



Traffic Impact Study

Rapp Road Residential
and Costco
Western Avenue Mixed-Use Development
Town of Guilderland, Albany County, NY

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A. INTRODUCTION

The Traffic Impact Study was prepared to evaluate the potential traffic impacts of the proposed Rapp Road Residential/Western Avenue Mixed Use Redevelopment Projects located within the Town of Guilderland Transit Oriented Development (TOD) District on the surrounding roadway network. The following sections provide a description of the Proposed Project and the tasks undertaken in completing our evaluation.

B. PROJECT DESCRIPTION AND LOCATION

(Figures No. 1, 1A)

Rapp Road Residential (Site 1) a 222-unit apartment development with some 3,900 s.f. of ancillary commercial space included within the first floor of the two five-story buildings is proposed on a ±19.8 acre site located on Rapp Road immediately west of the Crossgates Mall (the “Site 1 Project”). The Site 1 Project is located in the Town’s Transit Oriented Development (TOD) District. Access to Site 1 is proposed via two driveway connections to Rapp Road. These driveways will provide access to Crossgates Mall Road (the southerly Mall ring road) and from there directly to the I-87/I-90 highway system. As part of the development plan, a connection to/from the Crossgates Mall northerly ring road is also proposed to provide additional access to I-87/-I-90, as well as Washington Avenue Extension. A Design Year of 2022 has been utilized for the Site 1 analysis. Site 1 also identifies an area reserved for future development. As previously analyzed for the Rapp Road Residential Project, this area could support an additional 90 residential apartment units based on the proposed Project density. A Design Year of 2025 has been utilized for the potential future development area on Site 1.

The second redevelopment area (Site 2) is located on ±15 acres of the TOD at the intersection of Crossgates Mall Road and Western Avenue which is currently served by Gabriel Terrace, Lawton Terrace, Tiernan Court and Rielton Court. Site 2 is proposed for approximately 160,000 s.f. Costco retail facility with 18 fueling stations. Access to Site 2 is proposed via connector road from Western Avenue (at Gabriel Terrace) which would be extended and realigned and connect to Crossgates Mall Road opposite the westerly Crossgates Mall driveway. This connection (the “Gabriel Terrace Connector Road”) will provide direct access to Crossgates Mall, as well as access to Crossgates Mall Road (the southerly Mall Ring Road) and from there directly to the I-87/I-90 highway system. In addition two driveways to Rapp Road are also proposed, with the northerly access for entering left and right turns and exiting right turns only (exiting left turns will be prohibited) and the southerly access for entering right turns only. A Design Year of 2022 has been utilized for the Site 2 analysis.

The third redevelopment area (site 3) is located on ±11 acres of the TOD zoned property between Site 2 and the recently developed Hotel site on Western Avenue. While there are no current development plans for this Site, the DEIS analyzed ±115,000 s.f. of Retail, 50,000 s.f. of Office and 48 Residential Units. Access to Site 3 will also be provide by the Gabriel Terrace Connector Road from Western Avenue and Crossgates Mall Road as well as a driveway connection to the Hotel connector road from Western Avenue and Crossgates Mall Road. A Design Year of 2025 has been utilized for the potential future development of Site 3.

The above development areas (Sites) were included as potential future development in the Capital District Transportation Authority's ("CDTA") Traffic Studies for the CDTA Transit Center Project at Crossgates. See Section Q.

The Site Locations and Study Area Intersections are shown on Figure No. 1 and Proposed Driveways are shown on Figure No. 1A.

C. YEAR 2019 EXISTING TRAFFIC VOLUMES

(Figures No. 2, 3, 4)

In order to establish existing traffic conditions in the vicinity of the proposed Sites, the turning movement traffic counts which were conducted in November 2017 (for the previous Rapp Road Residential Traffic Impact Study dated November 14, 2018) and in November/December 2018 were supplemented with recent current traffic counts conducted in September/October 2019 to determine the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours for the following intersections (as per the Final Scope).

1. Western Avenue and Crossgates Mall Driveway
2. Western Highway and Gabriel Terrace
3. Western Avenue and Rapp Road/Johnston Road
4. Rapp Road and Crossgates Mall Road
5. Rapp Road and Gipp Road
6. Rapp Road and Pine Lane
7. Rapp Road and Springsteen Road
8. Springsteen Road and S. Frontage Road
9. Washington Avenue Extension and Springsteen Road/Crossgates Commons
10. Crossgates Mall Road and I-87 On/Off Ramp
11. Crossgates Mall Road and Crossgates Mall Entrance #1
12. Crossgates Mall Road and Crossgates Mall Entrance #2 / Hotel Access

- 13/14. Crossgates Mall Road and Crossgates Mall Driveway (from Western Avenue)
15. S. Frontage Road and Rapp Road
16. Western Avenue and Westmere Terrace

A copy of the traffic count data is contained in Appendix “E” of this Study.

Based upon a review of the above turning movement traffic counts and a review of NYSDOT historical traffic count data, the peak hours were generally identified as follows.

- Weekday Peak AM Hour 7:30 AM – 8:30 AM
- Weekday Peak PM Hour 4:30 PM – 5:30 PM
- Saturday Peak PM Hour 12:30 PM – 1:30 PM

Based on the above, the resulting Year 2019 Existing Traffic Volumes are shown on Figures No. 2, 3 and 4 for each of the Peak Hours, respectively.

D. YEAR 2022 NO-BUILD TRAFFIC VOLUMES

(Figures No. 5 - 13)

For the purpose of analysis, a Design Year of 2022 has been utilized in the completing the traffic analysis for Site 1 and Site 2.

In order to account for normal background traffic growth in the area, the Year 2019 Existing Traffic Volumes were increased by a compounded growth factor of 0.5% per year (based on NYSDOT historical data and traffic projections contained in the CDTA/Crossgates Transit Center Study) to the Year 2022 Design Year. The resulting Year 2022 Projected Traffic Volumes are shown on Figures No. 5, 6, and 7 for each of the Peak Hours, respectively.

In addition to the background growth factor, traffic generated by other planned developments in the area was also accounted for. These developments include 1700 Designer Residences (210 apartment units) and the Great Oaks Residential (120 apartment units). The resulting Other Development Traffic Volumes are shown on Figures No. 8, 9 and 10, for each of the Peak Hours, respectively.

The resulting Year 2022 No-Build Traffic Volumes are shown on Figures No. 11, 12 and 13 for each of the Peak Hours, respectively.

E. SITE 1 - SITE GENERATED TRAFFIC VOLUMES

(Table No. 1)

As discussed in Section B, a 222-unit apartment development is proposed on Rapp Road immediately west of the Crossgates Mall. To estimate the amount of traffic to be generated by Site 1, the Hourly Trip Generation Rates and Anticipated Site Generated Traffic Volumes were developed based on information contained in the Institute of Transportation Engineers (ITE) “Trip Generation Manual”, 10th Edition, September 2017 – Land Use 220 – Multifamily Housing. The Hourly Trip Generation Rates and anticipated Site Generated Traffic Volumes are shown in Table No. 1 in Appendix B of this Study.

As shown on Table No. 1, the proposed residential development (Site 1) would generate 24 entering trips and 78 exiting trips during the Weekday Peak AM Hour, 78 entering trips and 46 exiting trips during the Weekday Peak PM Hour and 78 entering trips and 78 exiting trips during the Saturday Peak Hour. In order to provide a conservative analysis, no credit (reduction in trips) have been taken for the CDTA/Crossgates Transit Center which is expected to reduce the trip generation on the adjacent roadway network by 10% to 20%. It should be noted that the ancillary commercial space is accounted for as interplay trips from the proposed residential and as pass-by trips from the existing roadway network and surrounding uses.

F. SITE 2 - SITE GENERATED TRAFFIC VOLUMES

(Table No. 2)

As discussed in Section B, Site 2 is proposed for approximately 160,000 s.f. Costco retail facility with 18 fueling stations. In order to provide a conservative analysis, estimates of the amount of traffic to be generated by Site 2 were based on the Hourly Trip Generation Rates for both the retail and 18 fueling stations components separately based on information contained in the Institute of Transportation Engineers (ITE) “Trip Generation Manual”, 10th Edition, September 2017 – Land Use 857 – for Costco and ITE Land Use 944 for the fueling stations. It should be noted that not all the trips to Costco facility would be “new” to the adjacent roadway system and a significant portion would be “interplay” between the Crossgates Mall, “interplay” between the Costco retail and fueling stations, and as “pass-by” traffic from the existing traffic stream along Western Avenue, Rapp Road and Crossgates Mall Road. The Hourly Trip Generation Rates and anticipated Site Generated Traffic Volumes are shown in Table No. 2 in Appendix B of this Study.

