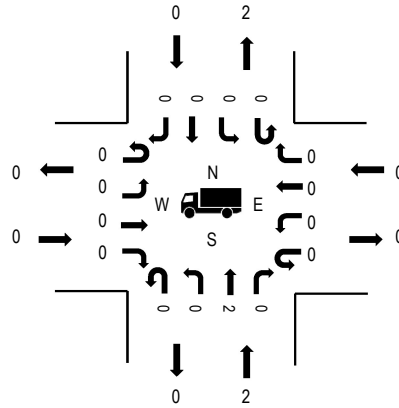
Motorized Vehicles



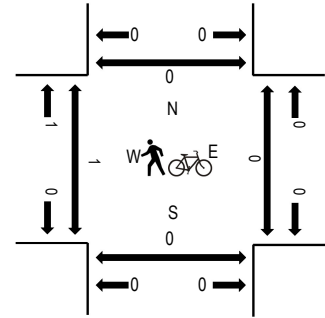
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.81
WB	0.0%	0.69
NB	0.2%	0.89
SB	0.0%	0.88
All	0.1%	0.94

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	SPRINGCREST BLVD Eastbound				SPRINGCREST BLVD Westbound				VOYAGER PKWY Northbound				VOYAGER PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	2	0	1	0	19	0	9	0	0	234	16	0	3	302	0	586	2,166
4:15 PM	0	0	0	2	0	17	0	2	0	0	234	15	0	1	290	0	561	2,183
4:30 PM	0	0	0	4	0	15	0	2	0	1	211	9	0	3	233	0	478	2,232
4:45 PM	0	1	0	3	0	9	0	4	0	3	239	13	0	3	266	0	541	2,291
5:00 PM	0	0	0	1	1	12	0	1	1	1	289	13	0	3	281	0	603	2,218
5:15 PM	0	0	0	0	0	11	0	3	0	0	257	11	0	4	324	0	610	
5:30 PM	0	0	0	5	0	4	0	1	1	1	234	15	0	6	270	0	537	
5:45 PM	0	0	0	0	0	9	0	2	1	0	234	11	0	3	208	0	468	
Count Total	0	3	0	16	1	96	0	24	3	6	1,932	103	0	26	2,174	0	4,384	
Peak Hour	0	1	0	9	1	36	0	9	2	5	1,019	52	0	16	1,141	0	2,291	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	1	1	5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
Count Total	0	2	0	0	2	Count Total	0	0	0	1	1	Count Total	1	0	0	0	1
Peak Hour	0	2	0	0	2	Peak Hour	0	0	0	1	1	Peak Hour	1	0	0	0	1



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Location: 2 VOYAGER PKWY & BRIARGATE PKWY AM

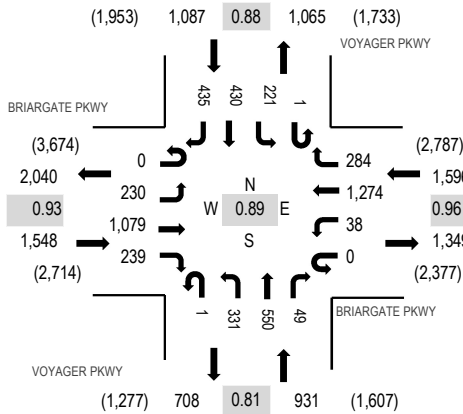
Date: Tuesday, March 18, 2025

Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour

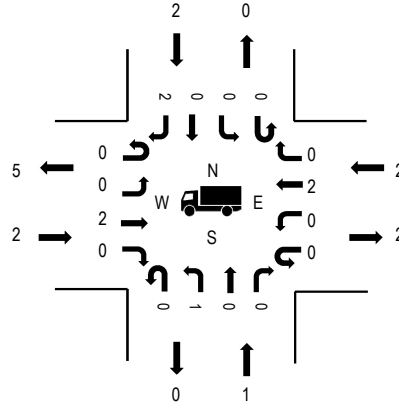
Motorized Vehicles



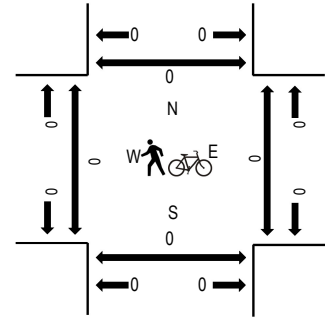
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.1%	0.93
WB	0.1%	0.96
NB	0.1%	0.81
SB	0.2%	0.88
All	0.1%	0.89

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	BRIARGATE PKWY Eastbound				BRIARGATE PKWY Westbound				VOYAGER PKWY Northbound				VOYAGER PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	32	158	30	2	3	347	19	0	98	67	7	0	27	36	88	914	4,745
7:15 AM	0	38	215	45	0	2	330	50	0	93	111	11	0	32	78	122	1,127	5,162
7:30 AM	0	63	284	73	0	9	337	58	0	95	110	14	1	29	78	106	1,257	5,110
7:45 AM	0	51	300	71	0	9	309	98	0	73	194	20	0	86	136	100	1,447	4,816
8:00 AM	0	78	280	50	0	18	298	78	1	70	135	4	0	74	138	107	1,331	4,316
8:15 AM	0	42	233	43	0	10	231	44	0	69	116	13	0	52	123	99	1,075	
8:30 AM	0	50	220	40	0	6	259	31	0	50	96	10	0	25	86	90	963	
8:45 AM	1	41	221	55	0	10	186	43	0	46	87	17	0	43	127	70	947	
Count Total	1	395	1,911	407	2	67	2,297	421	1	594	916	96	1	368	802	782	9,061	
Peak Hour	0	230	1,079	239	0	38	1,274	284	1	331	550	49	1	221	430	435	5,162	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1	1	0	1	3	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	1	2	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	0	1	2	1	4	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	1	1	0	0	2	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	2	0	1	0	3	8:30 AM	0	0	0	0	0	8:30 AM	0	0	1	0	1
8:45 AM	1	1	0	0	2	8:45 AM	0	0	0	0	0	8:45 AM	0	0	1	0	1
Count Total	7	4	3	3	17	Count Total	0	0	0	0	0	Count Total	0	0	2	0	2
Peak Hour	2	1	2	2	7	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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Location: 2 VOYAGER PKWY & BRIARGATE PKWY PM

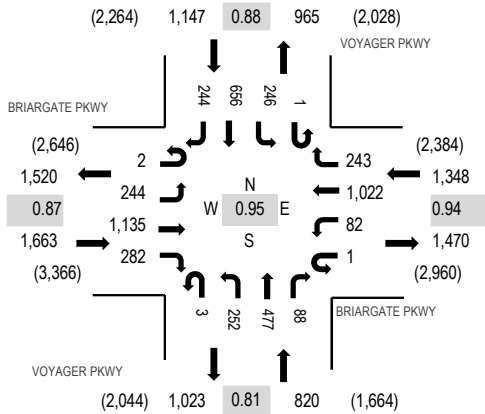
Date: Tuesday, March 18, 2025

Peak Hour: 04:00 PM - 05:00 PM

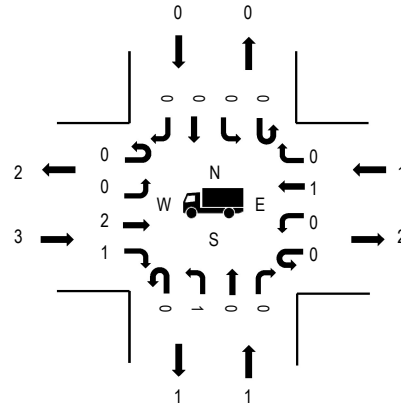
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour

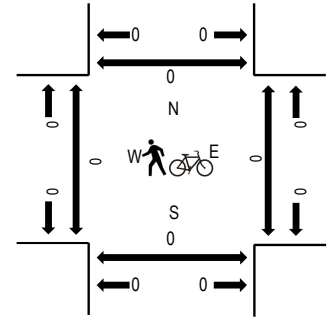
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.2%	0.87
WB	0.1%	0.94
NB	0.1%	0.81
SB	0.0%	0.88
All	0.1%	0.95

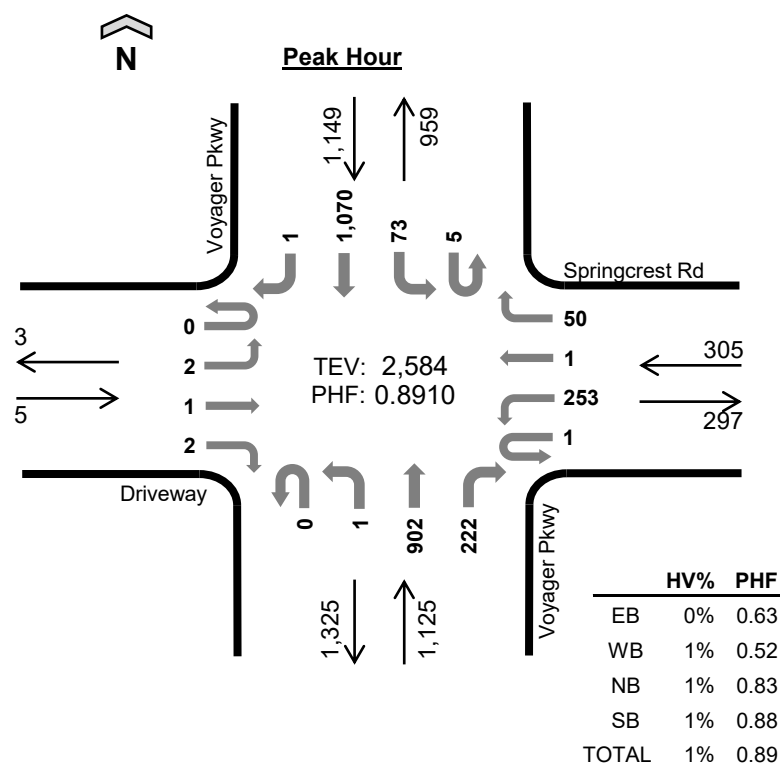
Traffic Counts - Motorized Vehicles

Interval Start Time	BRIARGATE PKWY Eastbound				BRIARGATE PKWY Westbound				VOYAGER PKWY Northbound				VOYAGER PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	1	62	283	51	0	24	275	61	1	88	124	18	0	69	177	72	1,306	4,978
4:15 PM	0	62	305	88	0	16	270	65	0	49	120	24	1	67	171	68	1,306	4,919
4:30 PM	0	55	248	69	0	23	231	48	2	77	117	22	0	42	162	43	1,139	4,940
4:45 PM	1	65	299	74	1	19	246	69	0	38	116	24	0	68	146	61	1,227	4,895
5:00 PM	1	71	258	74	0	19	205	64	1	64	167	30	0	53	167	73	1,247	4,700
5:15 PM	0	79	343	76	0	20	216	66	0	39	122	32	0	75	201	58	1,327	
5:30 PM	0	71	250	68	0	21	158	63	0	51	115	24	0	57	163	53	1,094	
5:45 PM	0	58	294	60	1	19	133	51	0	40	136	23	0	50	132	35	1,032	
Count Total	3	523	2,280	560	2	161	1,734	487	4	446	1,017	197	1	481	1,319	463	9,678	
Peak Hour	2	244	1,135	282	1	82	1,022	243	3	252	477	88	1	246	656	244	4,978	

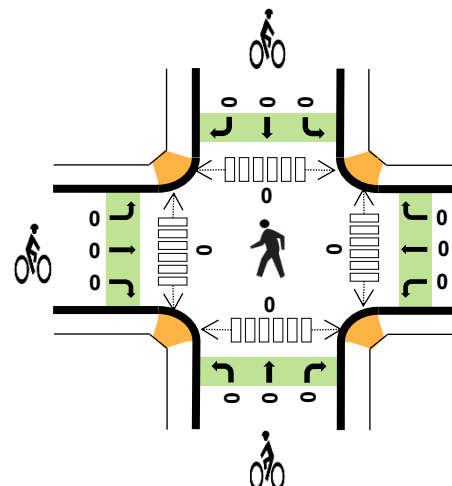
Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:15 PM	1	1	1	0	3	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:45 PM	2	0	0	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	2	0	2
5:15 PM	1	0	0	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:30 PM	2	0	0	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
Count Total	6	1	2	0	9	Count Total	0	0	0	0	0	Count Total	0	0	2	0	2
Peak Hour	3	1	1	0	5	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Voyager Pkwy Springcrest Rd



Date: 2/3/2026
Count Period: 3:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



Peak Hour Count Summaries

Peak Hour Interval Start		Driveway				Springcrest Rd				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	1	0	0	0	10	0	3	0	0	210	58	1	11	203	0	497	0
3:15 PM		0	0	0	0	1	3	0	3	0	0	252	86	0	41	264	0	650	0
3:30 PM		0	0	1	1	0	123	0	24	0	1	216	58	2	14	285	0	725	0
3:45 PM		0	1	0	1	0	117	1	20	0	0	224	20	2	7	318	1	712	2,584
Pk Hr	All	0	2	1	2	1	253	1	50	0	1	902	222	5	73	1,070	1	2,584	
	HV	0	0	0	0	0	2	0	2	0	0	5	2	0	4	13	0	28	
	HV%	-	0%	0%	0%	0%	1%	0%	4%	-	0%	1%	1%	0%	5%	1%	0%	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:00 PM	0	1	1	4	6	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	4	6	11	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	2	1	2	5	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	4	7	17	28	0	0	0	0	0	0	0	0	0	0

Count Summaries - All Vehicles

Interval Start		Driveway				Springcrest Rd				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	1	0	0	0	10	0	3	0	0	210	58	1	11	203	0	497	0
3:15 PM		0	0	0	0	1	3	0	3	0	0	252	86	0	41	264	0	650	0
3:30 PM		0	0	1	1	0	123	0	24	0	1	216	58	2	14	285	0	725	0
3:45 PM		0	1	0	1	0	117	1	20	0	0	224	20	2	7	318	1	712	2,584
Count Total		0	2	1	2	1	253	1	50	0	1	902	222	5	73	1,070	1	2,584	
Pk Hr	All	0	2	1	2	1	253	1	50	0	1	902	222	5	73	1,070	1	2,584	
	HV	0	0	0	0	0	2	0	2	0	0	5	2	0	4	13	0	28	
	HV%	-	0%	0%	0%	0%	1%	0%	4%	-	0%	1%	1%	0%	5%	1%	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:00 PM	0	1	1	4	6	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	4	6	11	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	2	1	2	5	0	0	0	0	0	0	0	0	0	0
Count Total	0	4	7	17	28	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	4	7	17	28	0	0	0	0	0	0	0	0	0	0

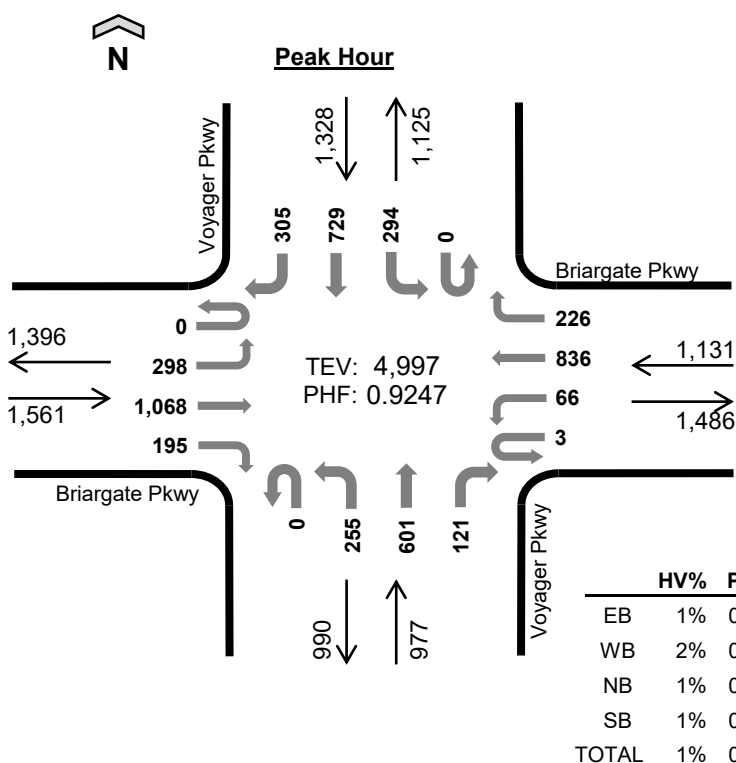
Count Summaries - Heavy Vehicles

Interval Start	Driveway				Springcrest Rd				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	2	2	0	6	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	6	0
3:30 PM	0	0	0	0	0	0	0	1	0	0	3	1	0	2	4	0	11	0
3:45 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	0	2	0	5	28
Count Total	0	0	0	0	0	2	0	2	0	0	5	2	0	4	13	0	28	
Pk Hr Heavy	0	0	0	0	0	2	0	2	0	0	5	2	0	4	13	0	28	

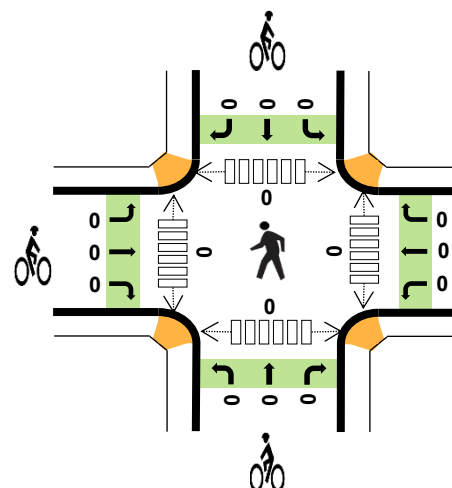
Count Summaries - Bikes

Interval Start	Driveway				Springcrest Rd				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Voyager Pkwy Briargate Pkwy



Date: 2/3/2026
Count Period: 3:00 PM to 4:00 PM
Peak Hour: 3:00 PM to 4:00 PM



Peak Hour Count Summaries

Peak Hour Interval Start		Briargate Pkwy				Briargate Pkwy				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	64	221	48	1	13	183	61	0	51	159	36	0	36	143	52	1,068	0
3:15 PM		0	99	308	48	1	19	215	73	0	62	151	37	0	67	128	58	1,266	0
3:30 PM		0	73	253	52	0	16	208	52	0	91	165	22	0	93	228	98	1,351	0
3:45 PM		0	62	286	47	1	18	230	40	0	51	126	26	0	98	230	97	1,312	4,997
Pk Hr	All	0	298	1,068	195	3	66	836	226	0	255	601	121	0	294	729	305	4,997	
	HV	0	0	8	1	0	2	15	0	0	1	7	1	0	0	5	10	50	
	HV%	-	0%	1%	1%	0%	3%	2%	0%	-	0%	1%	1%	-	0%	1%	3%	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:00 PM	4	4	2	2	12	0	0	0	0	0	0	0	0	0	0
3:15 PM	2	7	1	3	13	0	0	0	0	0	0	0	0	0	0
3:30 PM	2	2	4	6	14	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	4	2	4	11	0	0	0	0	0	0	0	0	0	0
Peak Hour	9	17	9	15	50	0	0	0	0	0	0	0	0	0	0

Count Summaries - All Vehicles

Interval Start		Briargate Pkwy				Briargate Pkwy				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	64	221	48	1	13	183	61	0	51	159	36	0	36	143	52	1,068	0
3:15 PM		0	99	308	48	1	19	215	73	0	62	151	37	0	67	128	58	1,266	0
3:30 PM		0	73	253	52	0	16	208	52	0	91	165	22	0	93	228	98	1,351	0
3:45 PM		0	62	286	47	1	18	230	40	0	51	126	26	0	98	230	97	1,312	4,997
Count Total		0	298	1,068	195	3	66	836	226	0	255	601	121	0	294	729	305	4,997	
Pk Hr	All	0	298	1,068	195	3	66	836	226	0	255	601	121	0	294	729	305	4,997	
	HV	0	0	8	1	0	2	15	0	0	1	7	1	0	0	5	10	50	
	HV%	-	0%	1%	1%	0%	3%	2%	0%	-	0%	1%	1%	-	0%	1%	3%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:00 PM	4	4	2	2	12	0	0	0	0	0	0	0	0	0	0
3:15 PM	2	7	1	3	13	0	0	0	0	0	0	0	0	0	0
3:30 PM	2	2	4	6	14	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	4	2	4	11	0	0	0	0	0	0	0	0	0	0
Count Total	9	17	9	15	50	0	0	0	0	0	0	0	0	0	0
Peak Hour	9	17	9	15	50	0	0	0	0	0	0	0	0	0	0

Count Summaries - Heavy Vehicles

Interval Start	Briargate Pkwy				Briargate Pkwy				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	4	0	0	2	2	0	0	1	1	0	0	0	1	1	12	0
3:15 PM	0	0	1	1	0	0	7	0	0	0	1	0	0	0	0	3	13	0
3:30 PM	0	0	2	0	0	0	2	0	0	0	4	0	0	0	3	3	14	0
3:45 PM	0	0	1	0	0	0	4	0	0	0	1	1	0	0	1	3	11	50
Count Total	0	0	8	1	0	2	15	0	0	1	7	1	0	0	5	10	50	
Pk Hr Heavy	0	0	8	1	0	2	15	0	0	1	7	1	0	0	5	10	50	

Count Summaries - Bikes

Interval Start	Briargate Pkwy				Briargate Pkwy				Voyager Pkwy				Voyager Pkwy				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Appendix C: Future Traffic Projections

CDOT OTIS Growth Projections: Briargate MF

ROUTE	REFPT	ENDREFPT	LENGTH	UPDATEYR	AADT	YR20FACTOR	GROWTH RATE	DHV	DD	LOCATION
021B	149	151.646	2.561	2023	57000	1.3	1.32%	8	54	ON POWERS BLVD N/O WOODMEN RD COLORADO SPRINGS
021B	151.646	154.112	2.524	2023	48000	1.31	1.36%	10	54	ON SH 21 POWERS BLVD 0.6 MI S/O OLD RANCH RD COLO SPGS
025A	150.303	151.66	1.314	2023	130000	1.3	1.32%	8	53	ON I-25 S/O BRIARGATE PKWY COLORADO SPRINGS
025A	151.66	153.2	1.599	2023	115000	1.3	1.32%	8.5	52	ON I-25 N/O BRIARGATE PKWY COLORADO SPRINGS
					AVERAGE	1.3025	1.33%			



Appendix D: Trip Generation Worksheets

Project Briargate MF
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by AS Date April 01, 2025 Job No. 296922006
 Checked by TJD Date April 01, 2025 Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

$$X = 250$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 275)

$$\begin{aligned}
 (T) &= 0.44 (X) - 11.61 \\
 (T) &= 0.44 * (250.0) - 11.61 \\
 &= 100
 \end{aligned}$$

Directional Distribution: 23% ent. 77% exit.