As shown on Table No. 2, Site 2 would generate 146 “new” entering trips and 116 “new” exiting trips during the Weekday Peak AM Hour, generate 300 “new” entering trips and 300 “new” exiting trips during the Weekday Peak PM Hour and 396 “new” entering trips and 417 “new” exiting trips during the Saturday Peak Hour.

G. SITE 1 - ARRIVAL/DEPARTURE DISTRIBUTIONS

(Figures No. 14,14A - 15,15A)

Arrival and departure distributions for Site 1 (Rapp Road Residential) were developed to assign the Site 1 site generated traffic volumes to the Study Area intersections. The distributions were based on a review of existing traffic volumes, expected travel patterns and site layout. It is anticipated that 60% of these trips will utilize the Crossgates Mall Road and northerly ring road to/from the I-87/I-90 highway system as well as Washington Avenue Extension eastbound. The remaining 40% will arrive and depart from the Project site via Rapp Road with 20% to/from the north (Washington Avenue Extension to/from the west) and 20% to/from the south (Western Avenue). The resulting Site 1 arrival/departure distributions are shown on Figures No. 14, 14A and 15, 15A, respectively.

H. SITE 2 - ARRIVAL/DEPARTURE DISTRIBUTIONS

(Figures No. 16,16A - 17,17A)

Arrival and departure distributions for Site 2 were developed to assign the site generated traffic volumes to the Study Area intersections. The distributions were based on a review of existing traffic volumes, expected travel patterns, site layout and driveway locations. It is anticipated that 65% of these trips will utilize the Crossgates Mall Road and northerly ring road to/from the I-87/I-90 highway system as well as Washington Avenue Extension eastbound. The resulting Site 2 arrival/departure distributions are shown on Figures No. 16, 16A, and 17, 17A, respectively.

I. YEAR 2022 BUILD TRAFFIC VOLUMES

(Figures No. 18, 18A – 26, 26A)

The Site 1 (Rapp Road Residential) Site Generated Traffic Volumes were assigned to the roadway network based the arrival/departure distribution shown on Figures No. 14, 14A and 15, 15A and the resulting Site Generated Traffic Volumes are shown on Figures No. 18, 18A, 19, 19A and 20, 20A, respectively. The Site 2 (Costco) Site Generated Traffic

Volumes were assigned to the roadway network based the arrival/departure distribution shown on Figures No. 16, 16A and 17, 17A and the resulting Site Generated Traffic Volumes are shown on Figures No. 21, 21A, 22, 22A and 23, 23A, respectively.

The Site Generated Traffic Volumes for Site 1 and Site 2 were added to the Year 2022 No-Build Traffic Volumes to obtain the Year 2022 Build Traffic Volumes. The resulting Year 2022 Build Traffic Volumes are shown on Figures No. 24, 24A, 25, 25A and 26, 26A for each of the Peak Hours, respectively.

J. YEAR 2025 NO-BUILD TRAFFIC VOLUMES

(Figures No. 27, 2A – 29, 29A)

A Design Year of 2025 has been utilized for the potential future development of Site 1 and Site 3.

Following the same methodology outlined in Section D through H, the Year 2025 No-Build Traffic Volumes were developed to include normal background growth, the other development traffic volumes as well as the Site 1 and Site 2 site generated traffic volumes. The resulting Year 2025 No-Build Traffic Volumes are shown on Figures No. 27, 27A, 28, 28A and 29, 29A for each of the Peak Hours, respectively.

K. SITE 1 – POTENTIAL FUTURE SITE GENERATED TRAFFIC VOLUMES

(Table No.4)

As discussed in Section B, Site 1 (Rapp Road Residential) identifies a potential future development area that could support an additional 90 residential apartment units. The Hourly Trip Generation Rates and anticipated Site Generated Traffic Volumes are shown in Table No. 4 in Appendix B of this Study. As shown on Table No. 4, if developed, an additional 90 units would generate 10 entering trips and 31 exiting trips during the Weekday Peak AM Hour, 31 entering trips and 19 exiting trips during the Weekday Peak PM Hour and 31 entering trips and 31 exiting trips during the Saturday Peak Hour. As discussed in Section E, in order to provide a conservative analysis, no credit (reduction in trips) have been taken for the CDTA/Crossgates Transit Center which is expected to reduce the trip generation on the adjacent roadway network by 10% to 20%.

L. SITE 3 – POTENTIAL FUTURE SITE GENERATED TRAFFIC VOLUMES

(Table No.5)

As discussed in Section B, while there are no current development plans for Site 3 (Potential Western Avenue Mixed-Use Development), a zoning compliant conceptual plan was developed and analyzed for 115,000 s.f. of Retail, 50,000 s.f. of Office and 48 Residential Units. To estimate the amount of traffic to be generated by Site 3, the Hourly Trip Generation Rates and Anticipated Site Generated Traffic Volumes were developed based on information contained in the Institute of Transportation Engineers (ITE) “Trip Generation Manual”, 10th Edition, September 2017 – Land Use 820 – Shopping Center, ITE Land Use 710 – Office and ITE Land Use 220 - Multifamily Housing. It should be noted that not all the trips to Site 3 would be “new” to the adjacent roadway system and a significant portion would be “interplay” between the Crossgates Mall, “interplay” between the Costco facility, and as “retail pass-by” traffic from the existing traffic stream along Western Avenue, Rapp Road and Crossgates Mall Road. The Hourly Trip Generation Rates and anticipated Site Generated Traffic Volumes are shown in Table No. 5 in Appendix B of this Study.

As shown on Table No. 5, Site 3 would generate 122 “new” entering trips and 67 “new” exiting trips during the Weekday Peak AM Hour, generate 130 “new” entering trips and 180 “new” exiting trips during the Weekday Peak PM Hour and 179 “new” entering trips and 155 “new” exiting trips during the Saturday Peak Hour.

M. SITE 3 - ARRIVAL/DEPARTURE DISTRIBUTIONS

(Figures No. 30,30A -31A,31A)

Arrival and departure distributions for Site 3 (Potential Western Avenue Mixed-Use Development) were developed to assign the Site 3 site generated traffic volumes to the Study Area intersections. The distributions were based on a review of existing traffic volumes, expected travel patterns, site layout and driveway locations. It is anticipated that 65% of these trips will utilize the Crossgates Mall Road and northerly ring road to/from the I-87/I-90 highway system as well as Washington Avenue Extension eastbound. The resulting Site 3 arrival/departure distributions are shown on Figures No. 30, 30A, and 31, 31A, respectively.

N. YEAR 2025 BUILD TRAFFIC VOLUMES

(Figures No. 32, 32A – 40, 41A)

The potential future development area identified on Site 1 Site Generated Traffic Volumes were assigned to the roadway network based the arrival/departure distribution shown on Figures No. 14, 14A and 15, 15A and the resulting Site 1 Potential Site Generated Traffic Volumes are shown on Figures No. 32, 32A, 33, 33A and 34, 34A, respectively. The Site 3 (Potential Western Avenue Mixed-Use Development) Site Generated Traffic Volumes were assigned to the roadway network based the arrival/departure distribution shown on Figures No. 30, 30A and 31, 31A and the resulting Site 3 Potential Site Generated Traffic Volumes are shown on Figures No. 35, 35A, 36, 36A and 37, 37A, respectively.

The Potential Site Generated Traffic Volumes for Site 1 and Site 3 were added to the Year 2025 No-Build Traffic Volumes to obtain the Year 2025 Build Traffic Volumes. The resulting Year 2025 Build Traffic Volumes are shown on Figures No. 38, 38A, 39, 39A and 40, 40A for each of the Peak Hours, respectively.

O. DESCRIPTION OF ANALYSIS PROCEDURES

In order to determine existing and future traffic operating conditions at the Study Area Intersections, it was necessary to perform a Synchro analysis (capacity analyses). The following is a brief description of the analysis method utilized in this report:

Signalized Intersection Capacity Analysis

The capacity analysis for signalized intersections were performed in accordance with the procedures described in the Highway Capacity Manual – 6th Edition published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service “A” represents the best condition and a Level of Service “F” represents the worst condition. A Level of Service “C” is generally used as a design standard while a Level of Service “D” is acceptable during peak periods. A Level of Service “E” represents an operation near capacity. In order to identify an intersection’s Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

Unsignalized Intersection Capacity Analysis

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the Highway Capacity Manual – 6th Edition. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement (major street left turns and minor street movements) to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix C of this Study.