T = 100 Average Vehicle Trip Ends

23	entering	77	exiting
23	+	77	= 100

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 276)

$$\begin{aligned}
 (T) &= 0.39 (X) + 0.34 \\
 (T) &= 0.39 * (250.0) + 0.34 \\
 &= 98
 \end{aligned}$$

Directional Distribution: 61% ent. 39% exit.

T = 98 Average Vehicle Trip Ends

60	entering	38	exiting
60	+	38	= 98

Weekday (200 Series Page 274)

$$\begin{aligned}
 (T) &= 4.77 (X) - 46.46 \\
 (T) &= 4.77 * (250.0) - 46.46 \\
 &= 1148
 \end{aligned}$$

Directional Distribution: 50% ent. 50% exit.

T = 1148 Average Vehicle Trip Ends

574	entering	574	exiting
574	+	574	= 1148



Appendix E: Intersection Analysis Worksheets

Timings
1: Voyager Parkway & Springcrest Road

2025 Existing AM
03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	3	249	1	55	8	822	253	74	887	1
Future Volume (vph)	1	1	3	249	1	55	8	822	253	74	887	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

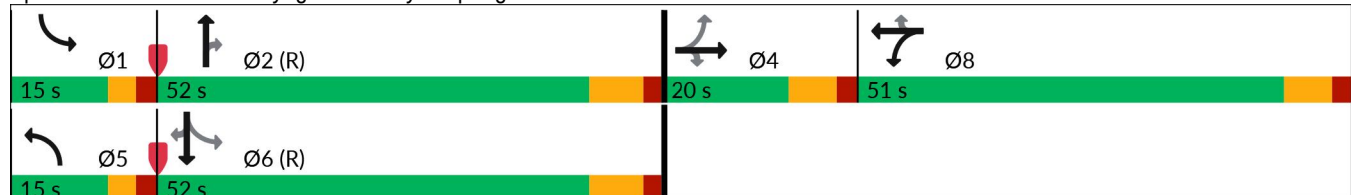
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2025 Existing AM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	3	249	1	55	8	822	253	74	887	1
Future Volume (veh/h)	1	1	3	249	1	55	8	822	253	74	887	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	4	305	0	67	10	1002	309	90	1082	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	5	5	9	383	0	171	16	2360	1053	363	2435	1086
Arrive On Green	0.01	0.01	0.01	0.11	0.00	0.11	0.01	0.88	0.88	0.03	0.69	0.69
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	4	305	0	67	10	1002	309	90	1082	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.3	11.5	0.0	5.4	0.8	7.3	4.2	2.2	19.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.3	11.5	0.0	5.4	0.8	7.3	4.2	2.2	19.0	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	0	9	383	0	171	16	2360	1053	363	2435	1086
V/C Ratio(X)	0.18	0.00	0.42	0.80	0.00	0.39	0.61	0.42	0.29	0.25	0.44	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2360	1053	438	2435	1086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	68.4	60.1	0.0	57.4	67.9	3.1	3.0	7.0	9.8	6.8
Incr Delay (d2), s/veh	7.9	0.0	27.4	3.8	0.0	1.5	27.6	0.5	0.6	0.4	0.6	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(50%),veh/ln	0.1	0.0	0.2	5.4	0.0	2.3	0.5	2.1	1.3	0.9	7.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.2	0.0	95.8	63.9	0.0	58.8	95.5	3.6	3.6	7.4	10.4	6.8
LnGrp LOS	E		F	E		E	F	A	A	A	B	A
Approach Vol, veh/h	6		372			1321			1173			
Approach Delay, s/veh	89.2		63.0			4.3			10.2			
Approach LOS	F		E			A			B			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	99.1		7.8	6.3	102.0		21.9				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.2	9.3		2.3	2.8	21.0		13.5				
Green Ext Time (p_c), s	0.1	10.5		0.0	0.0	8.6		1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	14.5											
HCM 7th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2026 Existing MID
02/16/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	2	254	1	50	1	902	222	73	1070	1
Future Volume (vph)	2	1	2	254	1	50	1	902	222	73	1070	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

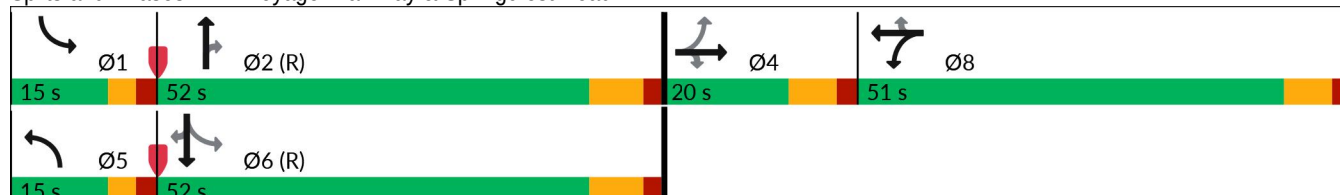
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2026 Existing MID
02/16/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1	2	254	1	50	1	902	222	73	1070	1
Future Volume (veh/h)	2	1	2	254	1	50	1	902	222	73	1070	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2	3	489	0	96	1	1087	267	83	1216	1
Peak Hour Factor	0.63	0.63	0.63	0.52	0.52	0.52	0.83	0.83	0.83	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	8	6	12	583	0	259	2	2197	980	357	2304	1028
Arrive On Green	0.01	0.01	0.01	0.16	0.00	0.16	0.00	1.00	1.00	0.03	0.64	0.64
Sat Flow, veh/h	1107	738	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	5	0	3	489	0	96	1	1087	267	83	1216	1
Grp Sat Flow(s),veh/h/ln	1845	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.3	18.1	0.0	7.3	0.1	0.0	0.0	2.3	25.4	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.3	18.1	0.0	7.3	0.1	0.0	0.0	2.3	25.4	0.0
Prop In Lane	0.60		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	0	12	583	0	259	2	2197	980	357	2304	1028
V/C Ratio(X)	0.35	0.00	0.24	0.84	0.00	0.37	0.51	0.49	0.27	0.23	0.53	0.00
Avail Cap(c_a), veh/h	174	0	152	1154	0	513	131	2197	980	432	2304	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	68.1	56.2	0.0	51.7	68.8	0.0	0.0	9.0	13.6	9.0
Incr Delay (d2), s/veh	14.4	0.0	9.9	3.3	0.0	0.9	113.9	0.7	0.6	0.3	0.9	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(50%),veh/ln	0.2	0.0	0.1	8.5	0.0	3.0	0.1	0.2	0.2	1.0	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.5	0.0	77.9	59.5	0.0	52.5	182.7	0.7	0.6	9.3	14.5	9.0
LnGrp LOS	F		E	E		D	F	A	A	A	B	A
Approach Vol, veh/h	8			585			1355			1300		
Approach Delay, s/veh	80.8			58.4			0.8			14.2		
Approach LOS	F			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	91.5		8.1	5.2	95.6		29.2				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.3	2.0		2.4	2.1	27.4		20.1				
Green Ext Time (p_c), s	0.1	11.9		0.0	0.0	8.4		2.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.7											
HCM 7th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings

1: Voyager Parkway & Springcrest Road

2025 Existing PM

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	9	37	1	9	7	1019	52	16	1141	1
Future Volume (vph)	1	1	9	37	1	9	7	1019	52	16	1141	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

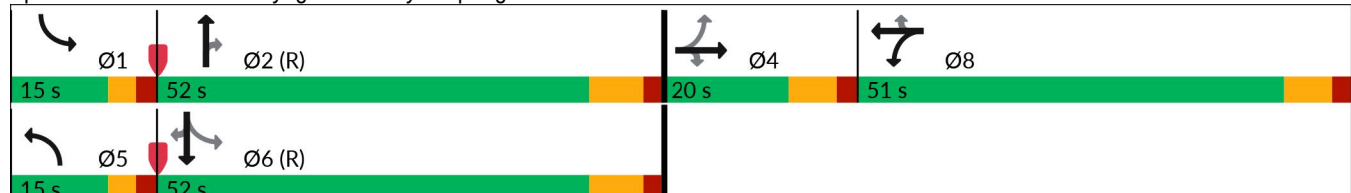
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2025 Existing PM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	9	37	1	9	7	1019	52	16	1141	1
Future Volume (veh/h)	1	1	9	37	1	9	7	1019	52	16	1141	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	10	40	0	10	7	1084	55	17	1214	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	10	17	88	0	39	12	2696	1203	452	2721	1214
Arrive On Green	0.01	0.01	0.01	0.02	0.00	0.02	0.01	1.00	1.00	0.01	0.77	0.77
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	10	40	0	10	7	1084	55	17	1214	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.1	0.0	0.9	1.5	0.0	0.9	0.5	0.0	0.0	0.3	16.8	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.9	1.5	0.0	0.9	0.5	0.0	0.0	0.3	16.8	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	17	88	0	39	12	2696	1203	452	2721	1214
V/C Ratio(X)	0.10	0.00	0.59	0.45	0.00	0.26	0.58	0.40	0.05	0.04	0.45	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2696	1203	556	2721	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.6	0.0	68.0	66.4	0.0	66.0	67.9	0.0	0.0	3.6	5.8	3.8
Incr Delay (d2), s/veh	2.3	0.0	28.6	3.6	0.0	3.4	33.6	0.4	0.1	0.0	0.5	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(50%),veh/ln	0.1	0.0	0.5	0.7	0.0	0.4	0.4	0.2	0.0	0.1	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.9	0.0	96.6	70.0	0.0	69.4	101.5	0.4	0.1	3.6	6.3	3.8
LnGrp LOS	E		F	E		E	F	A	A	A	A	A
Approach Vol, veh/h	12		50			1146			1232			
Approach Delay, s/veh	92.1		69.9			1.0			6.2			
Approach LOS	F		E			A			A			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	112.2		8.5	5.9	113.2		10.4				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	2.3	2.0		2.9	2.5	18.8		3.5				
Green Ext Time (p_c), s	0.0	10.6		0.0	0.0	10.4		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	5.5											
HCM 7th LOS	A											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings 1: Voyager Parkway & Springcrest Road

2029 Background AM
03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	3	263	1	58	8	867	267	78	935	1
Future Volume (vph)	1	1	3	263	1	58	8	867	267	78	935	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

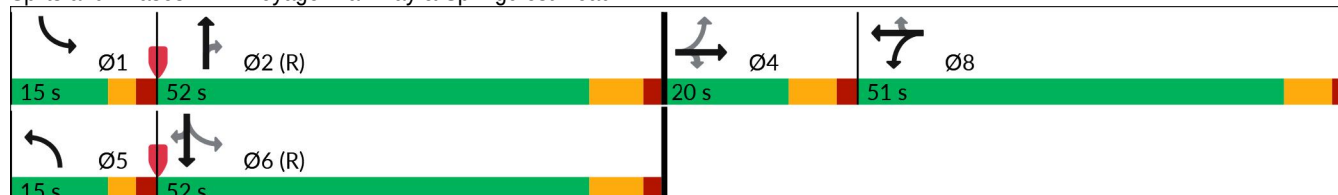
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2029 Background AM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	3	263	1	58	8	867	267	78	935	1
Future Volume (veh/h)	1	1	3	263	1	58	8	867	267	78	935	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	4	322	0	71	10	1057	326	95	1140	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	5	5	9	402	0	179	16	2336	1042	342	2416	1078
Arrive On Green	0.01	0.01	0.01	0.11	0.00	0.11	0.01	0.87	0.87	0.03	0.68	0.68
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	4	322	0	71	10	1057	326	95	1140	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.3	12.2	0.0	5.7	0.8	8.5	4.9	2.4	20.9	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.3	12.2	0.0	5.7	0.8	8.5	4.9	2.4	20.9	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	0	9	402	0	179	16	2336	1042	342	2416	1078
V/C Ratio(X)	0.18	0.00	0.42	0.80	0.00	0.40	0.61	0.45	0.31	0.28	0.47	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2336	1042	414	2416	1078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	68.4	59.7	0.0	56.9	67.9	3.5	3.3	7.4	10.4	7.1
Incr Delay (d2), s/veh	7.9	0.0	27.4	3.7	0.0	1.4	27.3	0.5	0.7	0.4	0.7	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(50%),veh/ln	0.1	0.0	0.2	5.7	0.0	0.1	0.5	2.4	1.5	0.9	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.2	0.0	95.8	63.4	0.0	58.3	95.3	4.0	4.0	7.8	11.1	7.1
LnGrp LOS	E		F	E		E	F	A	A	A	B	A
Approach Vol, veh/h	6			393			1393			1236		
Approach Delay, s/veh	89.2			62.5			4.7			10.8		
Approach LOS	F			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	98.2		7.8	6.3	101.3		22.6				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.4	10.5		2.3	2.8	22.9		14.2				
Green Ext Time (p_c), s	0.1	11.3		0.0	0.0	8.9		1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	14.9											
HCM 7th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2029 Background MID
02/16/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	2	268	1	53	1	951	234	77	1128	1
Future Volume (vph)	2	1	2	268	1	53	1	951	234	77	1128	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

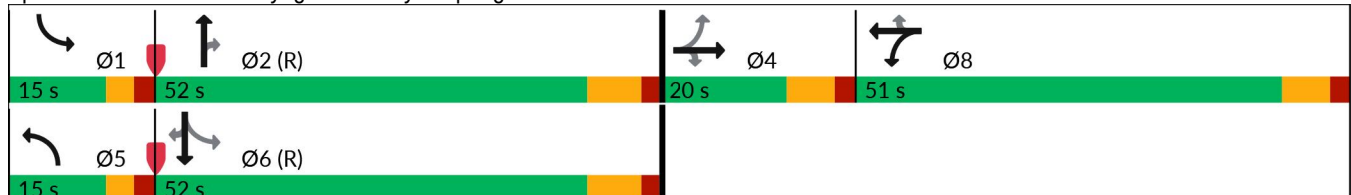
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2029 Background MID
02/16/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1	2	268	1	53	1	951	234	77	1128	1
Future Volume (veh/h)	2	1	2	268	1	53	1	951	234	77	1128	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2	3	516	0	102	1	1146	282	88	1282	1
Peak Hour Factor	0.63	0.63	0.63	0.52	0.52	0.52	0.83	0.83	0.83	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	8	6	12	611	0	272	2	2163	965	339	2275	1015
Arrive On Green	0.01	0.01	0.01	0.17	0.00	0.17	0.00	1.00	1.00	0.03	0.63	0.63
Sat Flow, veh/h	1107	738	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	5	0	3	516	0	102	1	1146	282	88	1282	1
Grp Sat Flow(s),veh/h/ln	1845	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.3	19.1	0.0	7.8	0.1	0.0	0.0	2.5	28.1	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.3	19.1	0.0	7.8	0.1	0.0	0.0	2.5	28.1	0.0
Prop In Lane	0.60		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	0	12	611	0	272	2	2163	965	339	2275	1015
V/C Ratio(X)	0.35	0.00	0.24	0.84	0.00	0.37	0.51	0.53	0.29	0.26	0.56	0.00
Avail Cap(c_a), veh/h	174	0	152	1154	0	513	131	2163	965	412	2275	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	68.1	55.6	0.0	50.9	68.8	0.0	0.0	9.4	14.6	9.4
Incr Delay (d2), s/veh	14.4	0.0	9.9	3.3	0.0	0.9	106.8	0.7	0.6	0.4	1.0	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(50%),veh/ln	0.2	0.0	0.1	9.0	0.0	3.2	0.1	0.2	0.2	1.0	11.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.5	0.0	77.9	58.9	0.0	51.7	175.6	0.7	0.6	9.8	15.6	9.4
LnGrp LOS	F		E	E		D	F	A	A	A	B	A
Approach Vol, veh/h	8			618			1429			1371		
Approach Delay, s/veh	80.8			57.7			0.8			15.3		
Approach LOS	F			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	90.2		8.1	5.2	94.5		30.3				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.5	2.0		2.4	2.1	30.1		21.1				
Green Ext Time (p_c), s	0.1	12.9		0.0	0.0	8.0		2.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	17.0											
HCM 7th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2029 Background PM
03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	9	39	1	9	7	1074	55	17	1203	1
Future Volume (vph)	1	1	9	39	1	9	7	1074	55	17	1203	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

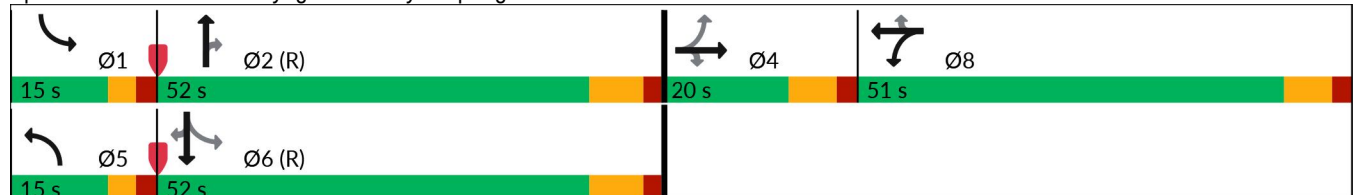
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2029 Background PM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	9	39	1	9	7	1074	55	17	1203	1
Future Volume (veh/h)	1	1	9	39	1	9	7	1074	55	17	1203	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	10	42	0	10	7	1143	59	18	1280	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	10	10	17	89	0	40	12	2693	1201	431	2720	1213
Arrive On Green	0.01	0.01	0.01	0.03	0.00	0.03	0.01	1.00	1.00	0.01	0.77	0.77
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	10	42	0	10	7	1143	59	18	1280	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.1	0.0	0.9	1.6	0.0	0.9	0.5	0.0	0.0	0.3	18.2	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.9	1.6	0.0	0.9	0.5	0.0	0.0	0.3	18.2	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	17	89	0	40	12	2693	1201	431	2720	1213
V/C Ratio(X)	0.10	0.00	0.59	0.47	0.00	0.25	0.58	0.42	0.05	0.04	0.47	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2693	1201	534	2720	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.6	0.0	68.0	66.4	0.0	66.0	67.9	0.0	0.0	3.6	5.9	3.8
Incr Delay (d2), s/veh	2.3	0.0	28.6	3.8	0.0	3.3	33.0	0.4	0.1	0.0	0.6	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(50%),veh/ln	0.1	0.0	0.5	0.8	0.0	0.4	0.4	0.2	0.0	0.1	6.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.9	0.0	96.6	70.2	0.0	69.3	100.9	0.4	0.1	3.7	6.5	3.8
LnGrp LOS	E		F	E		E	F	A	A	A	A	A
Approach Vol, veh/h	12				52		1209				1299	
Approach Delay, s/veh	92.1				70.0		1.0				6.5	
Approach LOS	F				E		A				A	
Timer - Assigned Phs	1	2			4	5	6	8				
Phs Duration (G+Y+Rc), s	7.0	112.1			8.5	5.9	113.1	10.5				
Change Period (Y+Rc), s	5.0	7.5			7.0	5.0	7.5	7.0				
Max Green Setting (Gmax), s	10.0	44.5			13.0	10.0	44.5	44.0				
Max Q Clear Time (g_c+I1), s	2.3	2.0			2.9	2.5	20.2	3.6				
Green Ext Time (p_c), s	0.0	11.5			0.0	0.0	10.8	0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			5.6									
HCM 7th LOS			A									
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings

1: Voyager Parkway & Springcrest Road

2029 Total AM

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	3	263	1	58	70	882	268	83	935	1
Future Volume (vph)	1	1	3	263	1	58	70	882	268	83	935	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

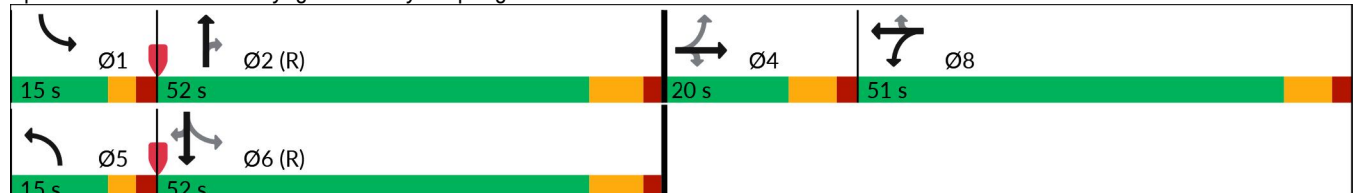
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2029 Total AM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	3	263	1	58	70	882	268	83	935	1
Future Volume (veh/h)	1	1	3	263	1	58	70	882	268	83	935	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	4	322	0	71	85	1076	327	101	1140	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	5	5	9	402	0	179	106	2326	1038	308	2238	998
Arrive On Green	0.01	0.01	0.01	0.11	0.00	0.11	0.06	0.65	0.65	0.03	0.63	0.63
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	4	322	0	71	85	1076	327	101	1140	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.3	12.2	0.0	5.7	6.5	20.7	12.4	2.8	24.1	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.3	12.2	0.0	5.7	6.5	20.7	12.4	2.8	24.1	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	11	0	9	402	0	179	106	2326	1038	308	2238	998
V/C Ratio(X)	0.18	0.00	0.42	0.80	0.00	0.40	0.80	0.46	0.32	0.33	0.51	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2326	1038	375	2238	998
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	68.4	59.7	0.0	56.9	64.1	11.8	10.4	9.7	13.9	9.5
Incr Delay (d2), s/veh	7.9	0.0	27.4	3.7	0.0	1.4	25.1	0.7	0.8	0.6	0.8	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(50%),veh/ln	0.1	0.0	0.2	5.7	0.0	0.1	3.7	8.2	4.5	1.1	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.2	0.0	95.8	63.4	0.0	58.3	89.2	12.5	11.2	10.3	14.8	9.5
LnGrp LOS	E		F	E		E	F	B	B	B	B	A
Approach Vol, veh/h	6		393				1488			1242		
Approach Delay, s/veh	89.2		62.5				16.6			14.4		
Approach LOS	F		E				B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	97.8		7.8	13.2	94.4		22.6				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.8	22.7		2.3	8.5	26.1		14.2				
Green Ext Time (p_c), s	0.1	9.7		0.0	0.0	8.2		1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	21.6											
HCM 7th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2029 Total MID
02/16/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	2	283	1	53	3	955	236	84	1128	1
Future Volume (vph)	2	1	2	283	1	53	3	955	236	84	1128	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

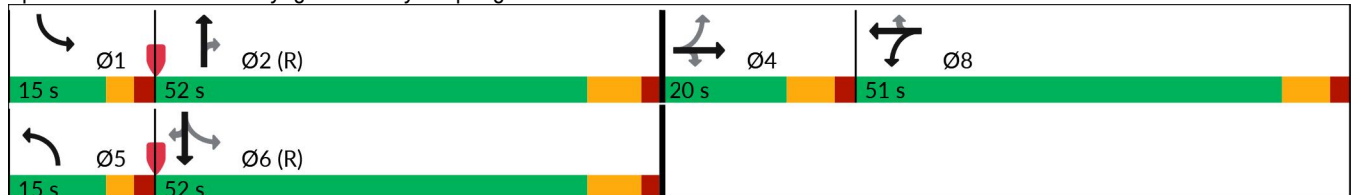
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2029 Total MID
02/16/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1	2	283	1	53	3	955	236	84	1128	1
Future Volume (veh/h)	2	1	2	283	1	53	3	955	236	84	1128	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2	3	545	0	102	4	1151	284	95	1282	1
Peak Hour Factor	0.63	0.63	0.63	0.52	0.52	0.52	0.83	0.83	0.83	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	8	6	12	642	0	286	7	2124	947	229	2234	996
Arrive On Green	0.01	0.01	0.01	0.18	0.00	0.18	0.00	0.19	0.19	0.03	0.62	0.62
Sat Flow, veh/h	1107	738	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	5	0	3	545	0	102	4	1151	284	95	1282	1
Grp Sat Flow(s),veh/h/ln	1845	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.0	0.3	20.1	0.0	7.7	0.3	39.6	20.8	2.8	29.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.3	20.1	0.0	7.7	0.3	39.6	20.8	2.8	29.0	0.0
Prop In Lane	0.60		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	0	12	642	0	286	7	2124	947	229	2234	996
V/C Ratio(X)	0.35	0.00	0.24	0.85	0.00	0.36	0.54	0.54	0.30	0.42	0.57	0.00
Avail Cap(c_a), veh/h	174	0	152	1154	0	513	131	2124	947	297	2234	996
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	68.1	55.0	0.0	49.9	68.8	38.9	31.3	17.9	15.5	10.0
Incr Delay (d2), s/veh	14.4	0.0	9.9	3.3	0.0	0.8	48.9	1.0	0.8	1.2	1.1	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(50%),veh/ln	0.2	0.0	0.1	9.5	0.0	3.2	0.2	19.6	9.3	1.2	12.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.5	0.0	77.9	58.2	0.0	50.6	117.7	39.8	32.1	19.1	16.6	10.0
LnGrp LOS	F		E	E		D	F	D	C	B	B	B
Approach Vol, veh/h	8			647			1439			1378		
Approach Delay, s/veh	80.8			57.0			38.5			16.8		
Approach LOS	F			E			D			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	88.7		8.1	5.6	92.9		31.5				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	4.8	41.6		2.4	2.3	31.0		22.1				
Green Ext Time (p_c), s	0.1	2.1		0.0	0.0	7.7		2.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	33.4											
HCM 7th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings

1: Voyager Parkway & Springcrest Road

2029 Total PM

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	9	39	1	9	37	1082	58	29	1203	1
Future Volume (vph)	1	1	9	39	1	9	37	1082	58	29	1203	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

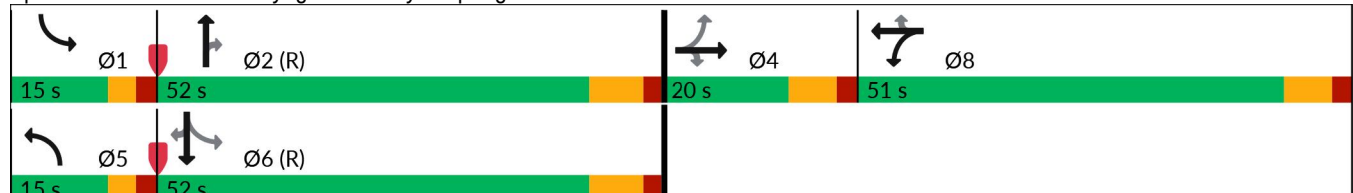
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2029 Total PM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	9	39	1	9	37	1082	58	29	1203	1
Future Volume (veh/h)	1	1	9	39	1	9	37	1082	58	29	1203	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	10	42	0	10	39	1151	62	31	1280	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	10	10	17	91	0	40	50	2715	1211	437	2687	1199
Arrive On Green	0.01	0.01	0.01	0.03	0.00	0.03	0.06	1.00	1.00	0.02	0.74	0.74
Sat Flow, veh/h	927	927	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	2	0	10	42	0	10	39	1151	62	31	1280	1
Grp Sat Flow(s),veh/h/ln	1854	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.1	0.0	0.9	1.6	0.0	0.8	2.9	0.0	0.0	0.6	19.4	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.9	1.6	0.0	0.8	2.9	0.0	0.0	0.6	19.4	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	17	91	0	40	50	2715	1211	437	2687	1199
V/C Ratio(X)	0.10	0.00	0.58	0.46	0.00	0.25	0.77	0.42	0.05	0.07	0.48	0.00
Avail Cap(c_a), veh/h	175	0	152	1154	0	513	131	2715	1211	531	2687	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.6	0.0	68.0	66.4	0.0	66.0	64.7	0.0	0.0	3.9	7.0	4.5
Incr Delay (d2), s/veh	2.2	0.0	27.4	3.7	0.0	3.2	21.8	0.5	0.1	0.1	0.6	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(50%),veh/ln	0.1	0.0	0.5	0.8	0.0	0.4	1.6	0.2	0.0	0.2	7.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	69.8	0.0	95.3	70.0	0.0	69.2	86.5	0.5	0.1	4.0	7.6	4.5
LnGrp LOS	E		F	E		E	F	A	A	A	A	A
Approach Vol, veh/h	12				52		1252				1312	
Approach Delay, s/veh	91.1				69.8		3.1				7.5	
Approach LOS	F				E		A				A	
Timer - Assigned Phs	1	2			4	5	6	8				
Phs Duration (G+Y+Rc), s	7.8	111.3			8.5	8.8	110.2	10.5				
Change Period (Y+Rc), s	5.0	7.5			7.0	5.0	7.5	7.0				
Max Green Setting (Gmax), s	10.0	44.5			13.0	10.0	44.5	44.0				
Max Q Clear Time (g_c+I1), s	2.6	2.0			2.9	4.9	21.4	3.6				
Green Ext Time (p_c), s	0.0	11.6			0.0	0.0	10.5	0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			7.0									
HCM 7th LOS			A									
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2045 Background AM
03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	4	324	1	72	10	1071	330	96	1155	1
Future Volume (vph)	1	1	4	324	1	72	10	1071	330	96	1155	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

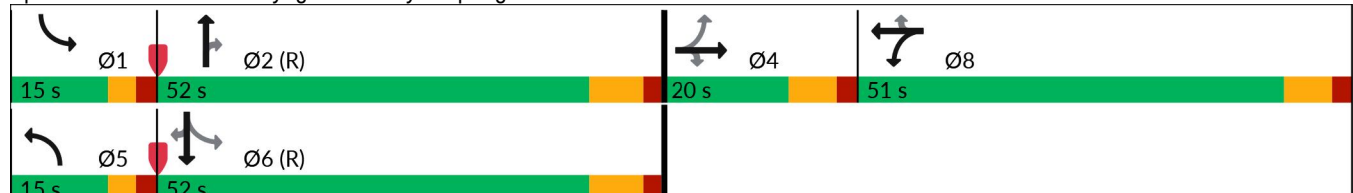
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2045 Background AM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	4	324	1	72	10	1071	330	96	1155	1
Future Volume (veh/h)	1	1	4	324	1	72	10	1071	330	96	1155	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	5	396	0	88	12	1306	402	117	1409	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	6	6	11	482	0	214	19	2231	995	238	2328	1038
Arrive On Green	0.01	0.01	0.01	0.14	0.00	0.14	0.01	0.63	0.63	0.04	0.66	0.66
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	5	396	0	88	12	1306	402	117	1409	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.4	14.9	0.0	7.0	0.9	29.8	17.4	3.2	31.3	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.4	14.9	0.0	7.0	0.9	29.8	17.4	3.2	31.3	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	12	0	11	482	0	214	19	2231	995	238	2328	1038
V/C Ratio(X)	0.16	0.00	0.46	0.82	0.00	0.41	0.63	0.59	0.40	0.49	0.61	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2231	995	299	2328	1038
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	0.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	68.3	58.0	0.0	54.6	68.0	15.1	12.8	13.7	13.6	8.2
Incr Delay (d2), s/veh	5.9	0.0	27.8	3.6	0.0	1.3	23.5	0.9	0.9	1.6	1.2	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(50%),veh/ln	0.1	0.0	0.3	7.0	0.0	2.9	0.5	12.0	6.4	1.3	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.0	0.0	96.0	61.6	0.0	55.9	91.5	16.0	13.7	15.3	14.8	8.2
LnGrp LOS	E		F	E		E	F	B	B	B	B	A
Approach Vol, veh/h	7			484			1720			1527		
Approach Delay, s/veh	89.7			60.6			16.0			14.8		
Approach LOS	F			E			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	94.2		7.9	6.5	97.9		25.7				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	5.2	31.8		2.4	2.9	33.3		16.9				
Green Ext Time (p_c), s	0.1	8.4		0.0	0.0	7.3		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	21.4											
HCM 7th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	3	331	1	65	1	1175	289	95	1394	1
Future Volume (vph)	3	1	3	331	1	65	1	1175	289	95	1394	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

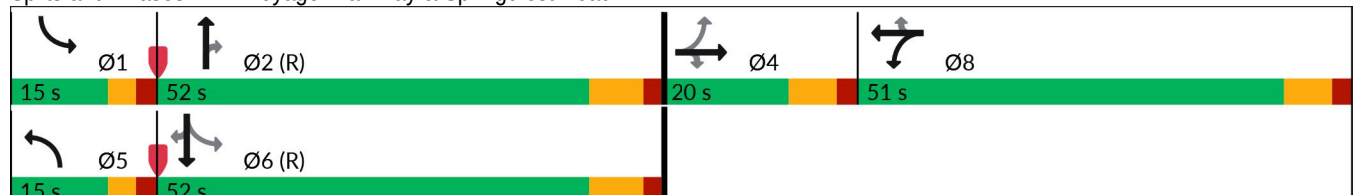
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2045 Background MID
02/16/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	3	331	1	65	1	1175	289	95	1394	1
Future Volume (veh/h)	3	1	3	331	1	65	1	1175	289	95	1394	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	2	5	638	0	125	1	1416	348	108	1584	1
Peak Hour Factor	0.63	0.63	0.63	0.52	0.52	0.52	0.83	0.83	0.83	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	6	17	741	0	329	2	1997	891	276	2136	953
Arrive On Green	0.01	0.01	0.01	0.20	0.00	0.20	0.00	1.00	1.00	0.04	0.59	0.59
Sat Flow, veh/h	1310	524	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	7	0	5	638	0	125	1	1416	348	108	1584	1
Grp Sat Flow(s),veh/h/ln	1834	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.5	0.0	0.4	23.5	0.0	9.2	0.1	0.0	0.0	3.4	44.1	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.4	23.5	0.0	9.2	0.1	0.0	0.0	3.4	44.1	0.0
Prop In Lane	0.71		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	17	741	0	329	2	1997	891	276	2136	953
V/C Ratio(X)	0.36	0.00	0.29	0.86	0.00	0.38	0.51	0.71	0.39	0.39	0.74	0.00
Avail Cap(c_a), veh/h	173	0	152	1154	0	513	131	1997	891	336	2136	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	0.0	67.7	53.0	0.0	47.3	68.8	0.0	0.0	11.3	20.5	11.5
Incr Delay (d2), s/veh	10.6	0.0	9.0	4.2	0.0	0.7	86.1	1.3	0.8	0.9	2.4	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(50%),veh/ln	0.3	0.0	0.2	11.1	0.0	3.8	0.1	0.4	0.2	1.5	18.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.4	0.0	76.7	57.2	0.0	48.0	155.0	1.3	0.8	12.3	22.9	11.5
LnGrp LOS	E		E	E		D	F	A	A	B	C	B
Approach Vol, veh/h	12			763			1765			1693		
Approach Delay, s/veh	77.7			55.7			1.3			22.2		
Approach LOS	E			E			A			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	83.8		8.5	5.2	89.1		35.2				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	5.4	2.0		2.5	2.1	46.1		25.5				
Green Ext Time (p_c), s	0.1	18.1		0.0	0.0	0.0		2.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	19.7											
HCM 7th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings 1: Voyager Parkway & Springcrest Road

2045 Background PM
03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	12	48	1	12	9	1327	68	21	1486	1
Future Volume (vph)	1	1	12	48	1	12	9	1327	68	21	1486	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

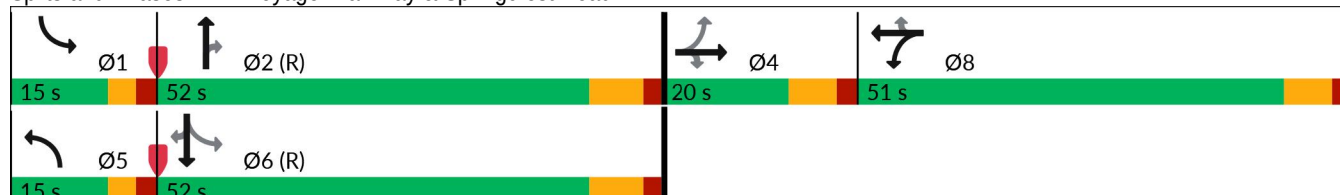
Actuated Cycle Length: 138

Offset: 83 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2045 Background PM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	12	48	1	12	9	1327	68	21	1486	1
Future Volume (veh/h)	1	1	12	48	1	12	9	1327	68	21	1486	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	13	52	0	13	10	1412	72	22	1581	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	12	12	20	99	0	44	16	2669	1190	348	2695	1202
Arrive On Green	0.01	0.01	0.01	0.03	0.00	0.03	0.02	1.00	1.00	0.02	0.76	0.76
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	13	52	0	13	10	1412	72	22	1581	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.1	0.0	1.1	2.0	0.0	1.1	0.8	0.0	0.0	0.4	26.7	0.0
Cycle Q Clear(g_c), s	0.1	0.0	1.1	2.0	0.0	1.1	0.8	0.0	0.0	0.4	26.7	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	20	99	0	44	16	2669	1190	348	2695	1202
V/C Ratio(X)	0.09	0.00	0.65	0.52	0.00	0.29	0.61	0.53	0.06	0.06	0.59	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2669	1190	448	2695	1202
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	0.0	67.8	66.2	0.0	65.8	67.5	0.0	0.0	3.8	7.3	4.0
Incr Delay (d2), s/veh	1.6	0.0	29.9	4.3	0.0	3.6	25.9	0.6	0.1	0.1	0.9	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(50%),veh/ln	0.1	0.0	0.6	1.0	0.0	0.5	0.5	0.2	0.0	0.1	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.9	0.0	97.7	70.4	0.0	69.4	93.4	0.6	0.1	3.9	8.2	4.0
LnGrp LOS	E		F	E		E	F	A	A	A	A	A
Approach Vol, veh/h		15			65			1494			1604	
Approach Delay, s/veh		93.9			70.2			1.2			8.1	
Approach LOS		F			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	111.1		8.7	6.3	112.1		10.8				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	2.4	2.0		3.1	2.8	28.7		4.0				
Green Ext Time (p_c), s	0.0	16.0		0.0	0.0	10.5		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			6.6									
HCM 7th LOS			A									
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings

1: Voyager Parkway & Springcrest Road

2045 Total AM

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	4	324	1	72	72	1086	331	101	1155	1
Future Volume (vph)	1	1	4	324	1	72	72	1086	331	101	1155	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

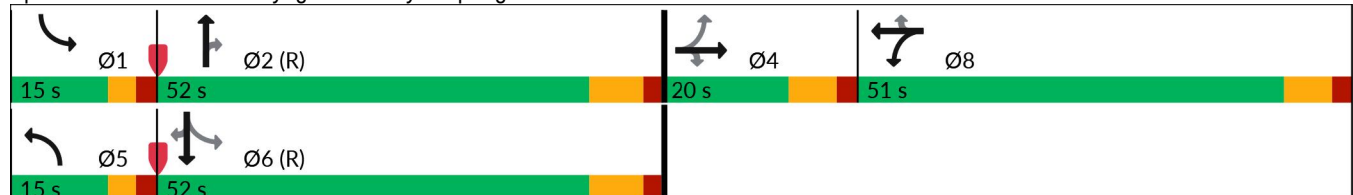
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2045 Total AM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	4	324	1	72	72	1086	331	101	1155	1
Future Volume (veh/h)	1	1	4	324	1	72	72	1086	331	101	1155	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1	1	5	396	0	88	88	1324	404	123	1409	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	6	6	11	482	0	214	109	2220	990	220	2148	958
Arrive On Green	0.01	0.01	0.01	0.14	0.00	0.14	0.04	0.42	0.42	0.04	0.60	0.60
Sat Flow, veh/h	912	912	1585	3563	0	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	2	0	5	396	0	88	88	1324	404	123	1409	1
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	0	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.4	14.9	0.0	7.0	6.8	39.8	24.7	3.6	35.9	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.4	14.9	0.0	7.0	6.8	39.8	24.7	3.6	35.9	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	12	0	11	482	0	214	109	2220	990	220	2148	958
V/C Ratio(X)	0.16	0.00	0.46	0.82	0.00	0.41	0.80	0.60	0.41	0.56	0.66	0.00
Avail Cap(c_a), veh/h	172	0	149	1136	0	505	129	2220	990	276	2148	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	0.0	68.3	58.0	0.0	54.6	65.3	26.6	22.2	18.2	17.9	10.8
Incr Delay (d2), s/veh	5.9	0.0	27.8	3.6	0.0	1.3	26.1	1.2	1.2	2.2	1.6	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(50%),veh/ln	0.1	0.0	0.3	7.0	0.0	2.9	3.9	18.3	10.3	1.8	14.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.0	0.0	96.0	61.6	0.0	55.9	91.4	27.8	23.5	20.4	19.5	10.8
LnGrp LOS	E		F	E		E	F	C	C	C	B	B
Approach Vol, veh/h	7			484			1816			1533		
Approach Delay, s/veh	89.7			60.6			29.9			19.5		
Approach LOS	F			E			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	93.7		7.9	13.5	90.9		25.7				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	5.6	41.8		2.4	8.8	37.9		16.9				
Green Ext Time (p_c), s	0.1	2.2		0.0	0.0	4.8		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	29.8											
HCM 7th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
1: Voyager Parkway & Springcrest Road

2045 Total MID
02/16/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	3	346	1	65	3	1179	291	102	1394	1
Future Volume (vph)	3	1	3	346	1	65	3	1179	291	102	1394	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

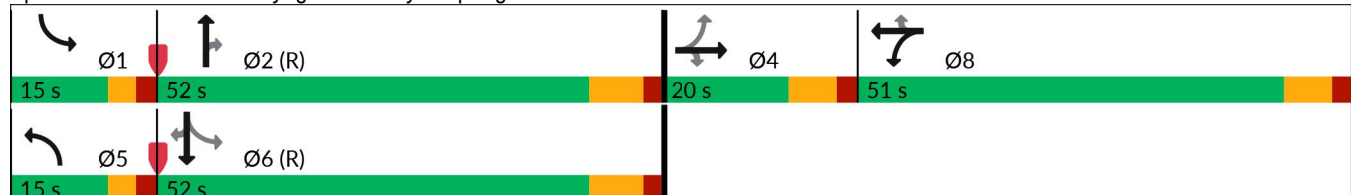
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary
1: Voyager Parkway & Springcrest Road

2045 Total MID
02/16/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1	3	346	1	65	3	1179	291	102	1394	1
Future Volume (veh/h)	3	1	3	346	1	65	3	1179	291	102	1394	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	2	5	666	0	125	4	1420	351	116	1584	1
Peak Hour Factor	0.63	0.63	0.63	0.52	0.52	0.52	0.83	0.83	0.83	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	14	6	17	769	0	342	7	1959	874	175	2096	935
Arrive On Green	0.01	0.01	0.01	0.21	0.00	0.21	0.00	0.18	0.18	0.04	0.58	0.58
Sat Flow, veh/h	1310	524	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	7	0	5	666	0	125	4	1420	351	116	1584	1
Grp Sat Flow(s),veh/h/ln	1834	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.5	0.0	0.4	24.5	0.0	9.1	0.3	51.2	26.6	3.8	45.3	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.4	24.5	0.0	9.1	0.3	51.2	26.6	3.8	45.3	0.0
Prop In Lane	0.71		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	17	769	0	342	7	1959	874	175	2096	935
V/C Ratio(X)	0.36	0.00	0.29	0.87	0.00	0.37	0.54	0.72	0.40	0.66	0.76	0.00
Avail Cap(c_a), veh/h	173	0	152	1154	0	513	131	1959	874	230	2096	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	0.0	67.7	52.4	0.0	46.4	68.8	46.9	36.8	28.5	21.6	12.1
Incr Delay (d2), s/veh	10.6	0.0	9.0	4.7	0.0	0.7	48.9	2.4	1.4	4.3	2.6	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(50%),veh/ln	0.3	0.0	0.2	11.6	0.0	3.8	0.2	25.6	11.9	2.4	19.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.4	0.0	76.7	57.1	0.0	47.0	117.7	49.3	38.2	32.8	24.2	12.1
LnGrp LOS	E		E	E		D	F	D	D	C	C	B
Approach Vol, veh/h	12			791			1775			1701		
Approach Delay, s/veh	77.7			55.6			47.3			24.8		
Approach LOS	E			E			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	82.4		8.5	5.6	87.6		36.3				
Change Period (Y+Rc), s	5.0	7.5		7.0	5.0	7.5		7.0				
Max Green Setting (Gmax), s	10.0	44.5		13.0	10.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	5.8	53.2		2.5	2.3	47.3		26.5				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.0		2.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	40.0											
HCM 7th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings

1: Voyager Parkway & Springcrest Road

2045 Total PM

03/23/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	12	48	1	12	39	1335	71	33	1486	1
Future Volume (vph)	1	1	12	48	1	12	39	1335	71	33	1486	1
Turn Type	Perm	NA	Perm	Split	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	8		5	2		1	6	
Permitted Phases	4		4			8			2	6		6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	4.0	6.0	6.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	9.5	36.5	36.5	9.5	25.5	25.5
Total Split (s)	20.0	20.0	20.0	51.0	51.0	51.0	15.0	52.0	52.0	15.0	52.0	52.0
Total Split (%)	14.5%	14.5%	14.5%	37.0%	37.0%	37.0%	10.9%	37.7%	37.7%	10.9%	37.7%	37.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0	7.0	7.0	5.0	7.5	7.5	5.0	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 138

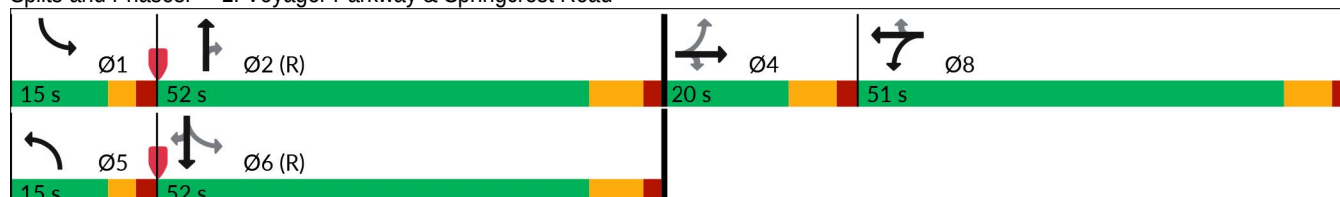
Actuated Cycle Length: 138

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 1: Voyager Parkway & Springcrest Road



HCM 7th Signalized Intersection Summary

1: Voyager Parkway & Springcrest Road

2045 Total PM
03/23/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	12	48	1	12	39	1335	71	33	1486	1
Future Volume (veh/h)	1	1	12	48	1	12	39	1335	71	33	1486	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	1	13	52	0	13	41	1420	76	35	1581	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	12	12	20	100	0	44	53	2694	1202	354	2665	1189
Arrive On Green	0.01	0.01	0.01	0.03	0.00	0.03	0.04	0.99	0.99	0.02	0.74	0.74
Sat Flow, veh/h	927	927	1610	3619	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	2	0	13	52	0	13	41	1420	76	35	1581	1
Grp Sat Flow(s),veh/h/ln	1854	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.1	0.0	1.1	2.0	0.0	1.1	3.1	0.8	0.1	0.7	28.1	0.0
Cycle Q Clear(g_c), s	0.1	0.0	1.1	2.0	0.0	1.1	3.1	0.8	0.1	0.7	28.1	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	0	20	100	0	44	53	2694	1202	354	2665	1189
V/C Ratio(X)	0.09	0.00	0.64	0.52	0.00	0.29	0.77	0.53	0.06	0.10	0.59	0.00
Avail Cap(c_a), veh/h	175	0	152	1154	0	513	131	2694	1202	447	2665	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	0.0	67.8	66.2	0.0	65.8	65.8	0.1	0.1	4.1	8.4	4.7
Incr Delay (d2), s/veh	1.5	0.0	28.5	4.1	0.0	3.6	20.5	0.7	0.1	0.1	1.0	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(50%),veh/ln	0.1	0.0	0.6	1.0	0.0	0.5	1.7	0.4	0.0	0.2	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.9	0.0	96.3	70.3	0.0	69.4	86.4	0.9	0.2	4.2	9.4	4.7
LnGrp LOS	E		F	E		E	F	A	A	A	A	A
Approach Vol, veh/h	15				65		1537				1617	
Approach Delay, s/veh	92.6				70.1		3.1				9.3	
Approach LOS	F				E		A				A	
Timer - Assigned Phs	1	2			4	5	6	8				
Phs Duration (G+Y+Rc), s	8.0	110.5			8.7	9.1	109.4	10.8				
Change Period (Y+Rc), s	5.0	7.5			7.0	5.0	7.5	7.0				
Max Green Setting (Gmax), s	10.0	44.5			13.0	10.0	44.5	44.0				
Max Q Clear Time (g_c+I1), s	2.7	2.8			3.1	5.1	30.1	4.0				
Green Ext Time (p_c), s	0.0	16.0			0.0	0.0	9.7	0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	8.0											
HCM 7th LOS	A											
Notes												
User approved volume balancing among the lanes for turning movement.												

Timings
2: Briargate Parkway & Voyager Parkway

2025 Existing AM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1079	239	38	1274	284	332	550	49	222	430	435
Future Volume (vph)	230	1079	239	38	1274	284	332	550	49	222	430	435
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2025 Existing AM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1079	239	38	1274	284	332	550	49	222	430	435
Future Volume (veh/h)	230	1079	239	38	1274	284	332	550	49	222	430	435
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	258	1212	202	43	1431	0	373	618	0	249	483	489
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1697	527	56	1388		722	1332		303	837	519
Arrive On Green	0.09	0.33	0.33	0.03	0.27	0.00	0.21	0.37	0.00	0.09	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	258	1212	202	43	1431	0	373	618	0	249	483	489
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.1	28.7	7.2	3.3	37.5	0.0	13.2	18.2	0.0	9.8	16.6	23.1
Cycle Q Clear(g_c), s	10.1	28.7	7.2	3.3	37.5	0.0	13.2	18.2	0.0	9.8	16.6	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	1697	527	56	1388		722	1332		303	837	519
V/C Ratio(X)	0.81	0.71	0.38	0.77	1.03		0.52	0.46		0.82	0.58	0.94
Avail Cap(c_a), veh/h	526	1697	527	271	1388		722	1332		401	837	519
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	1.00	0.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	61.5	40.3	10.1	66.3	50.3	0.0	48.4	32.7	0.0	61.9	46.7	20.7
Incr Delay (d2), s/veh	5.0	1.4	0.5	19.5	32.6	0.0	0.6	1.2	0.0	8.9	2.6	25.4
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(50%),veh/ln	4.7	12.3	2.6	1.8	20.1	0.0	5.8	8.1	0.0	4.7	7.7	11.8
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	66.5	41.8	10.6	85.8	82.8	0.0	49.1	33.8	15.0	70.8	49.2	46.1
LnGrp LOS	E	D	B	F	F	A	D	C	B	E	D	D
Approach Vol, veh/h	1672			1793			1046			1221		
Approach Delay, s/veh	41.8			68.2			38.3			52.4		
Approach LOS	D			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.1	59.2	9.3	52.4	36.3	40.0	17.7	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	11.8	20.2	5.3	30.7	15.2	25.1	12.1	39.5				
Green Ext Time (p_c), s	0.3	4.1	0.1	4.6	0.7	3.1	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	51.7
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2025 Existing MID
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	298	1068	195	69	836	226	255	601	121	294	729	305
Future Volume (vph)	298	1068	195	69	836	226	255	601	121	294	729	305
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2025 Existing MID
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	1068	195	69	836	226	255	601	121	294	729	305
Future Volume (veh/h)	298	1068	195	69	836	226	255	601	121	294	729	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	324	1161	212	75	909	0	277	653	0	320	792	332
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	385	1422	441	96	1128		861	1417		374	850	556
Arrive On Green	0.11	0.27	0.27	0.05	0.22	0.00	0.25	0.39	0.00	0.04	0.08	0.08
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	324	1161	212	75	909	0	277	653	0	320	792	332
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	12.5	28.9	7.9	5.7	22.9	0.0	8.9	18.5	0.0	12.5	30.1	9.7
Cycle Q Clear(g_c), s	12.5	28.9	7.9	5.7	22.9	0.0	8.9	18.5	0.0	12.5	30.1	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1422	441	96	1128		861	1417		374	850	556
V/C Ratio(X)	0.84	0.82	0.48	0.78	0.81		0.32	0.46		0.86	0.93	0.60
Avail Cap(c_a), veh/h	534	1422	441	275	1410		861	1417		407	850	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	60.3	46.8	11.4	64.5	51.2	0.0	42.7	31.1	0.0	65.5	62.5	17.3
Incr Delay (d2), s/veh	8.5	3.8	0.8	12.7	2.8	0.0	0.2	1.1	0.0	12.8	15.5	3.8
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(50%),veh/ln	6.0	12.9	2.9	3.0	10.3	0.0	3.9	8.3	0.0	6.6	16.5	5.2
Unsig. Movement Delay, s/veh	15.00											
LnGrp Delay(d), s/veh	68.8	50.7	12.2	77.3	54.1	0.0	42.9	32.2	15.0	78.4	78.1	21.2
LnGrp LOS	E	D	B	E	D		D	C	B	E	E	C
Approach Vol, veh/h	1697			984			1062			1444		
Approach Delay, s/veh	49.3			55.8			32.8			65.0		
Approach LOS	D			E			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.7	61.7	12.3	44.3	41.4	40.0	20.1	36.5				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	14.5	20.5	7.7	30.9	10.9	32.1	14.5	24.9				
Green Ext Time (p_c), s	0.2	4.3	0.1	4.3	0.7	0.3	0.6	5.1				

Intersection Summary

HCM 7th Control Delay, s/veh 51.6
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2025 Existing PM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (vph)	246	1135	282	83	1022	243	255	477	88	247	656	244
Future Volume (vph)	246	1135	282	83	1022	243	255	477	88	247	656	244
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2025 Existing PM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	1135	282	83	1022	243	255	477	88	247	656	244
Future Volume (veh/h)	246	1135	282	83	1022	243	255	477	88	247	656	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	259	1195	297	87	1076	0	268	502	0	260	691	257
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	319	1417	440	109	1260		807	1406		316	837	519
Arrive On Green	0.09	0.28	0.28	0.06	0.25	0.00	0.23	0.40	0.00	0.03	0.08	0.08
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	259	1195	297	87	1076	0	268	502	0	260	691	257
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.1	30.5	12.3	6.7	27.8	0.0	8.9	13.7	0.0	10.3	26.4	8.4
Cycle Q Clear(g_c), s	10.1	30.5	12.3	6.7	27.8	0.0	8.9	13.7	0.0	10.3	26.4	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	1417	440	109	1260		807	1406		316	837	519
V/C Ratio(X)	0.81	0.84	0.68	0.80	0.85		0.33	0.36		0.82	0.83	0.49
Avail Cap(c_a), veh/h	526	1417	440	271	1388		807	1406		401	837	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	61.5	47.0	12.7	63.9	49.6	0.0	43.9	29.3	0.0	65.8	60.8	17.2
Incr Delay (d2), s/veh	5.0	4.8	4.1	12.2	5.0	0.0	0.2	0.7	0.0	9.7	8.5	3.1
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(50%),veh/ln	4.7	13.5	4.9	3.4	12.4	0.0	3.9	6.1	0.0	5.2	13.7	3.7
Unsig. Movement Delay, s/veh	15.00											
LnGrp Delay(d), s/veh	66.5	51.9	16.8	76.1	54.7	0.0	44.2	30.1	15.0	75.5	69.3	20.3
LnGrp LOS	E	D	B	E	D		D	C	B	E	E	C
Approach Vol, veh/h	1751			1163			863			1208		
Approach Delay, s/veh	48.1			56.3			32.8			60.2		
Approach LOS	D			E			C			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	62.1	13.5	44.8	39.7	40.0	17.7	40.5				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	12.3	15.7	8.7	32.5	10.9	28.4	12.1	29.8				
Green Ext Time (p_c), s	0.3	3.5	0.1	3.6	0.6	2.1	0.6	4.3				

Intersection Summary

HCM 7th Control Delay, s/veh 50.3
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR] is included in calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1138	252	40	1343	299	350	580	52	234	453	459
Future Volume (vph)	242	1138	252	40	1343	299	350	580	52	234	453	459
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Background AM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	1138	252	40	1343	299	350	580	52	234	453	459
Future Volume (veh/h)	242	1138	252	40	1343	299	350	580	52	234	453	459
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	272	1279	283	45	1509	0	393	652	0	263	509	516
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	1710	531	59	1388		707	1303		316	837	525
Arrive On Green	0.10	0.33	0.33	0.03	0.27	0.00	0.20	0.37	0.00	0.09	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	272	1279	283	45	1509	0	393	652	0	263	509	516
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.7	30.7	10.8	3.5	37.5	0.0	14.1	19.6	0.0	10.3	17.6	25.2
Cycle Q Clear(g_c), s	10.7	30.7	10.8	3.5	37.5	0.0	14.1	19.6	0.0	10.3	17.6	25.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	1710	531	59	1388		707	1303		316	837	525
V/C Ratio(X)	0.82	0.75	0.53	0.77	1.09		0.56	0.50		0.83	0.61	0.98
Avail Cap(c_a), veh/h	526	1710	531	271	1388		707	1303		401	837	525
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	1.00	0.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	61.2	40.7	10.8	66.2	50.3	0.0	49.2	33.9	0.0	61.6	47.1	21.2
Incr Delay (d2), s/veh	5.6	1.9	1.0	18.7	51.7	0.0	1.0	1.4	0.0	10.0	2.9	32.7
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(50%),veh/ln	4.9	13.2	3.9	1.9	22.5	0.0	6.2	8.8	0.0	5.0	8.2	13.7
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	66.8	42.6	11.9	84.9	101.9	0.0	50.2	35.3	15.0	71.7	50.0	53.8
LnGrp LOS	E	D	B	F	F	A	D	D	B	E	D	D
Approach Vol, veh/h	1834			1890			1103			1288		
Approach Delay, s/veh	41.4			83.4			39.5			55.9		
Approach LOS	D			F			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	58.1	9.5	52.7	35.7	40.0	18.3	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	12.3	21.6	5.5	32.7	16.1	27.2	12.7	39.5				
Green Ext Time (p_c), s	0.3	4.2	0.1	3.6	0.6	2.5	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 57.1
HCM 7th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	1197	297	88	1077	256	269	503	93	260	692	257
Future Volume (vph)	259	1197	297	88	1077	256	269	503	93	260	692	257
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Background PM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	1197	297	88	1077	256	269	503	93	260	692	257
Future Volume (veh/h)	259	1197	297	88	1077	256	269	503	93	260	692	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	273	1260	313	93	1134	0	283	529	0	274	728	271
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	333	1458	452	116	1299		767	1353		327	837	526
Arrive On Green	0.10	0.29	0.29	0.07	0.25	0.00	0.22	0.38	0.00	0.09	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	273	1260	313	93	1134	0	283	529	0	274	728	271
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.7	32.3	13.3	7.1	29.4	0.0	9.6	14.9	0.0	10.8	27.2	8.6
Cycle Q Clear(g_c), s	10.7	32.3	13.3	7.1	29.4	0.0	9.6	14.9	0.0	10.8	27.2	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1458	452	116	1299		767	1353		327	837	526
V/C Ratio(X)	0.82	0.86	0.69	0.80	0.87		0.37	0.39		0.84	0.87	0.52
Avail Cap(c_a), veh/h	526	1458	452	271	1388		767	1353		401	837	526
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	1.00	0.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	61.2	46.8	13.2	63.6	49.3	0.0	45.5	31.1	0.0	61.4	50.7	13.9
Incr Delay (d2), s/veh	5.7	5.7	4.5	11.9	6.2	0.0	0.3	0.9	0.0	11.2	10.9	3.2
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(50%),veh/ln	5.0	14.4	5.3	3.6	13.2	0.0	4.2	6.6	0.0	5.2	13.4	3.3
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	66.9	52.4	17.6	75.5	55.5	0.0	45.8	31.9	15.0	72.6	61.6	17.1
LnGrp LOS	E	D	B	E	E	A	D	C	B	E	E	B
Approach Vol, veh/h	1846			1496			910			1273		
Approach Delay, s/veh	48.7			46.7			34.4			54.5		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.1	60.1	14.0	45.9	38.1	40.0	18.3	41.6				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	12.8	16.9	9.1	34.3	11.6	29.2	12.7	31.4				
Green Ext Time (p_c), s	0.3	3.6	0.1	2.5	0.6	1.8	0.6	3.7				