P. RESULTS OF ANALYSIS

(Tables No. 3 and 6)

In order to evaluate current and future traffic operating conditions at each of the Study Area Intersections, SYNCHRO analyses were conducted utilizing the procedures described above. Summarized below is a description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service for each of the Study Area Intersections. Table No. 3 summarizes the Year 2019 Existing, Year 2022 No-Build and Year 2022 Build (which includes Site 1 and Site 2) Levels of Service, delays and volume-to-capacity (v/c) ratios. Table No. 6 summarizes the Year 2025 No-Build (which includes Site 1 and Site 2) and Year 2025 Build Conditions (which includes Site 1A and Site 3). The capacity analysis (Appendix D) also shows the existing geometry including lane widths, traffic control including signal phasing/timing (where appropriate) as well as the results of the analysis.

1. Western Avenue (US Route 20) and Crossgates Mall Driveway

The Crossgates Mall driveway intersects Western Avenue at a signalized, “English Couplet System ” intersection. The Western Avenue eastbound approach consists of three lanes in the form of a separate left turn lane and two through lanes and the Western Avenue westbound approach consists of three lanes in the form of two separate through lanes and a shared through/right turn lane. The Crossgates Mall Road southbound driveway approach consists of three lanes in the form of a double left turn lane and a separate right turn lane.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “B” or better during each of the Peak Hours.

2. Western Avenue (US Route 20) and Gabriel Terrace/1700 Design Residences

Gabriel Terrace intersects Western Avenue opposite 1700 Design Residences at a full movement, unsignalized intersection. The Western Avenue eastbound and westbound approaches each consists of three lanes in the form of a two-way left turn lane, a separate through lane and a shared through/right turn lane. The Gabriel Terrace (southbound approach) and 1700 Designer Residences (northbound approach) each consist of one lane for left, through and right turn movements.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that Gabriel Terrace southbound and 1700 Designer Residences northbound approaches (minor movements) are currently operating at a Level of Service “F” during both the Weekday Peak PM and Saturday Peak Hours. The Western Avenue eastbound and westbound left turns are currently operating at a Level of Service “C” or better.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that Gabriel Terrace southbound and 1700 Designer Residences northbound approaches (minor movements) are projected to operate at a Level of Service “F” during each of the Peak Hours. The Western Avenue eastbound and westbound left turns are projected to operate at a Level of Service “C” or better.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that 1700 Designer Residences northbound approach (minor movements) is projected to continue to operate at a Level of Service “F” during each of the peak Hours. The Gabriel Terrace Connector Road southbound approach (minor movements), if required, the Town could restrict left turns and therefore operate at a Level of Service “B” during the Weekday Peak AM Hour, operate at a Level of Service “D” during the Weekday Peak PM Hour and operate at a Level of Service “C” during the Saturday Peak Hour. It should be noted the Gabriel Terrace Connector Road will provide access to Crossgates Mall via Crossgates Mall Road (the southerly Mall Ring Road) and from there directly to the I-87/I-90 highway system. The Western Avenue eastbound and westbound left turns are projected to continue to operate at a Level of Service “C” or better.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that 1700 Designer Residences northbound approach (minor movements) is projected to operate at a Level of Service “F” during each of the peak Hours. The Gabriel Terrace Connector Road southbound approach (minor movements), if required, the Town could restrict left turns and therefore operate at a Level of Service “B” during the Weekday Peak AM Hour, operate at a Level of Service “D” during the Weekday Peak PM Hour and operate at a Level of Service “C” during the Saturday Peak Hour. It should be noted the Gabriel Terrace Connector Road will provide access to Crossgates Mall via Crossgates Mall Road (the southerly Mall Ring Road) and from there directly to the I-87/I-90 highway system. The Western Avenue eastbound and westbound left turns are projected to operate at a Level of Service “C” or better.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that 1700 Designer Residences northbound approach (minor movements) is projected to continue to operate at a Level of Service “F” during each of the peak Hours. The

Gabriel Terrace Connector Road southbound approach (minor movements), if required, the Town could restrict left turns and therefore operate at a Level of Service “B” during the Weekday Peak AM Hour, projected operate at a Level of Service “E” during the Weekday Peak PM Hour and projected to continue operate at a Level of Service “C” during the Saturday Peak Hour. It should be noted the Gabriel Terrace Connector Road will provide access to Crossgates Mall via Crossgates Mall Road (the southerly Mall Ring Road) and from there directly to the I-87/I-90 highway system. The Western Avenue eastbound and westbound left turns are projected to continue to operate at a Level of Service “C” or better.

3. Western Avenue (US Route 20) and Crossgates Mall Road/Johnston Road

Crossgates Mall Road intersects Western Avenue opposite Johnston Road at a full movement, signalized intersection. The Western Avenue eastbound and westbound approaches each consist of three lanes in the form of a separate left turn lane, a separate through lane and a shared through/right lane. The Crossgates Mall Road southbound approach consists of three lanes in the form of a separate left turn lane, separate through lane and a separate right turn lane. The Johnston Road northbound approach consists of three lanes in the form of a separate left turn lane, a shared through/right lane and a separate right turn lane.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “C” during the Weekday Peak AM Hour, is currently operating at an overall Level of Service “D” during the Weekday Peak PM Hour and is currently operating at an overall Level of Service “B” during the Saturday Peak Hour.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” during the Weekday Peak AM Hour, is projected to operate at an overall Level of Service “D” during the Weekday Peak PM Hour and is projected to operate at an overall Level of Service “B” during the Saturday Peak Hour.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” during the Weekday Peak AM Hour, is projected to continue to operate at an

overall Level of Service “D” during the Weekday Peak PM Hour and projected to operate at an overall Level of Service “C” during the Saturday Peak Hour.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “D” during the Weekday Peak AM Hour, is projected to operate at an overall Level of Service “D” during the Weekday Peak PM Hour and is projected to operate at an overall Level of Service “C” during the Saturday Peak Hour.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “D” during the Weekday Peak AM Hour, is projected to continue to operate at an overall Level of Service “D” during the Weekday Peak PM Hour and projected to continue to operate at an overall Level of Service “C” during the Saturday Peak Hour.

4. Rapp Road and Crossgates Mall Road

Rapp Road and Crossgates Mall Road intersects at a full movement, signalized intersection. The Crossgates Mall Road northbound approach consists of two lanes in the form of a shared left/through lane and a separate channelized right turn lane. The Rapp Road eastbound approach consists of two lanes in the form of a shared left/through lane and a separate channelized right turn lane. The Crossgates Mall Road westbound approach consists of two lanes in the form of a separate left turn lane and a shared through/right lane. The Crossgates Mall northerly ring road (southbound approach) consists of two lanes in the form of a shared left/through lane and a shared through/right lane.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “B” during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” during each of the Peak Hours.

Year 2022 Build Traffic Volumes

It is recommended to remove the right turn slip lanes and bring the right turn movements under traffic signal control and modify/optimize the existing traffic signal. Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

It is recommended to remove the right turn slip lanes and bring the right turn movements under traffic signal control and modify/optimize the existing traffic signal. Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

It is recommended to remove the right turn slip lanes and bring the right turn movements under traffic signal control and modify/optimize the existing traffic signal. Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

5. Rapp Road and Gipp Road

Gipp Road intersects Rapp Road at a “T” shaped, unsignalized intersection. The Rapp Road northbound approach consists of one lane for left/through movements and the Rapp Road southbound approach consists of one lane for through/right movements. The Gipp Road eastbound approach consists of one lane for left and right turn movements and is “stop” sign controlled.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that Gipp Road eastbound approach (minor movements) is currently operating at a Level of Service “B” during each of the Peak Hours. The Rapp Road northbound left turn is currently operating at a Level of Service “A”.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that Gipp Road eastbound approach (minor movements) is projected to operate at a Level of Service “B” during each of the Peak Hours. The Rapp Road northbound left turn is projected to operate at a Level of Service “A”.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that Gipp Road eastbound approach (minor movements) is projected to operate at a Level of Service “C” or better during each of the Peak Hours. The Rapp Road northbound left turn is projected to continue to operate at a Level of Service “A”.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that Gipp Road eastbound approach (minor movements) is projected to operate at a Level of Service “C” or better during each of the Peak Hours. The Rapp Road northbound left turn is projected to operate at a Level of Service “A”.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that Gipp Road eastbound approach (minor movements) is projected to continue to operate at a Level of Service “C” or better during each of the Peak Hours. The Rapp Road northbound left turn is projected to continue to operate at a Level of Service “A”.

6. Rapp Road and Pine Lane

Pine Lane intersects Rapp Road at a “T” shaped, unsignalized intersection. The Rapp Road northbound approach consists of one lane for left/through movements and the Rapp Road southbound approach consists of one lane for through/right movements. The Pine Lane eastbound approach consists of one lane for left and right turn movements. All approaches to the intersection are “stop” sign controlled.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that all approaches to the intersection are currently operating at a Level of Service “B” or better during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that all approaches to the intersection are projected to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that all approaches to the intersection are projected to continue to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that all approaches to the intersection are projected to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that all approaches to the intersection are projected to continue to operate at a Level of Service “B” or better during each of the Peak Hours.

7. Rapp Road and Springsteen Road

Rapp Road intersects Springsteen Road at a “Y” shaped, unsignalized intersection. The Rapp Road northbound approach continues as Springsteen Road as a one-way road and the Rapp Road southbound approach consists of one lane for left and right turn movements and is “stop” sign controlled.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the Rapp Road southbound approach (minor movements) is currently operating at a Level of Service “B” or better during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the Rapp Road southbound approach (minor movements) is projected to operate at a Level of Service “B” or better each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the Rapp Road southbound approach (minor movements) is projected to continue to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the Rapp Road southbound approach (minor movements) is projected to operate at a Level of Service “B” or better each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Rapp Road southbound approach (minor movements) is projected to continue to operate at a Level of Service “B” or better during each of the Peak Hours.

8. Springsteen Road and S. Frontage Road

Springsteen Road intersects S. Frontage Road at an unsignalized intersection. The Springsteen Road eastbound approach consists of two lanes in the form of a separate left turn lane and a shared through/right lane and is “stop” sign controlled. The S. Frontage Road southbound approach consists of one lane for left/through movements and the S. Frontage Road northbound approach consists of one lane for through/right movements and are also “stop” sign controlled.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that all approaches to the intersection are currently operating at a Level of Service “A” during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that all approaches to the intersection are projected to operate at a Level of Service “A” during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that all approaches to the intersection are projected to continue to operate at a Level of Service “A” during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that all approaches to the intersection are projected to operate at a Level of Service “A” during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that all approaches to the intersection are projected to operate at a Level of Service “B” or better during each of the Peak Hours.

9. Washington Avenue Extension and Springsteen Road/Crossgates Commons

Springsteen Road intersects Washington Avenue Extension opposite Crossgates Commons at a signalized intersection. The Washington Avenue Extension northbound approach consists of five lanes in the form of a separate left turn lane, three through lanes and a separate right turn lane and the Washington Avenue Extension southbound approach consists of four lanes in the form of a separate left turn lane, two through lanes and a separate right turn lane. The Springsteen Road eastbound approach consists of one lane for right turn movements only and the Crossgates Commons westbound approach consists of three lanes in the form of a double left turn lane and a shared through/right lane.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “C” during the Weekday Peak AM Hour and is currently operating at an overall Level of Service “D” during both the Weekday Peak PM and Saturday Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” during the Weekday Peak AM Hour and is projected to operate at an overall Level of Service “D” during both the Weekday Peak PM Hour and Saturday Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” during the Weekday Peak AM Hour and continue to operate at an overall Level of Service “D” during both the Weekday Peak PM and Saturday Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” during the Weekday Peak AM Hour and is projected to operate at an overall Level of Service “D” during both the Weekday Peak PM Hour and Saturday Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” during the Weekday Peak AM Hour and continue to operate at an overall Level of Service “D” during both the Weekday Peak PM and Saturday Peak Hours.

10. Crossgates Mall Road and I-87 On/Off Ramps

The I-87 On/Off Ramps intersects Crossgates Mall Road at a “T” type, signalized intersection. The Crossgates Mall Road northbound approach consists of two lanes in the form of a separate through lane and a channelized right turn lane and the Crossgates Mall Road southbound approach consist of two lanes in the form of a separate left turn lane and separate through lane. The I-87 Off Ramp (westbound approach) consists of three lanes in the form of a double left turn lane and a separate channelized right turn lane at Crossgates Mall Road. It should be noted for analysis purpose, the I-87 Off Ramp approach was analyzed as two lanes in the form of a separate left turn lane and shared left/right turn lane to account for short storage lanes.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “B” during the Weekday Peak AM Hour, is currently operating at an overall Level of Service “C” during the Weekday Peak PM Hour and is currently operating at an overall Level of Service “D” during Saturday Peak Hour.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at an overall Level of Service “C” during the Weekday Peak PM Hour and is projected to operate at an overall Level of Service “D” during Saturday Peak Hour.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “B” during the Weekday Peak AM Hour, is projected to continue to operate at an overall Level of Service “C” during the Weekday Peak PM Hour and projected to continue to operate at an overall Level of Service “D” during the Saturday Peak Hour.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at an overall Level of Service “C” during the Weekday Peak PM Hour and is projected to operate at an overall Level of Service “D” during Saturday Peak Hour.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at an overall Level of Service “D” during the Weekday Peak PM Hour and projected to continue to operate at an overall Level of Service “D” during the Saturday Peak Hour. It should be noted that it is expected that the CDTA/Crossgates Transit Center improvements will be implemented by the Year 2025 including the roundabout at this location. These improvements and analysis are discussed in Section Q of the Study.

11. Crossgates Mall Road and Mall Driveway (For Reference Driveway #1)

Crossgates Mall Driveway (For Reference Driveway #1) intersects Crossgates Mall Road at a “T” type, unsignalized intersection.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the Crossgates Mall Driveway (minor approach) is currently operating at a Level of Service “C or better during each of the Peak Hours. The Crossgates Mall Road eastbound left turn is currently operating at a Level of Service “A”.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the Crossgates Mall Driveway (minor approach) is projected to operate at a Level of Service “C” or better during each of the Peak Hours. The Crossgates Mall Road eastbound left turn is projected to operate at a Level of Service “A”.

Year 2022 Build Traffic Volumes with Gabriel Terrace Connector

As discussed in Section B, the Gabriel Terrace Connector Road will connect to Crossgates Mall opposite the westerly Crossgates Mall driveway. It is recommended to restripe Crossgates Mall Road from Rapp Road to a location just west of the hotel

driveway as a three lane section including a separate left turn lane. Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the new Gabriel Terrace Connector northbound approach (minor approach) is projected to operate at a Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at a Level of Service “C” during the Weekday Peak PM Hour and is projected to operate at a Level of Service “F” during the Saturday Peak Hour. The Crossgates Mall Road eastbound and westbound left turns are projected to operate at a Level of Service “A”. This intersection should be monitored in the future to determine if a traffic signal will be warranted. (Levels of Service “B” or better).

Year 2025 No-Build Traffic Volumes with Gabriel Terrace Connector

It is recommended to restripe Crossgates Mall Road from Rapp Road to a location just west of the hotel driveway as a three lane section including a separate left turn lane. Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the new Gabriel Terrace Connector northbound approach (minor approach) is projected to operate at a Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at a Level of Service “C” during the Weekday Peak PM Hour and is projected to operate at a Level of Service “F” during the Saturday Peak Hour. The Crossgates Mall Road eastbound and westbound left turns are projected to operate at a Level of Service “A”. This intersection should be monitored in the future to determine if a traffic signal will be warranted. (Levels of Service “B” or better).

Year 2025 Build Traffic Volumes with Gabriel Terrace Connector

It is recommended to restripe Crossgates Mall Road from Rapp Road to a location just west of the hotel driveway as a three lane section including a separate left turn lane. Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the new Gabriel Terrace Connector northbound approach (minor approach) is projected to operate at a Level of Service “B” during the Weekday Peak AM Hour, is projected to operate at a Level of Service “F” during both the Weekday Peak PM and Saturday Peak Hours. The Crossgates Mall Road eastbound and westbound left turns are projected to operate at a Level of Service “A”. This intersection should be monitored in the future to determine if a traffic signal will be warranted. (Levels of Services “B” or better).

12. Crossgates Mall Road and Mall Driveway (For Reference Driveway #2)/Hotel

Crossgates Mall Driveway (For Reference Driveway #2) intersects Crossgates Mall Road opposite the Hotel connector road at a full movement, signalized intersection.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “B” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

13/14. Crossgates Mall Road and Crossgates Mall Main Access Road

The Crossgates Mall Main Access Road from the Western Avenue couplet intersects Crossgates Mall Road at two signalized intersections.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection is projected to continue to operate at an overall Level of Service “C” or better during each of the Peak Hours.