Intersection Summary

HCM 7th Control Delay, s/veh	47.2
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2029 Background AM - #2 Improved
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1138	252	40	1343	299	350	580	52	234	453	459
Future Volume (vph)	242	1138	252	40	1343	299	350	580	52	234	453	459
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	50.0	50.0	20.0	50.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	14.5%	36.2%	36.2%	14.5%	36.2%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		20 s		50 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		20 s		50 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Background AM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	1138	252	40	1343	299	350	580	52	234	453	459
Future Volume (veh/h)	242	1138	252	40	1343	299	350	580	52	234	453	459
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	272	1279	283	45	1509	0	393	652	0	263	509	516
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	1908	592	58	1598		574	1166		316	837	522
Arrive On Green	0.09	0.37	0.37	0.03	0.31	0.00	0.17	0.33	0.00	0.09	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	272	1279	283	45	1509	0	393	652	0	263	509	516
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.7	28.9	10.8	3.5	39.8	0.0	14.8	20.8	0.0	10.3	17.6	25.8
Cycle Q Clear(g_c), s	10.7	28.9	10.8	3.5	39.8	0.0	14.8	20.8	0.0	10.3	17.6	25.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	1908	592	58	1598		574	1166		316	837	522
V/C Ratio(X)	0.84	0.67	0.48	0.77	0.94		0.69	0.56		0.83	0.61	0.99
Avail Cap(c_a), veh/h	376	1908	592	194	1610		574	1166		401	837	522
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	1.00	0.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	61.5	36.1	10.8	66.2	46.2	0.0	54.2	38.2	0.0	61.6	47.1	20.2
Incr Delay (d2), s/veh	14.0	0.9	0.6	19.0	11.7	0.0	3.4	1.9	0.0	10.0	2.9	34.5
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(50%),veh/ln	5.3	12.2	3.8	1.9	18.5	0.0	6.7	9.5	0.0	5.0	8.2	14.1
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	75.6	37.0	11.4	85.2	58.0	0.0	57.5	40.1	15.0	71.7	50.0	54.6
LnGrp LOS	E	D	B	F	E	A	E	D	B	E	D	D
Approach Vol, veh/h	1834			1890			1103			1288		
Approach Delay, s/veh	38.8			48.3			45.0			56.3		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	52.8	9.5	58.1	30.4	40.0	17.9	49.7				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	15.0	43.5	20.5	32.5	15.0	43.5				
Max Q Clear Time (g_c+I1), s	12.3	22.8	5.5	30.9	16.8	27.8	12.7	41.8				
Green Ext Time (p_c), s	0.3	4.1	0.0	7.8	0.5	2.3	0.2	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	46.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2029 Background MID - #2 Improved
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	1126	206	73	881	238	269	634	128	310	769	322
Future Volume (vph)	314	1126	206	73	881	238	269	634	128	310	769	322
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	50.0	50.0	20.0	50.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	14.5%	36.2%	36.2%	14.5%	36.2%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		20 s		50 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		20 s		50 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Background MID - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	1126	206	73	881	238	269	634	128	310	769	322
Future Volume (veh/h)	314	1126	206	73	881	238	269	634	128	310	769	322
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	341	1224	224	79	958	0	292	689	0	337	836	350
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	1493	464	100	1216		805	1346		386	850	554
Arrive On Green	0.11	0.29	0.29	0.06	0.23	0.00	0.23	0.37	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	341	1224	224	79	958	0	292	689	0	337	836	350
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	13.2	30.4	8.5	6.0	23.9	0.0	9.7	20.4	0.0	13.0	31.8	10.8
Cycle Q Clear(g_c), s	13.2	30.4	8.5	6.0	23.9	0.0	9.7	20.4	0.0	13.0	31.8	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1493	464	100	1216		805	1346		386	850	554
V/C Ratio(X)	0.89	0.82	0.48	0.79	0.79		0.36	0.51		0.87	0.98	0.63
Avail Cap(c_a), veh/h	382	1635	508	197	1635		805	1346		407	850	554
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	1.00	0.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	60.7	45.8	11.7	64.4	49.6	0.0	44.7	33.5	0.0	60.5	52.5	14.1
Incr Delay (d2), s/veh	22.5	3.2	0.8	12.8	1.9	0.0	0.3	1.4	0.0	14.6	23.5	4.2
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(50%),veh/ln	7.1	13.5	3.2	3.1	10.6	0.0	4.3	9.3	0.0	6.6	17.1	4.2
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	83.2	49.0	12.4	77.1	51.5	0.0	45.0	34.9	15.0	75.0	76.0	18.3
LnGrp LOS	F	D	B	E	D	A	D	C	B	E	E	B
Approach Vol, veh/h	1789			1296			1120			1523		
Approach Delay, s/veh	50.9			42.8			35.1			62.5		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.2	59.0	12.6	46.2	39.1	40.0	20.0	38.9				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	15.0	43.5	20.5	32.5	15.0	43.5				
Max Q Clear Time (g_c+I1), s	15.0	22.4	8.0	32.4	11.7	33.8	15.2	25.9				
Green Ext Time (p_c), s	0.1	4.4	0.1	6.8	0.7	0.0	0.0	6.4				

Intersection Summary

HCM 7th Control Delay, s/veh	49.1
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2029 Total AM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1138	252	40	1343	304	350	583	52	249	465	490
Future Volume (vph)	251	1138	252	40	1343	304	350	583	52	249	465	490
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Total AM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1138	252	40	1343	304	350	583	52	249	465	490
Future Volume (veh/h)	251	1138	252	40	1343	304	350	583	52	249	465	490
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	282	1279	283	45	1509	0	393	655	0	280	522	551
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	1725	535	59	1388		697	1276		333	837	530
Arrive On Green	0.10	0.34	0.34	0.03	0.27	0.00	0.20	0.36	0.00	0.10	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	282	1279	283	45	1509	0	393	655	0	280	522	551
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.0	30.5	10.8	3.5	37.5	0.0	14.1	20.0	0.0	11.0	18.2	26.2
Cycle Q Clear(g_c), s	11.0	30.5	10.8	3.5	37.5	0.0	14.1	20.0	0.0	11.0	18.2	26.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	1725	535	59	1388		697	1276		333	837	530
V/C Ratio(X)	0.82	0.74	0.53	0.77	1.09		0.56	0.51		0.84	0.62	1.04
Avail Cap(c_a), veh/h	526	1725	535	271	1388		697	1276		401	837	530
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	40.4	10.8	66.2	50.3	0.0	49.6	34.7	0.0	61.3	47.3	21.3
Incr Delay (d2), s/veh	6.3	1.8	1.0	18.7	51.7	0.0	1.0	1.5	0.0	12.9	3.5	49.7
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(50%),veh/ln	5.2	13.1	3.9	1.9	22.5	0.0	6.2	9.0	0.0	5.4	8.5	16.5
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	67.3	42.1	11.8	84.9	101.9	0.0	50.6	36.2	15.0	74.2	50.8	71.0
LnGrp LOS	E	D	B	F	F	A	D	D	B	E	D	F
Approach Vol, veh/h	1844			1896			1106			1353		
Approach Delay, s/veh	41.3			83.1			40.2			63.8		
Approach LOS	D			F			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.3	57.1	9.5	53.1	35.3	40.0	18.7	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	13.0	22.0	5.5	32.5	16.1	28.2	13.0	39.5				
Green Ext Time (p_c), s	0.3	4.2	0.1	3.7	0.6	2.2	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	58.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2029 Total PM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	283	1197	297	88	1077	268	269	512	93	268	698	272
Future Volume (vph)	283	1197	297	88	1077	268	269	512	93	268	698	272
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Total PM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	1197	297	88	1077	268	269	512	93	268	698	272
Future Volume (veh/h)	283	1197	297	88	1077	268	269	512	93	268	698	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	298	1260	313	93	1134	0	283	539	0	282	735	286
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	359	1506	467	116	1309		765	1357		336	850	544
Arrive On Green	0.10	0.29	0.29	0.06	0.25	0.00	0.22	0.38	0.00	0.10	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	298	1260	313	93	1134	0	283	539	0	282	735	286
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	11.5	31.4	13.0	7.0	28.9	0.0	9.5	15.1	0.0	10.9	27.0	8.9
Cycle Q Clear(g_c), s	11.5	31.4	13.0	7.0	28.9	0.0	9.5	15.1	0.0	10.9	27.0	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	1506	467	116	1309		765	1357		336	850	544
V/C Ratio(X)	0.83	0.84	0.67	0.80	0.87		0.37	0.40		0.84	0.86	0.53
Avail Cap(c_a), veh/h	534	1506	467	275	1410		765	1357		407	850	544
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.8	45.9	13.1	63.7	49.4	0.0	45.9	31.6	0.0	61.4	50.6	13.7
Incr Delay (d2), s/veh	6.9	4.3	3.7	11.7	5.6	0.0	0.3	0.9	0.0	12.4	11.4	3.6
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(50%),veh/ln	5.5	14.1	5.2	3.6	13.1	0.0	4.2	6.8	0.0	5.5	13.5	3.5
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	67.7	50.2	16.7	75.4	55.0	0.0	46.2	32.5	15.0	73.8	62.0	17.3
LnGrp LOS	E	D	B	E	E	A	D	C	B	E	E	B
Approach Vol, veh/h	1871			1509			920			1303		
Approach Delay, s/veh	47.4			46.0			34.8			54.8		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	59.4	13.9	46.6	37.6	40.0	19.1	41.3				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	12.9	17.1	9.0	33.4	11.5	29.0	13.5	30.9				
Green Ext Time (p_c), s	0.3	3.7	0.1	3.1	0.7	1.9	0.6	4.0				

Intersection Summary

HCM 7th Control Delay, s/veh	46.7
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1138	252	40	1343	304	350	583	52	249	465	490
Future Volume (vph)	251	1138	252	40	1343	304	350	583	52	249	465	490
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	50.0	50.0	20.0	50.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	14.5%	36.2%	36.2%	14.5%	36.2%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		20 s		50 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		20 s		50 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Total AM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1138	252	40	1343	304	350	583	52	249	465	490
Future Volume (veh/h)	251	1138	252	40	1343	304	350	583	52	249	465	490
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	282	1279	283	45	1509	0	393	655	0	280	522	551
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	1922	597	58	1598		564	1139		333	837	526
Arrive On Green	0.10	0.38	0.38	0.03	0.31	0.00	0.16	0.32	0.00	0.10	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	282	1279	283	45	1509	0	393	655	0	280	522	551
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.1	28.8	10.8	3.5	39.8	0.0	14.8	21.2	0.0	11.0	18.2	26.3
Cycle Q Clear(g_c), s	11.1	28.8	10.8	3.5	39.8	0.0	14.8	21.2	0.0	11.0	18.2	26.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1922	597	58	1598		564	1139		333	837	526
V/C Ratio(X)	0.85	0.67	0.47	0.77	0.94		0.70	0.57		0.84	0.62	1.05
Avail Cap(c_a), veh/h	376	1922	597	194	1610		564	1139		401	837	526
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	35.8	10.8	66.2	46.2	0.0	54.5	39.0	0.0	61.3	47.3	20.0
Incr Delay (d2), s/veh	15.1	0.9	0.6	19.0	11.7	0.0	3.7	2.1	0.0	12.9	3.5	52.4
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(50%),veh/ln	5.6	12.1	3.8	1.9	18.5	0.0	6.8	9.6	0.0	5.4	8.5	17.0
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	76.5	36.7	11.4	85.2	58.0	0.0	58.2	41.2	15.0	74.2	50.8	72.4
LnGrp LOS	E	D	B	F	E	A	E	D	B	E	D	F
Approach Vol, veh/h	1844			1896			1106			1353		
Approach Delay, s/veh	38.9			48.2			45.9			64.4		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.3	51.7	9.5	58.4	30.0	40.0	18.3	49.7				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	15.0	43.5	20.5	32.5	15.0	43.5				
Max Q Clear Time (g_c+I1), s	13.0	23.2	5.5	30.8	16.8	28.3	13.1	41.8				
Green Ext Time (p_c), s	0.3	4.1	0.0	7.9	0.5	2.2	0.2	1.4				

Intersection Summary

HCM 7th Control Delay, s/veh	48.5
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2029 Total MID - #2 Improved
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	328	1126	206	73	881	245	269	641	128	314	773	331
Future Volume (vph)	328	1126	206	73	881	245	269	641	128	314	773	331
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	50.0	50.0	20.0	50.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	14.5%	36.2%	36.2%	14.5%	36.2%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		20 s		50 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		20 s		50 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2029 Total MID - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	1126	206	73	881	245	269	641	128	314	773	331
Future Volume (veh/h)	328	1126	206	73	881	245	269	641	128	314	773	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	357	1224	224	79	958	0	292	697	0	341	840	360
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	1493	464	100	1216		805	1343		390	850	554
Arrive On Green	0.11	0.29	0.29	0.06	0.23	0.00	0.23	0.37	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	357	1224	224	79	958	0	292	697	0	341	840	360
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	13.9	30.4	8.5	6.0	23.9	0.0	9.7	20.7	0.0	13.2	32.0	11.2
Cycle Q Clear(g_c), s	13.9	30.4	8.5	6.0	23.9	0.0	9.7	20.7	0.0	13.2	32.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1493	464	100	1216		805	1343		390	850	554
V/C Ratio(X)	0.94	0.82	0.48	0.79	0.79		0.36	0.52		0.88	0.99	0.65
Avail Cap(c_a), veh/h	382	1635	508	197	1635		805	1343		407	850	554
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	45.8	11.7	64.4	49.6	0.0	44.7	33.7	0.0	60.4	52.6	14.2
Incr Delay (d2), s/veh	30.2	3.2	0.8	12.8	1.9	0.0	0.3	1.4	0.0	18.3	28.1	5.8
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(50%),veh/ln	7.8	13.5	3.2	3.1	10.6	0.0	4.3	9.4	0.0	6.9	17.8	4.6
Unsig. Movement Delay, s/veh	0.00						15.00					
LnGrp Delay(d), s/veh	91.2	49.0	12.4	77.1	51.5	0.0	45.0	35.2	15.0	78.7	80.7	20.0
LnGrp LOS	F	D	B	E	D	A	D	D	B	E	F	C
Approach Vol, veh/h	1805			1303			1128			1541		
Approach Delay, s/veh	52.8			42.5			35.2			66.0		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.3	58.8	12.6	46.2	39.1	40.0	20.0	38.9				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	15.0	43.5	20.5	32.5	15.0	43.5				
Max Q Clear Time (g_c+I1), s	15.2	22.7	8.0	32.4	11.7	34.0	15.9	25.9				
Green Ext Time (p_c), s	0.1	4.4	0.1	6.8	0.7	0.0	0.0	6.4				

Intersection Summary

HCM 7th Control Delay, s/veh	50.6
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1405	311	49	1659	370	432	716	64	289	560	567
Future Volume (vph)	300	1405	311	49	1659	370	432	716	64	289	560	567
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Background AM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1405	311	49	1659	370	432	716	64	289	560	567
Future Volume (veh/h)	300	1405	311	49	1659	370	432	716	64	289	560	567
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	326	1527	338	53	1803	0	470	778	0	314	609	616
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	1759	546	69	1388		654	1199		364	837	550
Arrive On Green	0.11	0.34	0.34	0.04	0.27	0.00	0.19	0.34	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	326	1527	338	53	1803	0	470	778	0	314	609	616
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.8	38.6	13.6	4.1	37.5	0.0	17.6	25.6	0.0	12.3	21.8	25.9
Cycle Q Clear(g_c), s	12.8	38.6	13.6	4.1	37.5	0.0	17.6	25.6	0.0	12.3	21.8	25.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	1759	546	69	1388		654	1199		364	837	550
V/C Ratio(X)	0.85	0.87	0.62	0.77	1.30		0.72	0.65		0.86	0.73	1.12
Avail Cap(c_a), veh/h	526	1759	546	271	1388		654	1199		401	837	550
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	1.00	0.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	60.1	42.3	11.7	65.7	50.3	0.0	52.5	38.8	0.0	60.7	48.7	19.3
Incr Delay (d2), s/veh	9.2	4.9	2.1	16.3	140.2	0.0	3.8	2.7	0.0	13.0	4.3	71.7
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(50%),veh/ln	6.1	16.9	5.1	2.2	33.9	0.0	8.0	11.7	0.0	6.1	10.2	19.9
Unsig. Movement Delay, s/veh						0.00			15.00			
LnGrp Delay(d), s/veh	69.3	47.2	13.8	82.0	190.4	0.0	56.3	41.5	15.0	73.8	52.9	90.9
LnGrp LOS	E	D	B	F	F	A	E	D	B	E	D	F
Approach Vol, veh/h		2191			2258			1318			1539	
Approach Delay, s/veh		45.3			154.0			45.4			72.4	
Approach LOS		D			F			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	54.1	10.3	54.1	33.6	40.0	20.4	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	14.3	27.6	6.1	40.6	19.6	27.9	14.8	39.5				
Green Ext Time (p_c), s	0.2	4.2	0.1	0.0	0.2	2.7	0.6	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			84.6									
HCM 7th LOS			F									
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.												

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	1478	367	108	1331	316	332	621	115	322	854	318
Future Volume (vph)	320	1478	367	108	1331	316	332	621	115	322	854	318
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Background PM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1478	367	108	1331	316	332	621	115	322	854	318
Future Volume (veh/h)	320	1478	367	108	1331	316	332	621	115	322	854	318
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	337	1556	386	114	1401	0	349	654	0	339	899	335
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	396	1575	489	139	1388		643	1165		386	837	555
Arrive On Green	0.11	0.31	0.31	0.08	0.27	0.00	0.19	0.33	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	337	1556	386	114	1401	0	349	654	0	339	899	335
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.2	41.8	17.9	8.7	37.5	0.0	12.6	20.9	0.0	13.3	32.5	11.8
Cycle Q Clear(g_c), s	13.2	41.8	17.9	8.7	37.5	0.0	12.6	20.9	0.0	13.3	32.5	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	1575	489	139	1388		643	1165		386	837	555
V/C Ratio(X)	0.85	0.99	0.79	0.82	1.01		0.54	0.56		0.88	1.07	0.60
Avail Cap(c_a), veh/h	526	1575	489	271	1388		643	1165		401	837	555
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	1.00	0.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	59.9	47.5	14.9	62.7	50.2	0.0	50.8	38.2	0.0	60.4	52.7	14.0
Incr Delay (d2), s/veh	9.9	19.7	8.5	11.4	26.6	0.0	0.9	2.0	0.0	16.1	50.3	4.0
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(50%),veh/ln	6.3	20.5	7.6	4.4	19.3	0.0	5.6	9.5	0.0	6.7	20.3	4.6
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	69.8	67.2	23.4	74.0	76.8	0.0	51.8	40.1	15.0	76.4	103.1	17.9
LnGrp LOS	E	E	C	E	F	A	D	D	B	E	F	B
Approach Vol, veh/h	2279				1848			1124			1573	
Approach Delay, s/veh	60.1				62.8			41.1			79.2	
Approach LOS	E				E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	52.8	15.7	49.1	33.2	40.0	20.8	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	15.3	22.9	10.7	43.8	14.6	34.5	15.2	39.5				
Green Ext Time (p_c), s	0.1	4.1	0.2	0.0	0.6	0.0	0.6	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	62.1											
HCM 7th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.												