15. S. Frontage Road and Rapp Road

Rapp Road intersects Rapp Road at a “Y” shaped, unsignalized intersection. The S. Frontage Road westbound approach consists of one lane for left/through movements and the S. Frontage Road eastbound approach consists of one lane for through/right movements. The Rapp Road approach is one-way for southbound traffic only.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that S. Frontage Road westbound left turn is currently operating at a Level of Service “A” during each of the Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that S. Frontage Road westbound left turn is projected to operate at a Level of Service “A” during each of the Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that S. Frontage Road westbound left turn is projected to continue to operate at a Level of Service “A” during each of the Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that S. Frontage Road westbound left turn is projected to operate at a Level of Service “A” during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that S. Frontage Road westbound left turn is projected to continue to operate at a Level of Service “A” during each of the Peak Hours.

16. Western Avenue (US Route 20) and Westmere Terrace

Westmere Terrace intersects Western Avenue at a “T” shaped, unsignalized intersection. The Western Avenue eastbound approach consists of three lanes in the form of a center turning lane for left turn movements and two through lanes and the Western Avenue westbound approach consists of two lanes in the form of a separate through lane and a shared through/right turn lane. The Westmere Terrace southbound approach consists of one lane for left and right turn movements and is “stop” sign controlled.

Year 2019 Existing Traffic Volumes

Capacity analysis conducted utilizing the Year 2019 Existing Traffic Volumes indicates that Westmere Terrace southbound approach (minor movements) is currently operating at a Level of Service “E-F” during each of Peak Hours.

Year 2022 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 No-Build Traffic Volumes indicates that Westmere Terrace southbound approach (minor movements) is projected to operate at a Level of Service “E-F” during each of Peak Hours.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that Westmere Terrace southbound approach (minor movements) is projected to operate at a Level of Service “F” during each of Peak Hours.

Year 2025 No-Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 No-Build Traffic Volumes indicates that Westmere Terrace southbound approach (minor movements) is projected to operate at a Level of Service “F” during each of Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that Westmere Terrace southbound approach (minor movements) is projected to continue to operate at a Level of Service “F” during each of Peak Hours.

17/18. Rapp Road and Rapp Road Residential Site 1 Driveway(s)

As discussed in Section B, access to the Site 1 (Rapp Road Residential) is proposed via two driveway connections to Rapp Road.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the Rapp Road Residential Site Driveway(s) are projected to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Rapp Road Residential Site Driveway(s) are projected to operate at a Level of Service “B” or better during each of the Peak Hours.

19. Rapp Road and Site 2 Northerly Driveway

As discussed in Section B, Site 2 is proposed to have two driveways to Rapp Road, with the northerly access for entering left and right turns and exiting right turns only (exiting left turns will be prohibited).

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the Site 2 Rapp Road Northerly Driveway is projected to operate at a Level of Service “B” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Site 2 Rapp Road Northerly Driveway is projected to operate at a Level of Service “B” or better during each of the Peak Hours.

20. Rapp Road and Site 2 Southerly Driveway

As discussed in Section B, Site 2 is proposed to have two driveways to Rapp Road, with the southerly access for entering right turns only.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the Site 2 Rapp Road Southerly Driveway is projected to operate at a Level of Service “A” during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Site 2 Rapp Road Southerly Driveway is projected to operate at a Level of Service “A” during each of the Peak Hours.

21. Gabriel Terrace Connector Road and Site 2 Driveway

As discussed in Section B, access to Site 2 is also proposed via the Gabriel Terrace Connector Road.

Year 2022 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2022 Build Traffic Volumes indicates that the Site 2 Driveway to the Gabriel Terrace Connector Road is projected to operate at a Level of Service “C” or better during each of the Peak Hours.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Site 2 Driveway to the Gabriel Terrace Connector Road is projected to operate at a Level of Service “D” or better during each of the Peak Hours.

22. Gabriel Terrace Connector Road and Western Avenue Mixed-Use Site 3 Driveway

As discussed in Section B, access to the Potential Western Avenue Mixed-Use Development (Site 3) is also proposed via the Gabriel Terrace Connector Road.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Western Avenue Mixed-Use Site 3 Driveway is projected to operate at a Level of Service “C” or better during each of the Peak Hours.

23. Hotel Connector Road and Western Avenue Mixed-Use Site 3 Driveway

As discussed in Section B, access to Potential Western Avenue Mixed-Use Development (Site 3) is also proposed via the Hotel Connector Road.

Year 2025 Build Traffic Volumes

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the Western Avenue Mixed-Use Site 3 Driveway is projected to operate at a Level of Service “A” during each of the Peak Hours.

Q. CDTA/CROSSGATES TRANSIT CENTER STUDY

(Table No. 7)

Crossgates Mall is currently the busiest bus-stop on the Capital District Transportation Authority regional bus transportation service map. CDTA has proposed to develop a bus rapid transit express line, to be known as CDTA’s “BRT Line”, from Downtown Albany to a terminus as a new Transit Center at Crossgates Mall. The improvements associated with the Crossgates Transit Center include a state-of-the-art, climate-controlled passenger waiting area connected to the Mall food court, a ten bus parking deck on the south side of the shopping center, and improvements to Crossgates Mall Road and its connections to Western Avenue and the interstate highway system.

In connection with the development of the CDTA/Crossgates Transit Center, CDTA retained Creighton Manning Engineers to evaluate area traffic conditions following the construction of the Transit Center and related traffic improvements. The Creighton Manning traffic report (“CME Report”) provided an analysis of various potential development zones in the area and evaluated potential traffic impacts at the Crossgates main driveway on Western Avenue and the Ring Road/highway ramp intersections. As part of CDTA Project, improvements were proposed; a roundabout at the Crossgates Mall Road/I-87 On/Off Ramps, a roundabout at the Crossgates Mall Road and the Crossgates Mall Road at its two signalized intersections with Crossgates Mall Main Access Road from Western Avenue, and replacement of the couplet intersection at Western Avenue with a standard “T” intersection. Access to the Transit Center would be provided via the northern leg of the roundabout proposed at the intersection of Crossgates Mall Road and the Crossgates Mall Main Access Road from Western Avenue.

1. Western Avenue (US Route 20) and Crossgates Mall Driveway

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes indicates that the intersection as a standard “T” intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

10. Crossgates Mall Road and I-87 On/Off Ramps

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes with the Roundabout indicated the intersection is projected to operate at an overall Level of Service “C” or better during each of the Peak Hours.

13/14. Crossgates Mall Road and Crossgates Mall Main Access Road

Capacity analysis conducted utilizing the Year 2025 Build Traffic Volumes with the Roundabout indicated the intersection is projected to operate at an overall Level of Service “B” or better during each of the Peak Hours.

A copy of the Level of Service Summary Table (Table No. 7) and capacity analysis are contained in Appendix F.

R. CONCLUSION AND RECOMMENDATIONS

As summarized in this Study and as shown on the Level of Service Summary Table No. 3, the proposed Rapp Road Residential (Site 1) and Costco (Site 2) developments will not result in a significant impact on the existing roadway network. Similar Levels of Service and delays will be experienced under Future 2022 No-Build and 2022 Future Build Conditions. In addition, as also analyzed in this Study and as shown on Level of Service Summary Table No. 6, the future potential Rapp Road Residential development area identified on Site 1 and future potential Western Avenue Mixed-Use (Site 3) will not result in a significant impact on the existing roadway network. Similar Levels of Service and delays will be experienced under Future 2025 No-Build and 2025 Future Build Conditions.

As part of the potential cumulative impacts of Rapp Road Residential (Site 1), Costco (Site 2) and Future Potential Development Area (Site 3), and considering the recent VHB Rapp Road/Crossgates Mall Road Safety Evaluation Memorandum dated January 14, 2020, recommended improvements have been identified as shown on Conceptual Improvement Plan (Sheet 1 of 2 in Appendix A) and include the following:

- Remove the right turn slip lanes and bring the right turn movements under traffic signal control at the Rapp Road/Crossgates Mall Road intersection.

- Modify the existing traffic signal at the Rapp Road/Crossgates Mall Road intersection.
- Restripe Crossgates Mall Road from Rapp Road to a location just west of the hotel driveway as a three section including a separate left turn lane.
- Relocate Gabriel Terrace opposite the Crossgates Mall western driveway.
- Provide two driveways to Rapp Road as well as a connection to//from the Crossgates Mall North Ring Road to provide additional access to I-87/I-90 as well as Washington Avenue for the Rapp Road Residential Development (Site 1).
- Provide two driveways to Rapp Road for Costco (Site 2), with the northerly access for entering left turns (a separate entering left turn lane will be provided), entering right turns, and exiting right turns only (exiting left turn will be prohibited). The southerly driveway would be for entering right turns only.
- If required, a traffic signal at the Crossgates Mall Road and Gabriel Terrace Connector will be installed.
- If required, the Town could restrict left turns at the Gabriel Terrace Connector Road southbound approach to Western Avenue.

In addition, as outlined in Section Q, the three development sites would be compatible with the future CDTA Project improvements.

While not part of the recommended improvements above, in connection with the development of the CDTA/Crossgates Transit Center, at such time as significant new bus traffic is produced at the CDTA Transit Center, the following improvements were recommended by Creighton Manning as shown on Conceptual Improvement plan (Sheet 2 of 2 in Appendix F):

- A roundabout at the Crossgates Mall Road/I-87 On/Off Ramps
- A roundabout at the Crossgates Mall Road and the Crossgates Mall Road at its two signalized intersections with Crossgates Mall Main Access Road from Western Avenue
- Replacement of the couplet intersection at Western Avenue with a standard “T” intersection

- Access to the Transit Center would be provided via the northern leg of the roundabout proposed at the intersection of Crossgates Mall Road and the Crossgates Mall Main Access Road from Western Avenue

The Conceptual Improvement Plans and VHB Rapp Road/Crossgates Mall Road Safety Evaluation memorandum are contained Appendix C of the DEIS.

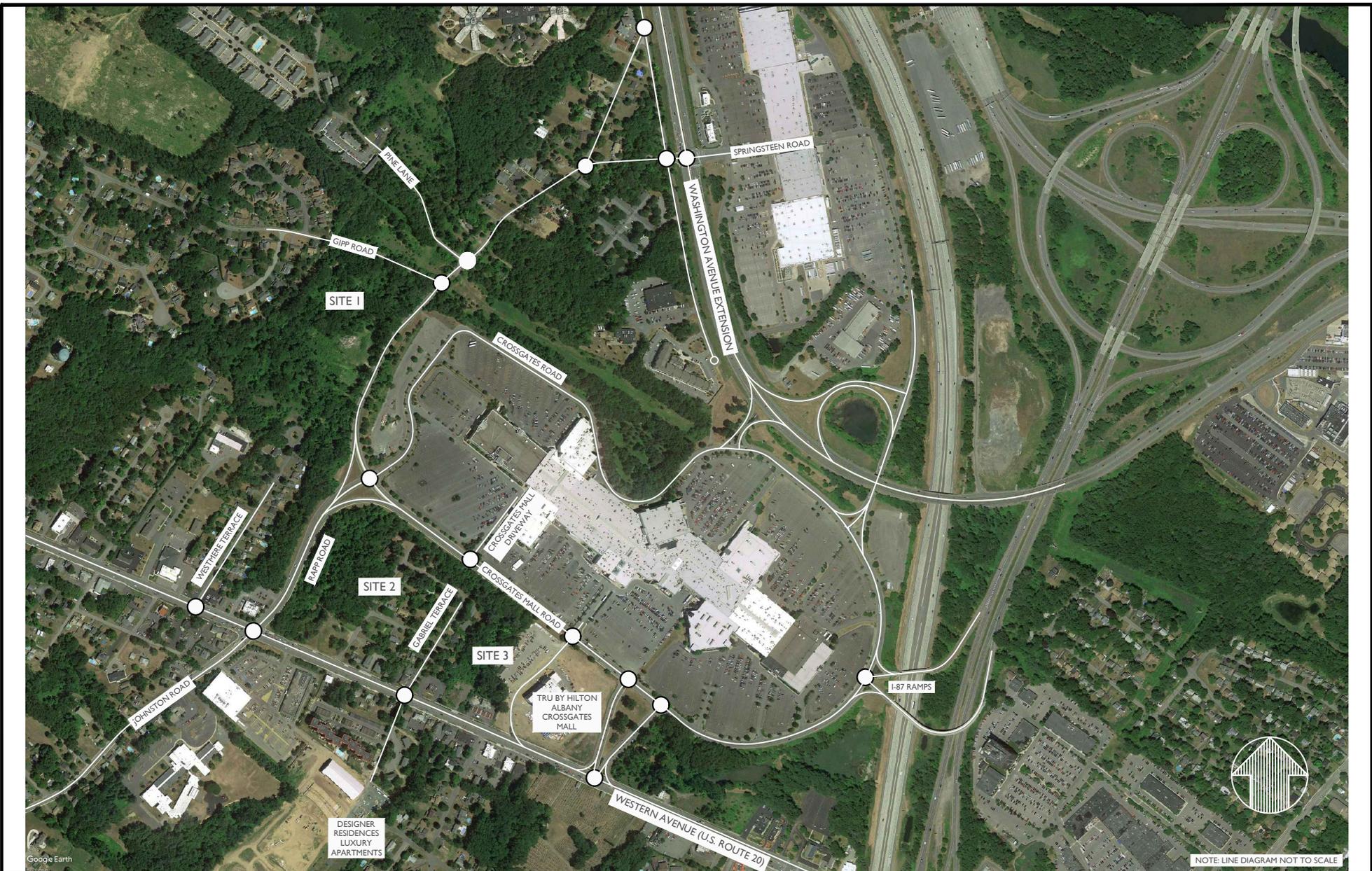


Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

APPENDIX A

FIGURES



NOTE: LINE DIAGRAM NOT TO SCALE



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SHEET TITLE:
**STUDY AREA
INTERSECTIONS**

SHEET NUMBER:
FIGURE NO. 1



NOTE: LINE DIAGRAM NOT TO SCALE



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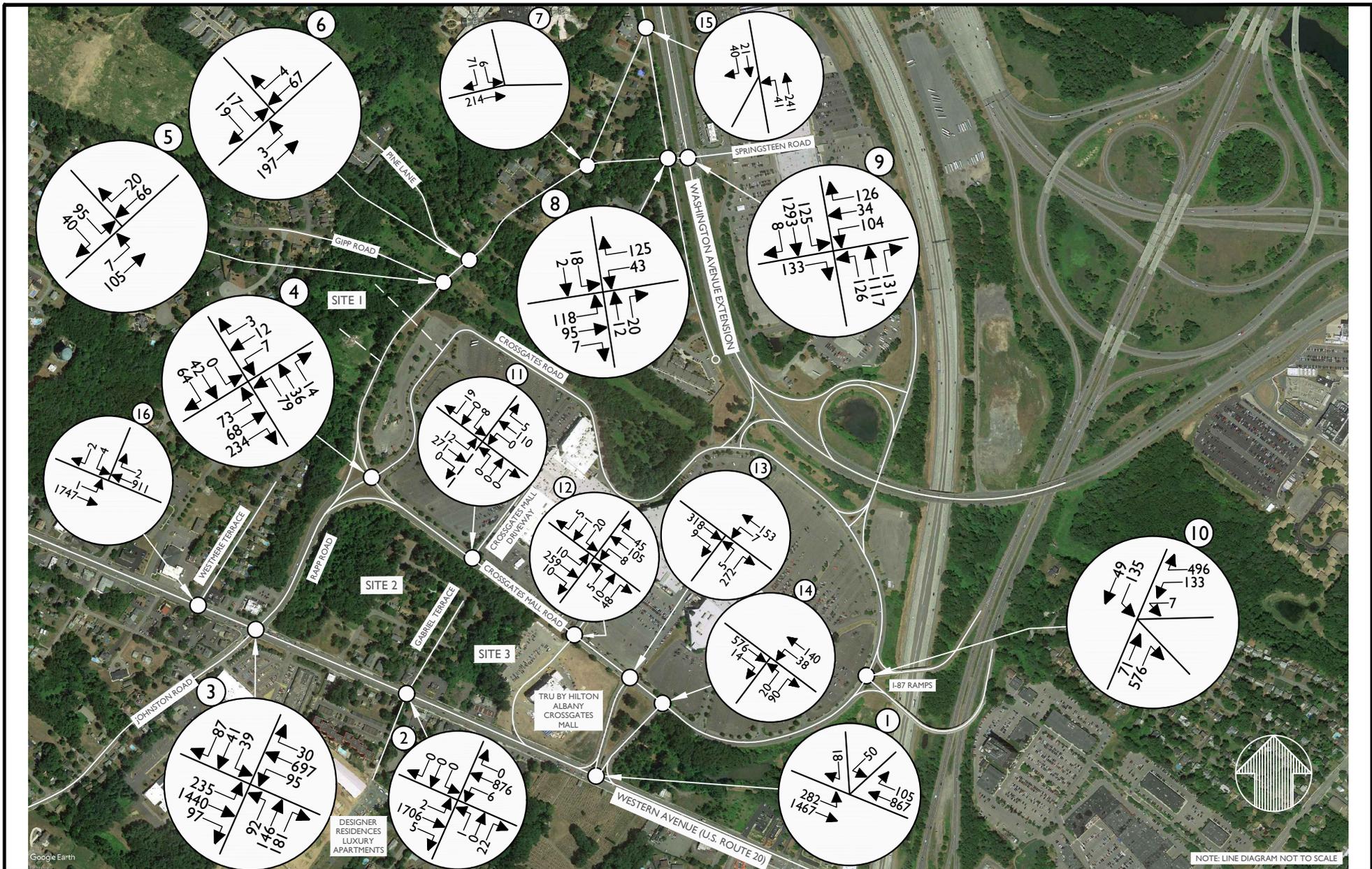
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SHEET TITLE:
PROPOSED DRIVEWAYS