Timings

2: Briargate Parkway & Voyager Parkway

2045 Background AM - #2 Improved

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1405	311	49	1659	370	432	716	64	289	560	567
Future Volume (vph)	300	1405	311	49	1659	370	432	716	64	289	560	567
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	16.0	50.0	50.0	16.0	50.0		28.0	51.0	51.0	21.0	44.0	
Total Split (%)	11.6%	36.2%	36.2%	11.6%	36.2%		20.3%	37.0%	37.0%	15.2%	31.9%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø2 (R)		Ø1		Ø3		Ø4
51 s		21 s		16 s		50 s	
	Ø6 (R)		Ø5		Ø7		Ø8
44 s		28 s		16 s		50 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Background AM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1405	311	49	1659	370	432	716	64	289	560	567
Future Volume (veh/h)	300	1405	311	49	1659	370	432	716	64	289	560	567
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	326	1527	338	53	1803	0	470	778	0	314	609	616
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	1820	565	68	1610		817	1120		641	940	546
Arrive On Green	0.08	0.36	0.36	0.04	0.32	0.00	0.24	0.32	0.00	0.19	0.26	0.26
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	326	1527	338	53	1803	0	470	778	0	314	609	616
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.0	37.9	14.7	4.1	43.5	0.0	16.6	26.5	0.0	11.2	21.0	36.3
Cycle Q Clear(g_c), s	11.0	37.9	14.7	4.1	43.5	0.0	16.6	26.5	0.0	11.2	21.0	36.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	1820	565	68	1610		817	1120		641	940	546
V/C Ratio(X)	1.18	0.84	0.60	0.77	1.12		0.58	0.69		0.49	0.65	1.13
Avail Cap(c_a), veh/h	275	1820	565	142	1610		817	1120		641	940	546
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	1.00	0.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	63.5	40.8	13.6	65.8	47.2	0.0	46.6	41.4	0.0	50.3	45.0	33.3
Incr Delay (d2), s/veh	113.3	3.7	1.7	16.8	63.0	0.0	1.0	3.6	0.0	0.4	2.7	75.2
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(50%),veh/ln	9.2	16.4	5.5	2.2	27.7	0.0	7.3	12.2	0.0	4.9	9.6	25.0
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	176.8	44.4	15.3	82.5	110.3	0.0	47.6	45.0	15.0	50.8	47.7	108.5
LnGrp LOS	F	D	B	F	F	A	D	D	B	D	D	F
Approach Vol, veh/h	2191				2258				1318			
Approach Delay, s/veh	59.6				90.0				44.3			
Approach LOS	E				F				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.2	51.0	10.3	55.7	40.2	44.0	16.0	50.0				
Change Period (Y+Rc), s	7.5	* 7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	* 44	11.0	43.5	20.5	36.5	11.0	43.5				
Max Q Clear Time (g_c+I1), s	13.2	28.5	6.1	39.9	18.6	38.3	13.0	45.5				
Green Ext Time (p_c), s	0.3	4.8	0.0	3.0	0.4	0.0	0.0	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 69.0
HCM 7th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
2: Briargate Parkway & Voyager Parkway

2045 Background MID - #2 Improved
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	388	1391	254	90	1089	294	332	783	158	383	949	397
Future Volume (vph)	388	1391	254	90	1089	294	332	783	158	383	949	397
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	51.0	51.0	16.0	47.0		23.0	50.0	50.0	21.0	48.0	
Total Split (%)	14.5%	37.0%	37.0%	11.6%	34.1%		16.7%	36.2%	36.2%	15.2%	34.8%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

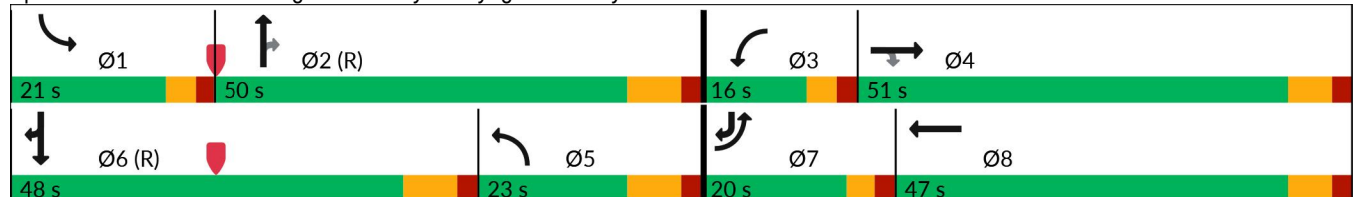
Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway



HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Background MID - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	388	1391	254	90	1089	294	332	783	158	383	949	397
Future Volume (veh/h)	388	1391	254	90	1089	294	332	783	158	383	949	397
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	422	1512	276	98	1184	0	361	851	0	416	1032	432
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	382	1648	512	120	1429		457	1177		407	1059	648
Arrive On Green	0.11	0.32	0.32	0.07	0.28	0.00	0.13	0.33	0.00	0.12	0.29	0.29
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	422	1512	276	98	1184	0	361	851	0	416	1032	432
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	15.0	38.7	12.9	7.4	29.6	0.0	13.8	28.7	0.0	16.0	39.0	16.3
Cycle Q Clear(g_c), s	15.0	38.7	12.9	7.4	29.6	0.0	13.8	28.7	0.0	16.0	39.0	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	382	1648	512	120	1429		457	1177		407	1059	648
V/C Ratio(X)	1.11	0.92	0.54	0.81	0.83		0.79	0.72		1.02	0.97	0.67
Avail Cap(c_a), veh/h	382	1673	519	144	1522		457	1177		407	1059	648
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	1.00	0.00	0.58	0.58	0.58
Uniform Delay (d), s/veh	61.5	45.3	16.9	63.6	46.9	0.0	58.2	41.0	0.0	61.0	48.2	13.0
Incr Delay (d2), s/veh	77.8	8.4	1.1	25.0	3.8	0.0	9.0	3.9	0.0	39.7	15.8	3.2
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(50%),veh/ln	10.8	17.8	4.9	4.2	13.2	0.0	6.7	13.4	0.0	9.4	19.8	6.2
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	139.3	53.8	18.0	88.6	50.7	0.0	67.2	44.9	15.0	100.7	64.0	16.2
LnGrp LOS	F	D	B	F	D	A	E	D	B	F	E	B
Approach Vol, veh/h	2210			1602			1384			1880		
Approach Delay, s/veh	65.6			42.9			47.0			61.1		
Approach LOS	E			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	52.5	14.2	50.3	25.5	48.0	20.0	44.5				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	42.5	11.0	44.5	15.5	40.5	15.0	40.5				
Max Q Clear Time (g_c+I1), s	18.0	30.7	9.4	40.7	15.8	41.0	17.0	31.6				
Green Ext Time (p_c), s	0.0	4.6	0.0	3.1	0.0	0.0	0.0	5.2				

Intersection Summary

HCM 7th Control Delay, s/veh	55.6
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2045 Background PM - #2 Improved
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	1478	367	108	1331	316	332	621	115	322	854	318
Future Volume (vph)	320	1478	367	108	1331	316	332	621	115	322	854	318
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	20.0	51.0	51.0	16.0	47.0		23.0	50.0	50.0	21.0	48.0	
Total Split (%)	14.5%	37.0%	37.0%	11.6%	34.1%		16.7%	36.2%	36.2%	15.2%	34.8%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

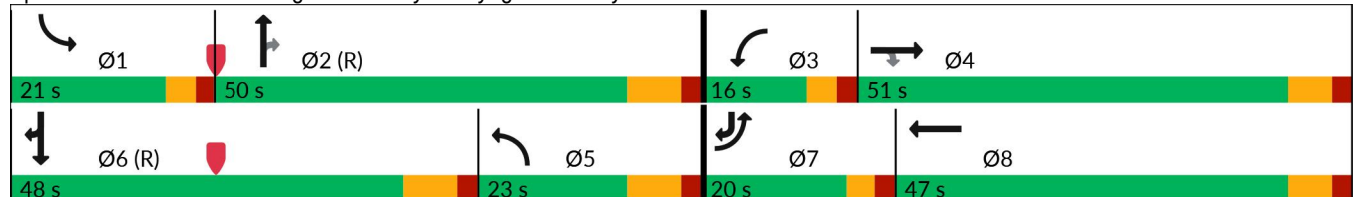
Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway



HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Background PM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1478	367	108	1331	316	332	621	115	322	854	318
Future Volume (veh/h)	320	1478	367	108	1331	316	332	621	115	322	854	318
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	337	1556	386	114	1401	0	349	654	0	339	899	335
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	376	1650	512	137	1487		396	1117		386	1043	637
Arrive On Green	0.11	0.32	0.32	0.08	0.29	0.00	0.11	0.31	0.00	0.11	0.29	0.29
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	337	1556	386	114	1401	0	349	654	0	339	899	335
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.3	40.9	20.5	8.7	37.0	0.0	13.7	21.3	0.0	13.3	33.0	12.5
Cycle Q Clear(g_c), s	13.3	40.9	20.5	8.7	37.0	0.0	13.7	21.3	0.0	13.3	33.0	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	1650	512	137	1487		396	1117		386	1043	637
V/C Ratio(X)	0.90	0.94	0.75	0.83	0.94		0.88	0.59		0.88	0.86	0.53
Avail Cap(c_a), veh/h	376	1650	512	142	1499		396	1117		401	1043	637
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	1.00	0.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	60.7	45.5	19.4	62.8	47.8	0.0	60.2	39.7	0.0	60.4	46.1	12.5
Incr Delay (d2), s/veh	23.3	11.4	6.2	32.1	12.1	0.0	20.0	2.2	0.0	16.1	7.8	2.5
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(50%),veh/ln	7.1	18.9	8.4	5.2	17.3	0.0	7.1	9.7	0.0	6.7	15.7	4.7
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	84.1	56.8	25.6	94.9	59.9	0.0	80.2	42.0	15.0	76.4	54.0	15.0
LnGrp LOS	F	E	C	F	E	A	F	D	B	E	D	B
Approach Vol, veh/h	2279			1848			1124			1573		
Approach Delay, s/veh	55.6			51.2			50.9			50.5		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	50.9	15.6	51.1	23.3	48.0	20.0	46.7				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	42.5	11.0	44.5	15.5	40.5	15.0	40.5				
Max Q Clear Time (g_c+I1), s	15.3	23.3	10.7	42.9	15.7	35.0	15.3	39.0				
Green Ext Time (p_c), s	0.1	4.4	0.0	1.4	0.0	3.3	0.0	1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				52.5								
HCM 7th LOS				D								
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.												

Timings
2: Briargate Parkway & Voyager Parkway

2045 Total AM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	1405	311	49	1659	375	432	719	64	304	572	598
Future Volume (vph)	309	1405	311	49	1659	375	432	719	64	304	572	598
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Total AM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1405	311	49	1659	375	432	719	64	304	572	598
Future Volume (veh/h)	309	1405	311	49	1659	375	432	719	64	304	572	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	336	1527	338	53	1803	0	470	782	0	330	622	650
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	395	1774	551	69	1388		644	1175		378	837	976
Arrive On Green	0.11	0.35	0.35	0.04	0.27	0.00	0.19	0.33	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	2790
Grp Volume(v), veh/h	336	1527	338	53	1803	0	470	782	0	330	622	650
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1395
Q Serve(g_s), s	13.2	38.4	13.6	4.1	37.5	0.0	17.7	26.1	0.0	13.0	22.4	13.4
Cycle Q Clear(g_c), s	13.2	38.4	13.6	4.1	37.5	0.0	17.7	26.1	0.0	13.0	22.4	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	1774	551	69	1388		644	1175		378	837	976
V/C Ratio(X)	0.85	0.86	0.61	0.77	1.30		0.73	0.67		0.87	0.74	0.67
Avail Cap(c_a), veh/h	526	1774	551	271	1388		644	1175		401	837	976
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	41.9	11.7	65.7	50.3	0.0	52.9	39.7	0.0	60.5	48.9	14.4
Incr Delay (d2), s/veh	9.8	4.6	2.0	16.3	140.2	0.0	4.2	3.0	0.0	17.9	5.9	3.6
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(50%),veh/ln	6.3	16.8	5.1	2.2	33.9	0.0	8.1	11.9	0.0	6.6	10.6	4.4
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	69.8	46.5	13.7	82.0	190.4	0.0	57.1	42.6	15.0	78.4	54.8	18.0
LnGrp LOS	E	D	B	F	F	A	E	D	B	E	D	B
Approach Vol, veh/h	2201			2264			1322			1602		
Approach Delay, s/veh	45.0			153.6			46.3			44.7		
Approach LOS	D			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.1	53.1	10.3	54.4	33.2	40.0	20.8	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	15.0	28.1	6.1	40.4	19.7	24.4	15.2	39.5				
Green Ext Time (p_c), s	0.1	4.1	0.1	0.0	0.2	4.3	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	78.4
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings
2: Briargate Parkway & Voyager Parkway

2045 Total PM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	1478	367	108	1331	328	332	630	115	330	860	333
Future Volume (vph)	344	1478	367	108	1331	328	332	630	115	330	860	333
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	26.0	44.0	44.0	26.0	44.0		28.0	47.0	47.0	21.0	40.0	
Total Split (%)	18.8%	31.9%	31.9%	18.8%	31.9%		20.3%	34.1%	34.1%	15.2%	29.0%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø1		Ø2 (R)		Ø3		Ø4
21 s		47 s		26 s		44 s	
	Ø6 (R)		Ø5		Ø7		Ø8
40 s		28 s		26 s		44 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Total PM
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	1478	367	108	1331	328	332	630	115	330	860	333
Future Volume (veh/h)	344	1478	367	108	1331	328	332	630	115	330	860	333
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	362	1556	386	114	1401	0	349	663	0	347	905	351
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	421	1634	507	139	1410		634	1162		395	850	573
Arrive On Green	0.12	0.31	0.31	0.08	0.27	0.00	0.18	0.32	0.00	0.11	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	362	1556	386	114	1401	0	349	663	0	347	905	351
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1610
Q Serve(g_s), s	14.0	40.5	17.5	8.6	37.2	0.0	12.5	21.1	0.0	13.4	32.5	12.3
Cycle Q Clear(g_c), s	14.0	40.5	17.5	8.6	37.2	0.0	12.5	21.1	0.0	13.4	32.5	12.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1634	507	139	1410		634	1162		395	850	573
V/C Ratio(X)	0.86	0.95	0.76	0.82	0.99		0.55	0.57		0.88	1.06	0.61
Avail Cap(c_a), veh/h	534	1634	507	275	1410		634	1162		407	850	573
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	46.3	14.7	62.8	50.1	0.0	51.4	38.9	0.0	60.3	52.8	13.8
Incr Delay (d2), s/veh	11.0	12.8	6.7	11.2	22.5	0.0	1.0	2.0	0.0	18.9	49.5	4.8
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(50%),veh/ln	6.9	19.3	7.3	4.4	18.9	0.0	5.6	9.7	0.0	7.0	20.5	5.0
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	70.5	59.1	21.4	73.9	72.6	0.0	52.5	40.9	15.0	79.2	102.3	18.7
LnGrp LOS	E	E	C	E	E	A	D	D	B	E	F	B
Approach Vol, veh/h	2304				1860			1133			1603	
Approach Delay, s/veh	54.6				59.2			41.7			79.0	
Approach LOS	D				E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.5	51.9	15.6	50.0	32.4	40.0	21.6	44.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	16.0	39.5	21.0	37.5	20.5	32.5	21.0	37.5				
Max Q Clear Time (g_c+I1), s	15.4	23.1	10.6	42.5	14.5	34.5	16.0	39.2				
Green Ext Time (p_c), s	0.1	4.2	0.2	0.0	0.7	0.0	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh	59.4
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Timings

2: Briargate Parkway & Voyager Parkway

2045 Total AM - #2 Improved

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	309	1405	311	49	1659	375	432	719	64	304	572	598
Future Volume (vph)	309	1405	311	49	1659	375	432	719	64	304	572	598
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	21.0	51.0	51.0	21.0	51.0		28.0	47.0	47.0	19.0	38.0	
Total Split (%)	15.2%	37.0%	37.0%	15.2%	37.0%		20.3%	34.1%	34.1%	13.8%	27.5%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway

	Ø2 (R)		Ø1		Ø3		Ø4
47 s		19 s		21 s		51 s	
	Ø6 (R)		Ø5		Ø7		Ø8
38 s		28 s		21 s		51 s	

HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Total AM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1405	311	49	1659	375	432	719	64	304	572	598
Future Volume (veh/h)	309	1405	311	49	1659	375	432	719	64	304	572	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	336	1527	338	53	1803	0	470	782	0	330	622	650
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	2017	626	69	1647		1294	1017		1069	785	926
Arrive On Green	0.11	0.39	0.39	0.04	0.32	0.00	0.37	0.29	0.00	0.31	0.22	0.22
Sat Flow, veh/h	3456	5106	1585	1781	5106	1585	3456	3554	1585	3456	3554	2790
Grp Volume(v), veh/h	336	1527	338	53	1803	0	470	782	0	330	622	650
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1702	1585	1728	1777	1585	1728	1777	1395
Q Serve(g_s), s	13.2	35.6	13.1	4.1	44.5	0.0	13.6	27.8	0.0	10.1	22.8	18.1
Cycle Q Clear(g_c), s	13.2	35.6	13.1	4.1	44.5	0.0	13.6	27.8	0.0	10.1	22.8	18.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	384	2017	626	69	1647		1294	1017		1069	785	926
V/C Ratio(X)	0.88	0.76	0.54	0.77	1.10		0.36	0.77		0.31	0.79	0.70
Avail Cap(c_a), veh/h	401	2017	626	207	1647		1294	1017		1069	785	926
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.4	36.0	10.8	65.7	46.7	0.0	31.2	45.1	0.0	36.4	50.8	33.0
Incr Delay (d2), s/veh	18.5	1.7	0.9	16.5	52.9	0.0	0.2	5.6	0.0	0.2	8.0	4.4
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(50%),veh/ln	6.8	15.0	4.7	2.2	26.8	0.0	5.8	13.1	0.0	4.3	11.0	6.4
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	78.9	37.7	11.7	82.2	99.7	0.0	31.4	50.7	15.0	36.6	58.8	37.5
LnGrp LOS	E	D	B	F	F	A	C	D	B	D	E	D
Approach Vol, veh/h	2201			2264			1322			1602		
Approach Delay, s/veh	40.0			81.3			41.9			45.6		
Approach LOS	D			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	50.3	47.0	10.3	61.0	59.3	38.0	20.3	51.0				
Change Period (Y+Rc), s	7.5	* 7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	14.0	* 40	16.0	44.5	20.5	30.5	16.0	44.5				
Max Q Clear Time (g_c+I1), s	12.1	29.8	6.1	37.6	15.6	24.8	15.2	46.5				
Green Ext Time (p_c), s	0.2	3.7	0.1	5.4	0.8	3.3	0.1	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh 54.2
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

2: Briargate Parkway & Voyager Parkway

2045 Total MID - #2 Improved

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	402	1391	254	90	1089	301	332	790	158	387	953	406
Future Volume (vph)	402	1391	254	90	1089	301	332	790	158	387	953	406
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	23.0	51.0	51.0	18.0	46.0		19.0	43.0	43.0	26.0	50.0	
Total Split (%)	16.7%	37.0%	37.0%	13.0%	33.3%		13.8%	31.2%	31.2%	18.8%	36.2%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

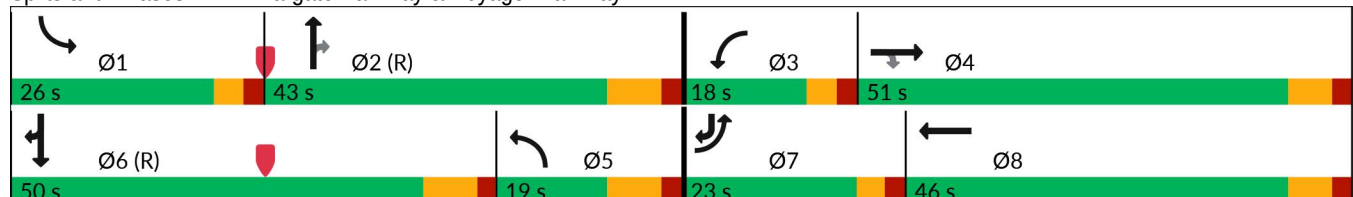
Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway



HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Total MID - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	402	1391	254	90	1089	301	332	790	158	387	953	406
Future Volume (veh/h)	402	1391	254	90	1089	301	332	790	158	387	953	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	437	1512	276	98	1184	0	361	859	0	421	1036	441
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	458	1703	529	121	1373		368	1066		476	1112	1242
Arrive On Green	0.13	0.33	0.33	0.07	0.26	0.00	0.10	0.30	0.00	0.14	0.31	0.31
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	2834
Grp Volume(v), veh/h	437	1512	276	98	1184	0	361	859	0	421	1036	441
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1417
Q Serve(g_s), s	17.1	38.1	13.3	7.4	30.0	0.0	14.2	30.4	0.0	16.3	38.4	7.9
Cycle Q Clear(g_c), s	17.1	38.1	13.3	7.4	30.0	0.0	14.2	30.4	0.0	16.3	38.4	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	1703	529	121	1373		368	1066		476	1112	1242
V/C Ratio(X)	0.95	0.89	0.52	0.81	0.86		0.98	0.81		0.88	0.93	0.35
Avail Cap(c_a), veh/h	458	1703	529	170	1485		368	1066		534	1112	1242
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	43.9	18.0	63.5	48.3	0.0	61.6	45.0	0.0	58.6	46.3	10.0
Incr Delay (d2), s/veh	30.6	6.1	0.9	17.7	5.2	0.0	41.6	6.5	0.0	15.0	14.9	0.8
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(50%),veh/ln	9.5	17.2	5.1	4.0	13.6	0.0	8.4	14.6	0.0	8.2	19.5	2.5
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	90.2	50.1	19.0	81.2	53.5	0.0	103.2	51.5	15.0	73.6	61.2	10.8
LnGrp LOS	F	D	B	F	D	A	F	D	B	E	E	B
Approach Vol, veh/h	2225			1609			1392			1898		
Approach Delay, s/veh	54.1			44.3			60.4			52.3		
Approach LOS	D			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.7	48.3	14.2	51.8	22.0	50.0	23.0	43.0				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	21.0	35.5	13.0	44.5	11.5	42.5	18.0	39.5				
Max Q Clear Time (g_c+I1), s	18.3	32.4	9.4	40.1	16.2	40.4	19.1	32.0				
Green Ext Time (p_c), s	0.5	1.7	0.1	3.6	0.0	1.6	0.0	4.5				

Intersection Summary

HCM 7th Control Delay, s/veh 52.6
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	344	1478	367	108	1331	328	332	630	115	330	860	333
Future Volume (vph)	344	1478	367	108	1331	328	332	630	115	330	860	333
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm	Prot	NA	pt+ov
Protected Phases	7	4		3	8		5	2		1	6	6 7
Permitted Phases			4			Free			2			
Detector Phase	7	4	4	3	8		5	2	2	1	6	6 7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	9.5	36.5	36.5	9.5	36.5		11.5	42.5	42.5	9.5	42.5	
Total Split (s)	21.0	51.0	51.0	16.0	46.0		23.0	49.0	49.0	22.0	48.0	
Total Split (%)	15.2%	37.0%	37.0%	11.6%	33.3%		16.7%	35.5%	35.5%	15.9%	34.8%	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		5.5	5.5	5.5	3.0	5.5	
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)	5.0	6.5	6.5	5.0	6.5		7.5	7.5	7.5	5.0	7.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Cycle Length: 138

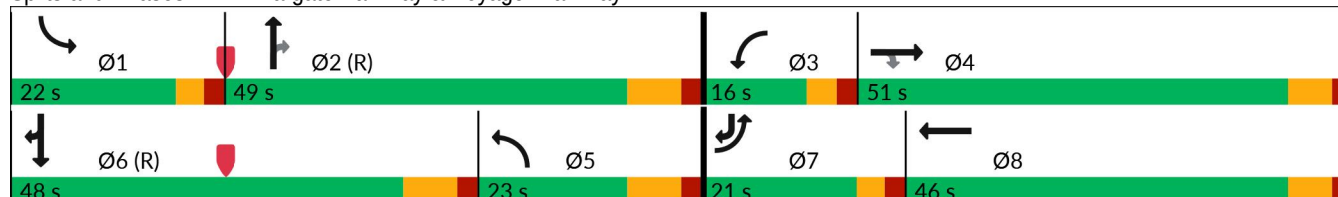
Actuated Cycle Length: 138

Offset: 73 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 2: Briargate Parkway & Voyager Parkway



HCM 7th Signalized Intersection Summary
2: Briargate Parkway & Voyager Parkway

2045 Total PM - #2 Improved
02/18/2026

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	1478	367	108	1331	328	332	630	115	330	860	333
Future Volume (veh/h)	344	1478	367	108	1331	328	332	630	115	330	860	333
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	362	1556	386	114	1401	0	349	663	0	347	905	351
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	407	1686	523	137	1477		399	1126		398	1059	1160
Arrive On Green	0.12	0.33	0.33	0.08	0.28	0.00	0.11	0.31	0.00	0.11	0.29	0.29
Sat Flow, veh/h	3510	5187	1610	1810	5187	1610	3510	3610	1610	3510	3610	2834
Grp Volume(v), veh/h	362	1556	386	114	1401	0	349	663	0	347	905	351
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1810	1729	1610	1755	1805	1610	1755	1805	1417
Q Serve(g_s), s	14.0	39.9	20.0	8.6	36.5	0.0	13.5	21.4	0.0	13.4	32.6	6.5
Cycle Q Clear(g_c), s	14.0	39.9	20.0	8.6	36.5	0.0	13.5	21.4	0.0	13.4	32.6	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	1686	523	137	1477		399	1126		398	1059	1160
V/C Ratio(X)	0.89	0.92	0.74	0.83	0.95		0.87	0.59		0.87	0.85	0.30
Avail Cap(c_a), veh/h	407	1686	523	144	1485		399	1126		432	1059	1160
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	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	44.9	19.2	62.9	48.3	0.0	60.2	40.0	0.0	60.2	46.0	10.9
Incr Delay (d2), s/veh	20.7	8.9	5.4	30.9	13.0	0.0	18.9	2.3	0.0	16.6	8.8	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(50%),veh/ln	7.4	18.4	8.3	5.1	17.5	0.0	7.1	9.9	0.0	6.9	15.9	2.7
Unsig. Movement Delay, s/veh						0.00	15.00					
LnGrp Delay(d), s/veh	80.9	53.8	24.6	93.9	61.4	0.0	79.1	42.3	15.0	76.7	54.7	11.6
LnGrp LOS	F	D	C	F	E	A	E	D	B	E	D	B
Approach Vol, veh/h	2304			1860			1133			1603		
Approach Delay, s/veh	53.2			52.0			50.7			50.1		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	50.6	15.5	51.4	23.2	48.0	21.0	45.8				
Change Period (Y+Rc), s	5.0	7.5	5.0	6.5	7.5	7.5	5.0	6.5				
Max Green Setting (Gmax), s	17.0	41.5	11.0	44.5	15.5	40.5	16.0	39.5				
Max Q Clear Time (g_c+I1), s	15.4	23.4	10.6	41.9	15.5	34.6	16.0	38.5				
Green Ext Time (p_c), s	0.2	4.3	0.0	2.2	0.0	3.6	0.0	0.8				

Intersection Summary

HCM 7th Control Delay, s/veh 51.7
HCM 7th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, WBR] is included in calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	23	1143	17	0	1208
Future Vol, veh/h	0	23	1143	17	0	1208
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	-	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	0	25	1242	18	0	1313

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	621	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	-
Pot Cap-1 Maneuver	0	*755	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		0	-
Mov Cap-1 Maneuver	-	*755	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.93	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	755
HCM Lane V/C Ratio	-	-	0.033
HCM Ctrl Dly (s/v)	-	-	9.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	7	1188	26	0	1418
Future Vol, veh/h	0	7	1188	26	0	1418
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	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	1350	30	0	1688

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	675	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	*744	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		0	-
Mov Cap-1 Maneuver	-	*744	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.89	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	744
HCM Lane V/C Ratio	-	-	0.01
HCM Ctrl Dly (s/v)	-	-	9.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	11	1140	45	0	1239
Future Vol, veh/h	0	11	1140	45	0	1239
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	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	1239	49	0	1347

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	620	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	*760	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		0	-
Mov Cap-1 Maneuver	-	*760	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.81	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	760
HCM Lane V/C Ratio	-	-	0.016
HCM Ctrl Dly (s/v)	-	-	9.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	23	1412	17	0	1478
Future Vol, veh/h	0	23	1412	17	0	1478
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	-	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	0	25	1535	18	0	1607

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	767	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	-
Pot Cap-1 Maneuver	0	*678	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		0	-
Mov Cap-1 Maneuver	-	*678	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.51	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	678
HCM Lane V/C Ratio	-	-	0.037
HCM Ctrl Dly (s/v)	-	-	10.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑			↑↑
Traffic Vol, veh/h	0	7	1467	26	0	1748
Future Vol, veh/h	0	7	1467	26	0	1748
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	8	1667	30	0	2081
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	848	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.1	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.9	-	-	-	-
Pot Cap-1 Maneuver	0	265	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	265	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Ctrl Dly, s/v	18.99	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-	265	-		
HCM Lane V/C Ratio	-	-	0.029	-		
HCM Ctrl Dly (s/v)	-	-	19	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗	↗		↗↗
Traffic Vol, veh/h	0	11	1407	45	0	1524
Future Vol, veh/h	0	11	1407	45	0	1524
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	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	12	1529	49	0	1657

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	765	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	*682	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		0	-
Mov Cap-1 Maneuver	-	*682	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.37	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	682
HCM Lane V/C Ratio	-	-	0.018
HCM Ctrl Dly (s/v)	-	-	10.4
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s
+: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	345	6	0	320	54	0
Future Vol, veh/h	345	6	0	320	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	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	375	7	0	348	59	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 723 375
Stage 1	-	-	- 375 -
Stage 2	-	-	- 348 -
Critical Hdwy	-	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	-	-	- 3.518 3.318
Pot Cap-1 Maneuver	-	- 0	- 393 671
Stage 1	-	- 0	- 695 -
Stage 2	-	- 0	- 715 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 393 671
Mov Cap-2 Maneuver	-	-	- 393 -
Stage 1	-	-	- 695 -
Stage 2	-	-	- 715 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	15.76
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	393	-	-	-
HCM Lane V/C Ratio	0.149	-	-	-
HCM Ctrl Dly (s/v)	15.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	312	9	0	322	15	0
Future Vol, veh/h	312	9	0	322	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	52	52	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	495	14	0	619	16	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 1114 495
Stage 1	-	-	- 495 -
Stage 2	-	-	- 619 -
Critical Hdwy	-	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	-	-	- 3.5 3.3
Pot Cap-1 Maneuver	-	- 0	- 232 578
Stage 1	-	- 0	- 617 -
Stage 2	-	- 0	- 541 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 232 578
Mov Cap-2 Maneuver	-	-	- 232 -
Stage 1	-	-	- 617 -
Stage 2	-	-	- 541 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	21.67
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	232	-	-	-
HCM Lane V/C Ratio	0.07	-	-	-
HCM Ctrl Dly (s/v)	21.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection

Int Delay, s/veh 2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	72	15	0	48	27	0
Future Vol, veh/h	72	15	0	48	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	25	25	25	25	25	25
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	288	60	0	192	108	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 480 288
Stage 1	-	-	- 288 -
Stage 2	-	-	- 192 -
Critical Hdwy	-	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	-	-	- 3.5 3.3
Pot Cap-1 Maneuver	-	- 0	- 548 756
Stage 1	-	- 0	- 766 -
Stage 2	-	- 0	- 845 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 548 756
Mov Cap-2 Maneuver	-	-	- 548 -
Stage 1	-	-	- 766 -
Stage 2	-	-	- 845 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	13.17
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	548	-	-	-
HCM Lane V/C Ratio	0.197	-	-	-
HCM Ctrl Dly (s/v)	13.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	426	6	0	396	54	0
Future Vol, veh/h	426	6	0	396	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	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	463	7	0	430	59	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 893 463
Stage 1	-	-	- 463 -
Stage 2	-	-	- 430 -
Critical Hdwy	-	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	-	-	- 3.518 3.318
Pot Cap-1 Maneuver	-	- 0	- 312 599
Stage 1	-	- 0	- 634 -
Stage 2	-	- 0	- 656 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 312 599
Mov Cap-2 Maneuver	-	-	- 312 -
Stage 1	-	-	- 634 -
Stage 2	-	-	- 656 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	312	-	-	-
HCM Lane V/C Ratio	0.188	-	-	-
HCM Ctrl Dly (s/v)	19.2	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.7	-	-	-

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	386	9	0	397	15	0
Future Vol, veh/h	386	9	0	397	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	52	52	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	613	14	0	763	16	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 1376 613
Stage 1	-	-	- 613 -
Stage 2	-	-	- 763 -
Critical Hdwy	-	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	-	-	- 3.5 3.3
Pot Cap-1 Maneuver	-	- 0	- 162 496
Stage 1	-	- 0	- 545 -
Stage 2	-	- 0	- 464 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 162 496
Mov Cap-2 Maneuver	-	-	- 162 -
Stage 1	-	-	- 545 -
Stage 2	-	-	- 464 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	29.77
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	162	-	-	-
HCM Lane V/C Ratio	0.101	-	-	-
HCM Ctrl Dly (s/v)	29.8	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑	↘	
Traffic Vol, veh/h	89	15	0	60	27	0
Future Vol, veh/h	89	15	0	60	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	25	25	25	25	25	25
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	356	60	0	240	108	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 596 356
Stage 1	-	-	- 356 -
Stage 2	-	-	- 240 -
Critical Hdwy	-	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	-	-	- 3.5 3.3
Pot Cap-1 Maneuver	-	- 0	- 470 693
Stage 1	-	- 0	- 713 -
Stage 2	-	- 0	- 805 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 470 693
Mov Cap-2 Maneuver	-	-	- 470 -
Stage 1	-	-	- 713 -
Stage 2	-	-	- 805 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	14.94
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	470	-	-	-
HCM Lane V/C Ratio	0.23	-	-	-
HCM Ctrl Dly (s/v)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.9	-	-	-



Appendix F: Signal Timing Worksheets

Intersection 299 at Voyager Pkwy and Springcrest Rd - Timing table, page 1

Page 1	Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
Min Green	4	6	0	4	4	6	0	4	0	0	0	0
Passage Time I	1.0	5.0	0.0	2.0	2.0	5.0	0.0	1.0	0.0	0.0	0.0	0.0
Passage Time II	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Green I	10	30	0	20	10	30	0	20	0	0	0	0
Max Green II	0	0	0	30	10	0	0	0	0	0	0	0
Yellow Clearance	3.0	5.5	0.0	5.0	3.0	5.5	0.0	5.0	0.0	0.0	0.0	0.0
Red Clearance	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Min Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Green Time	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance Walk Time	0	0	0	0	0	0	0	0	0	0	0	0
Walk Time	0	7	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance	0	22	0	0	0	0	0	0	0	0	0	0
Handicap Walk	0	0	0	0	0	0	0	0	0	0	0	0
Handicap Ped Clearance	0	0	0	0	0	0	0	0	0	0	0	0
Voyager Pkwy	X	X			X	X						
Springcrest Rd				X				X				
Compass Direction	S	N		E	N	S		W				
Through, Turn or XPed	Left,p/p	Thru		Thru	Left,prt	Thru		Thru				

Intersection 299 at Voyager Pkwy and Springcrest Rd - Sequence table, page 1

Page 1	Ring 1 Phases				Ring 2 Phases				Ring 3 Phases			
	1	2	3	4	5	6	7	8	9	10	11	12
State 1	Vehicle				Vehicle							
Barrier 1												
State 2		V & P				Vehicle						
Barrier 2	XXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXX							
State 3								Vehicle				
Barrier 3	XXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXX							
State 4				Vehicle								
Barrier 4	XXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXX							
State 5												
Barrier 5												
State 6												
Barrier 6												
State 7												
Barrier 7												
State 8												
Barrier 8												
State 9												
Barrier 9												
State 10												
Barrier 10												
State 11												
Barrier 11												
State 12												
Barrier 12												

Intersection 299 at Voyager Pkwy and Springcrest Rd - Phases control table, page 1

Page 1	Vehicle Phases		Ped Phases
	111		111
	123456789012		123456789012
Min Recalls		Ped Recalls	
Max Recalls	2 6	Handicap Ped Recalls	
Recall If Maxed		Soft Ped Recalls	
Dual Entry		Don't Recall (FDW Offset)	2 4 6 8
Do Not Skip		Allow Walk Reduction	
Simultaneous Gap Out		Hold In Walk	
Restricted Phases		Allow Ped Re-service	
Sequential Initial Timing		Rest In Walk	No
Max Timer Starts For Call			
Reduction Starts For Call			
Red To Avoid Left Turn Trap	2 6		
Rest In Red	No		

Intersection 299 at Voyager Pkwy and Springcrest Rd - Schedule table, events 1-25

Event Num	Enabled	Event Type	Event Parameters		Start					Duration Minutes	Stop		Repetition		Priority
			Param 1	Param 2	Mon	Day	Hour	Min	Sec		Mon	Day	Repeat	Intervals	
1	Yes	Run Plan	Plan 5	Ofst #2	1	1	06	30	00	720	12	31	Weekly	MTWTF	Low
2	Yes	Run Plan	Plan 5	Ofst #3	1	1	14	15	00	240	12	31	Weekly	MTWTF	Medium
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Intersection 299 at Voyager Pkwy and Springcrest Rd - Coordination table, plans 1-2

Plan 1	111	Cycle Length	124	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	106					
Coordinated Phases		Offset 2	0	1	16	0	0.0	16
	2 6	Offset 3	0	2	39	20	0.0	41
Secondary Coordinated Phases		Offset 4	0	3	0	0	0.0	0
		Relative Secondary Offset	0	4	20	0	0.0	27
Extra Time Phases		Permissive Period	Auto	5	15	0	0.0	14
		Max Cycle Addition	31	6	40	21	0.0	43
Additional Max Recalls		Max Cycle Subtraction	31	7	0	0	0.0	0
		Coord Actuated Period	0	8	49	0	0.0	46
Units		Top Of Cycle Green Point	End	9	0	0	0.0	0
	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0
Plan 2	111	Cycle Length	0	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	0					
Coordinated Phases		Offset 2	0	1	0	0	0.0	0
		Offset 3	0	2	0	0	0.0	0
Secondary Coordinated Phases		Offset 4	0	3	0	0	0.0	0
		Relative Secondary Offset	0	4	0	0	0.0	0
Extra Time Phases		Permissive Period	Auto	5	0	0	0.0	0
		Max Cycle Addition	0	6	0	0	0.0	0
Additional Max Recalls		Max Cycle Subtraction	0	7	0	0	0.0	0
		Coord Actuated Period	0	8	0	0	0.0	0
Units		Top Of Cycle Green Point	End	9	0	0	0.0	0
	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0

Intersection 299 at Voyager Pkwy and Springcrest Rd - Coordination table, plans 5-6

Plan 5	111	Cycle Length	138	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes	
	123456789012	Offset 1	123						
Coordinated		Offset 2	1	1	15	0	0.0	14	
Phases	2 6	Offset 3	83	2	52	0	0.0	64	
Secondary		Offset 4	0	3	0	0	0.0	0	
Coordinated		Relative Secondary Offset	0	4	20	0	0.0	27	
Phases		Permissive Period	Auto	5	15	0	0.0	14	
Extra Time		Max Cycle Addition	34	6	52	0	0.0	64	
Phases		Max Cycle Subtraction	34	7	0	0	0.0	0	
Additional		Coord Actuated Period	0	8	51	0	0.0	42	
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0	
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0	
		Big Bang Ped Recovery	No	11	0	0	0.0	0	
		Min Lagging Left Split	0%	12	0	0	0.0	0	
Plan 6	111	Cycle Length	0	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes	
	123456789012	Offset 1	0						
Coordinated		Offset 2	0	1	0	0	0.0	0	
Phases		Offset 3	0	2	0	0	0.0	0	
Secondary		Offset 4	0	3	0	0	0.0	0	
Coordinated		Relative Secondary Offset	0	4	0	0	0.0	0	
Phases		Permissive Period	Auto	5	0	0	0.0	0	
Extra Time		Max Cycle Addition	0	6	0	0	0.0	0	
Phases		Max Cycle Subtraction	0	7	0	0	0.0	0	
Additional		Coord Actuated Period	0	8	0	0	0.0	0	
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0	
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0	
		Big Bang Ped Recovery	No	11	0	0	0.0	0	
		Min Lagging Left Split	0%	12	0	0	0.0	0	

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Timing table, page 1

Page 1	Phases											
	1	2	3	4	5	6	7	8	9	10	11	12
Min Green	4	4	4	4	4	4	4	4	0	0	0	0
Passage Time I	1.0	5.0	1.0	1.0	1.0	3.0	1.0	1.0	0.0	0.0	0.0	0.0
Passage Time II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Green I	10	32	10	15	20	32	10	28	0	0	0	0
Max Green II	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Clearance	3.0	5.5	3.0	4.5	5.5	5.5	3.0	4.5	0.0	0.0	0.0	0.0
Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0
Added Initial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Min Passage	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Green Time	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert Time	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advance Walk Time	0	0	0	0	0	0	0	0	0	0	0	0
Walk Time	0	7	0	7	0	7	0	7	0	0	0	0
Pedestrian Clearance	0	28	0	23	0	28	0	23	0	0	0	0
Handicap Walk	0	0	0	0	0	0	0	0	0	0	0	0
Handicap Ped Clearance	0	0	0	0	0	0	0	0	0	0	0	0
Voyager Pkwy	X	X			X	X						
Briargate Pkwy/I-25			X	X			X	X				
Compass Direction	S	N	W	E	N	S	E	W				
Through, Turn or XPed	Left.prt	Thru	Left.prt	Thru	Left.prt	Thru	Left.prt	Thru				