SHEET NUMBER:
FIGURE NO. 1A



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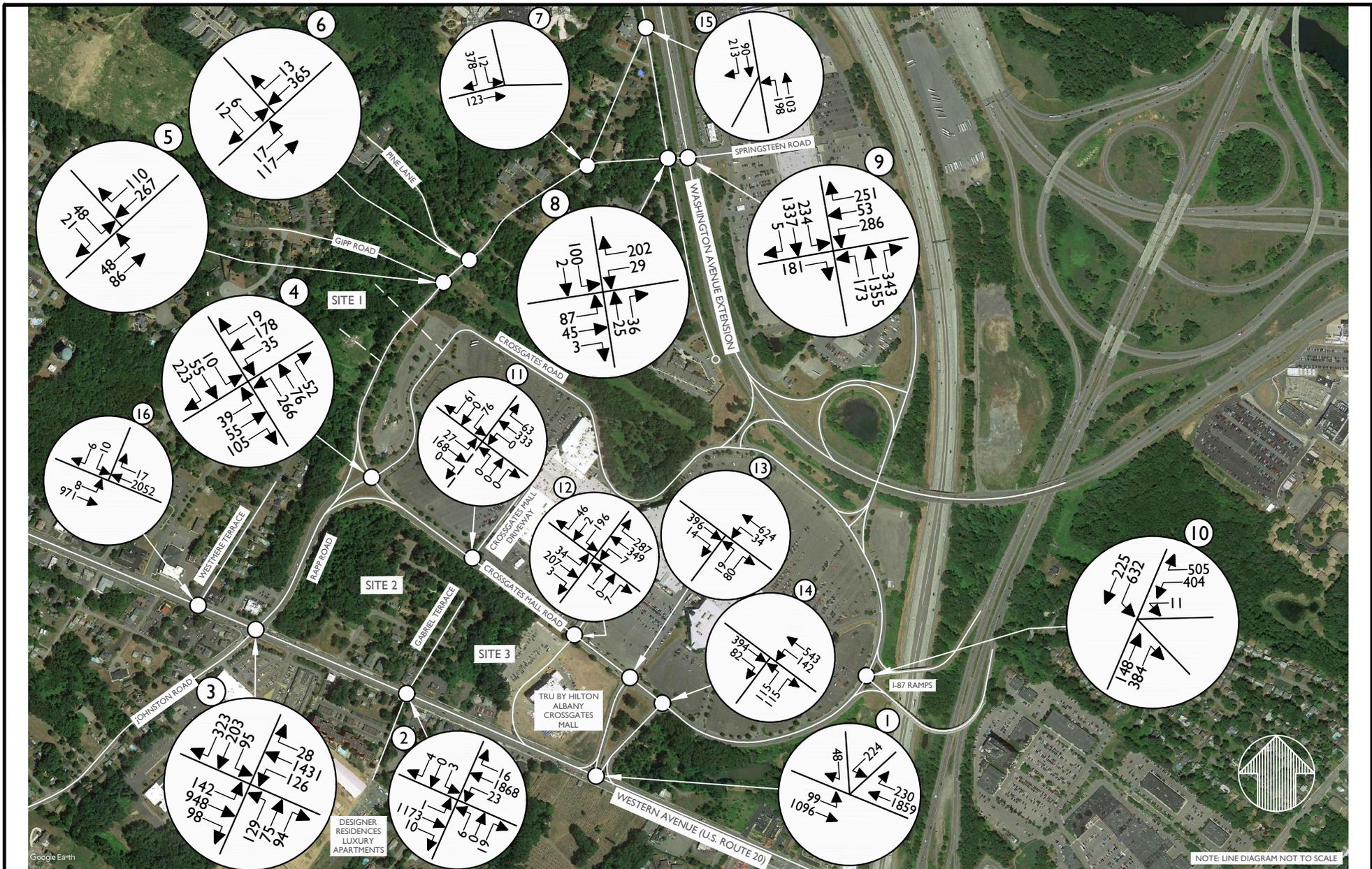
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2019 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			
FIGURE NO. 2			



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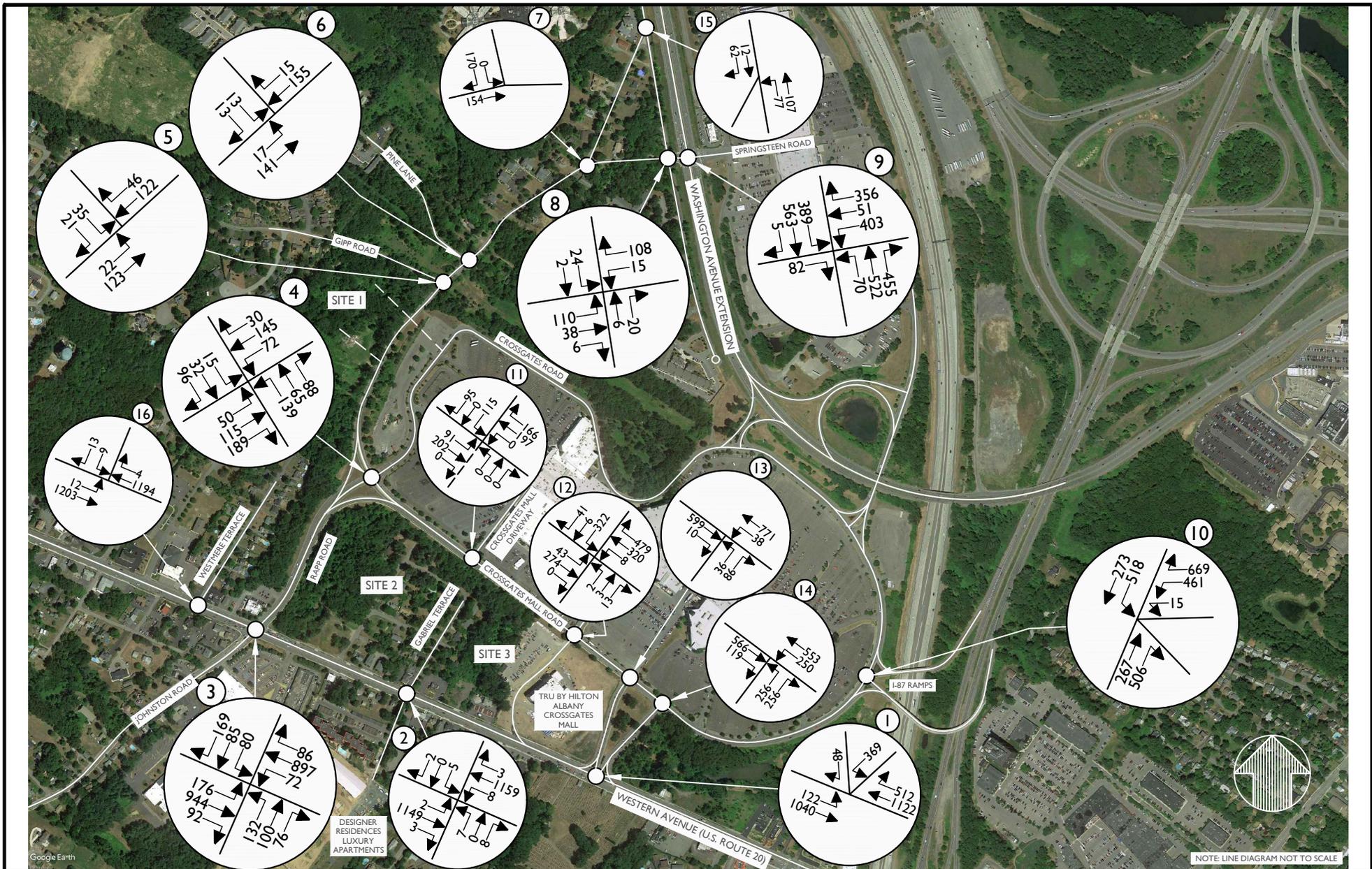