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Sequence table, page 1

Page 1	Ring 1 Phases				Ring 2 Phases				Ring 3 Phases			
	1	2	3	4	5	6	7	8	9	10	11	12
State 1	Vehicle											
Barrier 1												
State 2		V & P				V & P						
Barrier 2												
State 3					Vehicle							
Barrier 3	XXXXXXXXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
State 4			Vehicle				Vehicle					
Barrier 4												
State 5				V & P				V & P				
Barrier 5	XXXXXXXXXXXXXXXXXXXXXXXXXXXX				XXXXXXXXXXXXXXXXXXXXXXXXXXXX							
State 6												
Barrier 6												
State 7												
Barrier 7												
State 8												
Barrier 8												
State 9												
Barrier 9												
State 10												
Barrier 10												
State 11												
Barrier 11												
State 12												
Barrier 12												

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Phases control table, page 1

Page 1	Vehicle Phases		Ped Phases
	111		111
	123456789012		123456789012
Min Recalls		Ped Recalls	
Max Recalls	2 6	Handicap Ped Recalls	
Recall If Maxed		Soft Ped Recalls	
Dual Entry	4 8	Don't Recall (FDW Offset)	2 4 6 8
Do Not Skip		Allow Walk Reduction	
Simultaneous Gap Out		Hold In Walk	
Restricted Phases	1 5	Allow Ped Re-service	2 6
Sequential Initial Timing		Rest In Walk	No
Max Timer Starts For Call			
Reduction Starts For Call			
Red To Avoid Left Turn Trap			
Rest In Red	No		

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Overlaps control table, page 1

Page 1	Phases				Phases		
	111				111		
Vehicle Overlaps	123456789012				Ped Overlaps	123456789012	
Overlap A				Overlap E			
Parent Phases	67	Green Delay	2	Parent Phases		Walk Delay	0
Conflicting Phases		Green Extension	0	Conflicting Phases		Walk Extension	0
Main/Cross Street	Main	Yellow Clearance	3.0	Calc Walk Time	No	Ped Clearance	0
Compass Direction	S	Red Clearance	2.0	Overlap F			
Through or turn	Right			Parent Phases		Walk Delay	0
Overlap B				Conflicting Phases		Walk Extension	0
Parent Phases		Green Delay	0	Calc Walk Time	No	Ped Clearance	0
Conflicting Phases		Green Extension	0				
Main/Cross Street		Yellow Clearance	0.0				
Compass Direction		Red Clearance	0.0				
Through or turn							
Overlap C							
Parent Phases		Green Delay	0				
Conflicting Phases		Green Extension	0				
Main/Cross Street		Yellow Clearance	0.0				
Compass Direction		Red Clearance	0.0				
Through or turn							
Overlap D							
Parent Phases		Green Delay	0				
Conflicting Phases		Green Extension	0				
Main/Cross Street		Yellow Clearance	0.0				
Compass Direction		Red Clearance	0.0				
Through or turn							

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Coordination table, plans 1-2

Plan 1	111	Cycle Length	124	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	99					
Coordinated Phases		Offset 2	0	1	21	0	0.0	22
	2 6	Offset 3	0	2	43	0	0.0	46
Secondary Coordinated Phases		Offset 4	0	3	18	0	0.0	18
		Relative Secondary Offset	0	4	42	0	0.0	46
Extra Time Phases		Permissive Period	Auto	5	20	0	0.0	18
		Max Cycle Addition	31	6	44	0	0.0	48
Additional Max Recalls		Max Cycle Subtraction	31	7	18	0	0.0	18
		Coord Actuated Period	0	8	42	0	0.0	46
Units		Top Of Cycle Green Point	End	9	0	0	0.0	0
	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0
Plan 2	111	Cycle Length	138	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	99					
Coordinated Phases		Offset 2	0	1	21	0	0.0	22
	2 6	Offset 3	0	2	38	19	0.0	40
Secondary Coordinated Phases		Offset 4	0	3	18	0	0.0	18
		Relative Secondary Offset	0	4	61	0	0.0	70
Extra Time Phases		Permissive Period	Auto	5	20	0	0.0	18
		Max Cycle Addition	34	6	39	20	0.0	41
Additional Max Recalls		Max Cycle Subtraction	34	7	18	0	0.0	18
		Coord Actuated Period	0	8	61	0	0.0	70
Units		Top Of Cycle Green Point	End	9	0	0	0.0	0
	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Coordination table, plans 5-6

AM/
PM

Plan 5	111	Cycle Length	138	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	73					
Coordinated		Offset 2	0	1	21	0	0.0	22
Phases	2 6	Offset 3	0	2	47	0	0.0	51
Secondary		Offset 4	0	3	26	0	0.0	28
Coordinated		Relative Secondary Offset	0	4	44	0	0.0	49
Phases		Permissive Period	Auto	5	28	0	0.0	28
Extra Time		Max Cycle Addition	34	6	40	0	0.0	43
Phases		Max Cycle Subtraction	34	7	26	0	0.0	28
Additional		Coord Actuated Period	0	8	44	0	0.0	49
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0
Plan 6	111	Cycle Length	0	Phases	Splits	Alternate Mins	Alternate Passages	Alternate Maxes
	123456789012	Offset 1	0					
Coordinated		Offset 2	0	1	0	0	0.0	0
Phases		Offset 3	0	2	0	0	0.0	0
Secondary		Offset 4	0	3	0	0	0.0	0
Coordinated		Relative Secondary Offset	0	4	0	0	0.0	0
Phases		Permissive Period	Auto	5	0	0	0.0	0
Extra Time		Max Cycle Addition	0	6	0	0	0.0	0
Phases		Max Cycle Subtraction	0	7	0	0	0.0	0
Additional		Coord Actuated Period	0	8	0	0	0.0	0
Max Recalls		Top Of Cycle Green Point	End	9	0	0	0.0	0
Units	Seconds	Big Bang Preempt Recvry	No	10	0	0	0.0	0
		Big Bang Ped Recovery	No	11	0	0	0.0	0
		Min Lagging Left Split	0%	12	0	0	0.0	0

Intersection 329 at Voyager Pkwy and Briargate Pkwy/I-25 - Schedule table, events 1-25

Event Num	Enabled	Event Type	Event Parameters		Start					Duration Minutes	Stop		Repetition		Priority
			Param 1	Param 2	Mon	Day	Hour	Min	Sec		Mon	Day	Repeat	Intervals	
1															
2															
3	No	Run Plan	Plan 2	Ofst #2	1	1	06	00	00	135	12	31	Weekly	MTWTF	Medium
4	Yes	Run Plan	Plan 5	Ofst #1	1	1	06	00	00	780	12	31	Weekly	MTWTF	Medium
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Appendix G: Queue Analysis Worksheets

Queues

2029 Total AM

1: Voyager Parkway & Springcrest Road

04/29/2025

									
Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	193	194	71	20	1076	327	101	1140
v/c Ratio	0.01	0.73	0.73	0.20	0.22	0.49	0.31	0.29	0.49
Control Delay (s/veh)	0.0	69.9	70.2	1.2	82.6	12.5	3.5	9.0	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.0	69.9	70.2	1.2	82.6	12.5	3.5	9.0	15.4
Queue Length 50th (ft)	0	175	177	0	19	228	0	20	257
Queue Length 95th (ft)	0	222	223	0	m29	514	153	57	419
Internal Link Dist (ft)			246			391			270
Turn Bay Length (ft)	25	350		350	325			300	
Base Capacity (vph)	342	535	535	593	128	2176	1067	369	2340
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	0.01	0.36	0.36	0.12	0.16	0.49	0.31	0.27	0.49
Intersection Summary									
m Volume for 95th percentile queue is metered by upstream signal.									

Queues
1: Voyager Parkway & Springcrest Road

2029 Total MID
02/16/2026

											
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	3	272	274	102	4	1151	284	95	1282	1
v/c Ratio	0.06	0.01	0.76	0.76	0.23	0.05	0.59	0.30	0.35	0.57	0.00
Control Delay (s/veh)	61.7	0.0	64.1	64.3	3.9	63.3	22.0	7.9	15.6	20.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.7	0.0	64.1	64.3	3.9	63.3	22.0	7.9	15.6	20.7	0.0
Queue Length 50th (ft)	4	0	243	245	0	4	350	28	25	273	0
Queue Length 95th (ft)	13	0	166	167	0	m7	588	m132	74	638	0
Internal Link Dist (ft)	208			246			391			270	
Turn Bay Length (ft)		25	350		350	325			300		75
Base Capacity (vph)	150	269	546	548	603	130	1940	959	293	2239	1049
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.50	0.50	0.17	0.03	0.59	0.30	0.32	0.57	0.00

Intersection Summary

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

Queues
1: Voyager Parkway & Springcrest Road

2029 Total PM
04/29/2025

										
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	10	35	35	10	12	1151	62	31	1280
v/c Ratio	0.01	0.05	0.34	0.34	0.05	0.14	0.41	0.05	0.08	0.45
Control Delay (s/veh)	63.0	0.4	70.4	70.4	0.4	91.4	4.6	0.1	4.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.0	0.4	70.4	70.4	0.4	91.4	4.6	0.1	4.4	8.8
Queue Length 50th (ft)	1	0	32	32	0	12	46	0	3	121
Queue Length 95th (ft)	7	0	71	71	0	m26	372	m0	16	405
Internal Link Dist (ft)	208			246			391			270
Turn Bay Length (ft)		25	350		350	325			300	
Base Capacity (vph)	178	269	546	546	603	130	2794	1278	433	2842
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	0.01	0.04	0.06	0.06	0.02	0.09	0.41	0.05	0.07	0.45
Intersection Summary										
m Volume for 95th percentile queue is metered by upstream signal.										

Queues

2045 Total AM

1: Voyager Parkway & Springcrest Road

04/29/2025

									
Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	5	230	231	88	22	1324	404	123	1409
v/c Ratio	0.02	0.74	0.75	0.22	0.24	0.65	0.40	0.46	0.63
Control Delay (s/veh)	0.3	67.0	67.2	3.0	81.2	18.5	5.6	14.0	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	0.3	67.0	67.2	3.0	81.2	18.5	5.6	14.0	20.4
Queue Length 50th (ft)	0	207	208	0	20	438	28	29	393
Queue Length 95th (ft)	0	251	252	5	m30	655	206	73	606
Internal Link Dist (ft)			246			391			270
Turn Bay Length (ft)	25	350		350	325			300	
Base Capacity (vph)	315	535	535	593	128	2044	1017	276	2247
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	0.02	0.43	0.43	0.15	0.17	0.65	0.40	0.45	0.63

Intersection Summary

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

Queues

2045 Total MID

1: Voyager Parkway & Springcrest Road

02/16/2026

											
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	5	332	335	125	4	1420	351	116	1584	1
v/c Ratio	0.08	0.02	0.77	0.78	0.25	0.05	0.80	0.39	0.65	0.76	0.00
Control Delay (s/veh)	61.5	0.3	59.9	60.2	6.2	69.3	25.3	7.8	40.9	28.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.5	0.3	59.9	60.2	6.2	69.3	25.3	7.8	40.9	28.2	0.0
Queue Length 50th (ft)	6	0	292	295	0	3	478	37	39	446	0
Queue Length 95th (ft)	15	0	187	189	0	m6	m#833	m175	#140	#1041	0
Internal Link Dist (ft)	208			246			391			270	
Turn Bay Length (ft)		25	350		350	325			300		75
Base Capacity (vph)	146	269	549	551	605	130	1775	895	194	2082	984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.02	0.60	0.61	0.21	0.03	0.80	0.39	0.60	0.76	0.00

Intersection Summary

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.

Queues

2045 Total PM

1: Voyager Parkway & Springcrest Road

04/29/2025

										
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	13	40	40	13	14	1420	76	35	1581
v/c Ratio	0.01	0.07	0.37	0.37	0.06	0.16	0.52	0.06	0.12	0.56
Control Delay (s/veh)	63.0	0.7	71.0	71.0	0.5	89.8	5.9	0.2	5.1	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.0	0.7	71.0	71.0	0.5	89.8	5.9	0.2	5.1	10.7
Queue Length 50th (ft)	1	0	36	36	0	13	60	0	4	175
Queue Length 95th (ft)	7	0	77	77	0	m26	498	m0	18	579
Internal Link Dist (ft)	208			246			391			270
Turn Bay Length (ft)		25	350		350	325			300	
Base Capacity (vph)	178	269	546	546	603	130	2727	1251	332	2830
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	0.01	0.05	0.07	0.07	0.02	0.11	0.52	0.06	0.11	0.56

Intersection Summary

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

Queues
2: Briargate Parkway & Voyager Parkway

2029 Total AM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	282	1279	283	45	1509	342	393	655	58	280	522	551
v/c Ratio	0.56	0.67	0.37	0.39	1.07	0.22	0.77	0.63	0.11	0.75	0.63	0.87
Control Delay (s/veh)	59.4	39.1	6.6	71.2	91.3	0.3	67.7	45.7	0.5	67.7	50.0	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.4	39.1	6.6	71.2	91.3	0.3	67.7	45.7	0.5	67.7	50.0	37.5
Queue Length 50th (ft)	124	364	14	40	~567	0	179	275	0	131	230	211
Queue Length 95th (ft)	170	430	79	80	#652	0	236	340	1	179	322	#501
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	522	1905	755	269	1413	1583	509	1039	540	398	833	639
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.67	0.37	0.17	1.07	0.22	0.77	0.63	0.11	0.70	0.63	0.86

Intersection Summary

~ 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.

Queues

2029 Total AM

2: Briargate Parkway & Voyager Parkway

04/16/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	282	1279	283	45	1509	342	393	657	58	280	526	551
v/c Ratio	0.65	0.67	0.37	0.39	1.00	0.22	0.82	0.63	0.11	0.75	0.61	0.81
Control Delay (s/veh)	64.2	39.1	6.6	71.2	71.0	0.3	72.1	45.8	0.5	66.2	52.4	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.2	39.1	6.6	71.2	71.0	0.3	72.1	45.8	0.5	66.2	52.4	51.1
Queue Length 50th (ft)	125	358	13	39	497	0	176	272	0	129	234	433
Queue Length 95th (ft)	167	423	77	79	#642	0	232	335	1	174	273	604
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	522	1905	755	269	1511	1583	509	1039	540	398	864	722
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.67	0.37	0.17	1.00	0.22	0.77	0.63	0.11	0.70	0.61	0.76

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2029 Total PM

2: Briargate Parkway & Voyager Parkway

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	298	1260	313	93	1134	282	283	539	98	282	735	286
v/c Ratio	0.70	0.78	0.45	0.57	0.79	0.17	0.54	0.47	0.17	0.74	0.79	0.45
Control Delay (s/veh)	66.7	47.5	7.3	73.4	50.6	0.2	58.8	40.5	6.1	62.1	55.5	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.7	47.5	7.3	73.4	50.6	0.2	58.8	40.5	6.1	62.1	55.5	18.1
Queue Length 50th (ft)	134	363	13	81	334	0	123	214	0	127	358	75
Queue Length 95th (ft)	178	443	90	137	406	0	171	273	37	177	#447	237
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	532	1608	701	274	1471	1615	520	1146	585	406	935	687
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.78	0.45	0.34	0.77	0.17	0.54	0.47	0.17	0.69	0.79	0.42

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues
2: Briargate Parkway & Voyager Parkway

2045 Total AM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	336	1527	338	53	1803	408	470	782	70	330	622	650
v/c Ratio	0.72	0.81	0.45	0.44	1.23	0.26	0.92	0.77	0.13	0.85	0.75	0.62
Control Delay (s/veh)	65.9	44.1	10.6	71.9	152.9	0.4	82.6	50.8	2.3	70.0	51.7	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.9	44.1	10.6	71.9	152.9	0.4	82.6	50.8	2.3	70.0	51.7	23.4
Queue Length 50th (ft)	151	467	48	47	~764	0	221	344	0	157	288	183
Queue Length 95th (ft)	204	#558	140	92	#868	0	#323	423	13	#225	384	322
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	522	1885	750	269	1461	1583	509	1021	533	398	833	1084
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.81	0.45	0.20	1.23	0.26	0.92	0.77	0.13	0.83	0.75	0.60

Intersection Summary

~ 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.

Queues
2: Briargate Parkway & Voyager Parkway

2045 Total PM
02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	362	1556	386	114	1401	345	349	663	121	347	905	351
v/c Ratio	0.76	0.93	0.54	0.62	0.94	0.21	0.67	0.64	0.22	0.87	1.06	0.56
Control Delay (s/veh)	67.8	56.2	13.0	73.7	61.1	0.3	62.7	46.3	9.6	68.5	96.2	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.8	56.2	13.0	73.7	61.1	0.3	62.7	46.3	9.6	68.5	96.2	20.7
Queue Length 50th (ft)	161	494	61	100	458	0	154	274	9	160	~482	98
Queue Length 95th (ft)	215	#654	173	160	#572	0	208	342	58	#241	#622	322
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	532	1672	717	274	1489	1615	520	1039	541	406	850	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.93	0.54	0.42	0.94	0.21	0.67	0.64	0.22	0.85	1.06	0.54

Intersection Summary

~ 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.

Queues

2045 Total AM - #2 Improved

2: Briargate Parkway & Voyager Parkway

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	336	1527	338	53	1803	408	470	782	70	330	622	650
v/c Ratio	0.86	0.78	0.43	0.44	1.09	0.26	0.92	0.77	0.13	0.95	0.80	0.66
Control Delay (s/veh)	81.1	41.7	8.5	71.9	95.7	0.4	82.6	51.3	0.5	101.7	56.7	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.1	41.7	8.5	71.9	95.7	0.4	82.6	51.3	0.5	101.7	56.7	22.9
Queue Length 50th (ft)	157	456	35	47	~681	0	221	344	0	147	294	112
Queue Length 95th (ft)	#236	544	120	92	#778	0	#323	423	0	#262	348	297
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	398	1958	781	205	1649	1583	509	1012	543	348	782	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.78	0.43	0.26	1.09	0.26	0.92	0.77	0.13	0.95	0.80	0.66

Intersection Summary

~ 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.

Queues

2045 Total MID - #2 Improved

2: Briargate Parkway & Voyager Parkway

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	437	1512	276	98	1184	327	361	859	172	421	1036	441
v/c Ratio	0.96	0.89	0.40	0.65	0.81	0.20	1.24	0.88	0.34	0.83	0.92	0.35
Control Delay (s/veh)	92.2	51.3	9.1	81.2	51.1	0.3	184.3	60.5	18.3	61.5	58.1	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	92.2	51.3	9.1	81.2	51.1	0.3	184.3	60.5	18.3	61.5	58.1	12.5
Queue Length 50th (ft)	204	473	29	86	360	0	~206	397	45	195	461	93
Queue Length 95th (ft)	#310	541	101	148	419	0	#310	#520	112	#231	#626	115
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	456	1708	686	170	1484	1615	291	971	512	532	1125	1255
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.89	0.40	0.58	0.80	0.20	1.24	0.88	0.34	0.79	0.92	0.35

Intersection Summary

~ 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.

Queues

2045 Total PM - #2 Improved

2: Briargate Parkway & Voyager Parkway

02/18/2026

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	362	1556	386	114	1401	345	349	663	121	347	905	351
v/c Ratio	0.90	0.93	0.53	0.81	0.94	0.21	0.89	0.60	0.21	0.83	0.85	0.30
Control Delay (s/veh)	84.9	55.4	10.7	101.0	61.3	0.3	84.7	43.8	9.2	73.3	56.3	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	84.9	55.4	10.7	101.0	61.3	0.3	84.7	43.8	9.2	73.3	56.3	13.3
Queue Length 50th (ft)	167	494	48	102	451	0	161	268	9	158	420	54
Queue Length 95th (ft)	#256	#587	144	#209	#546	0	#247	334	56	#228	501	106
Internal Link Dist (ft)		396			909			439			587	
Turn Bay Length (ft)	475		275	225		250	400		150	450		300
Base Capacity (vph)	406	1681	733	143	1486	1615	393	1098	565	431	1059	1165
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.93	0.53	0.80	0.94	0.21	0.89	0.60	0.21	0.81	0.85	0.30

Intersection Summary

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

Queue shown is maximum after two cycles.