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SHEET NUMBER:			
FIGURE NO. 3			



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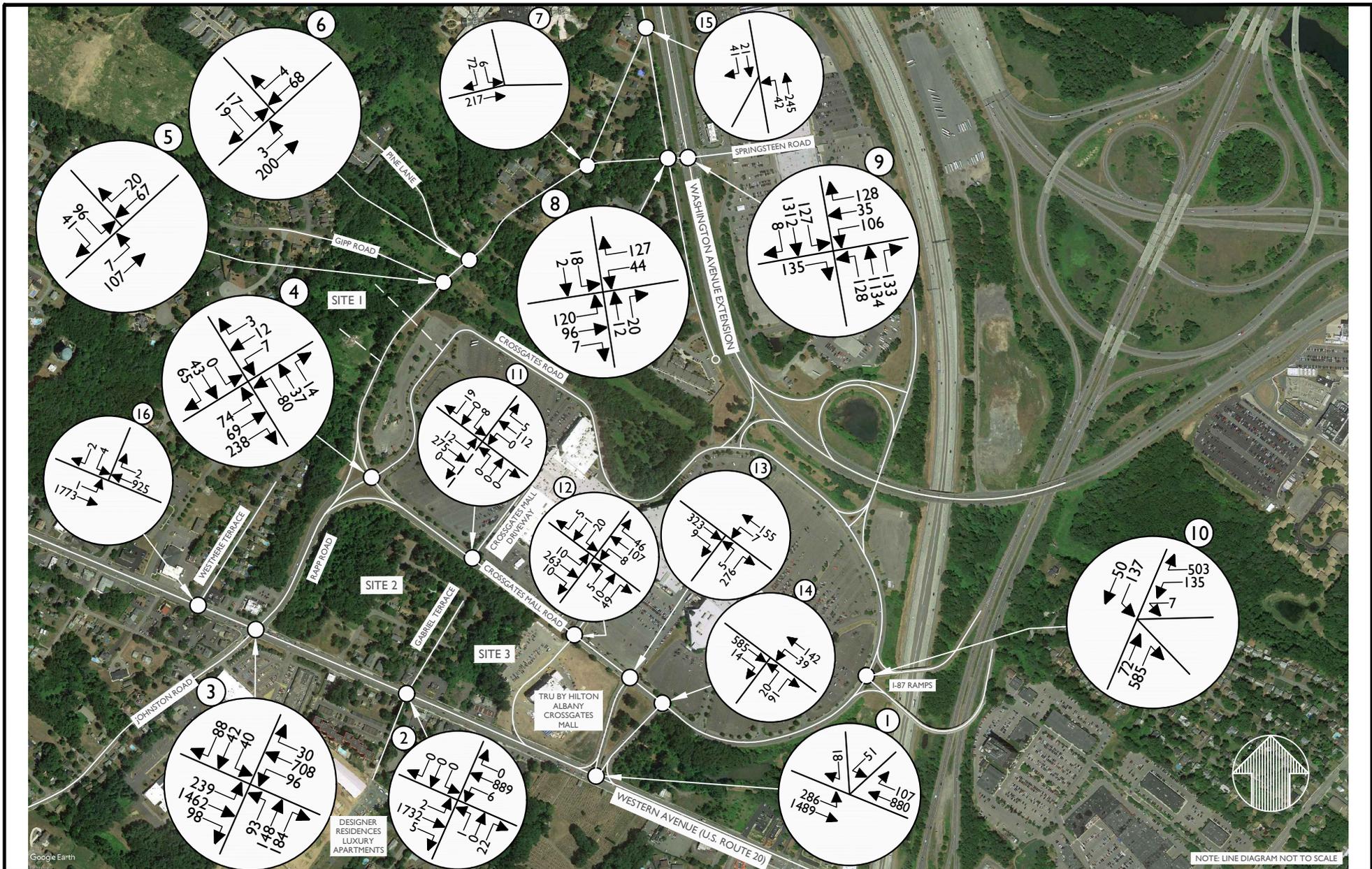


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FIGURE NO. 4			



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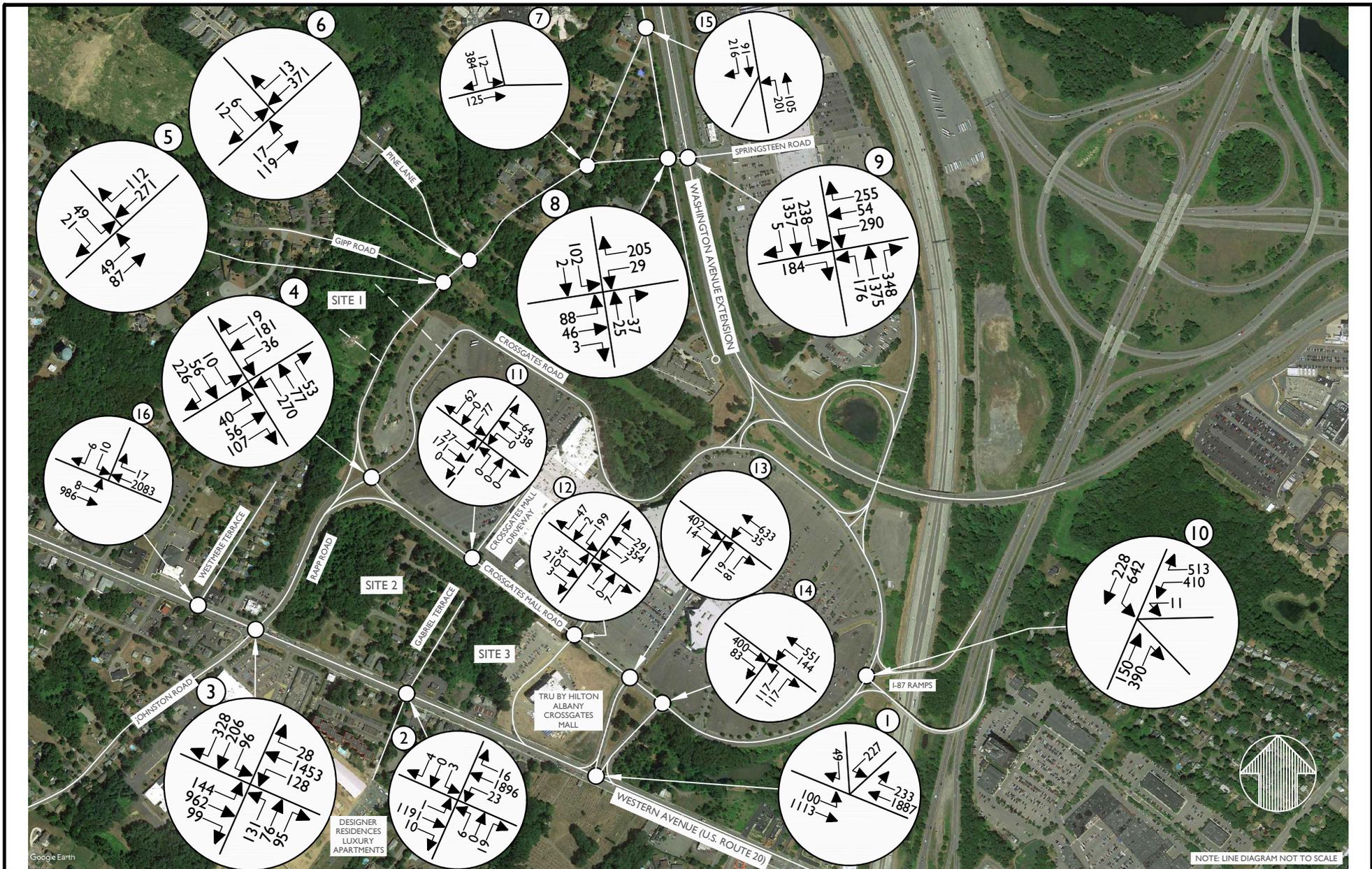
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FIGURE NO. 5			



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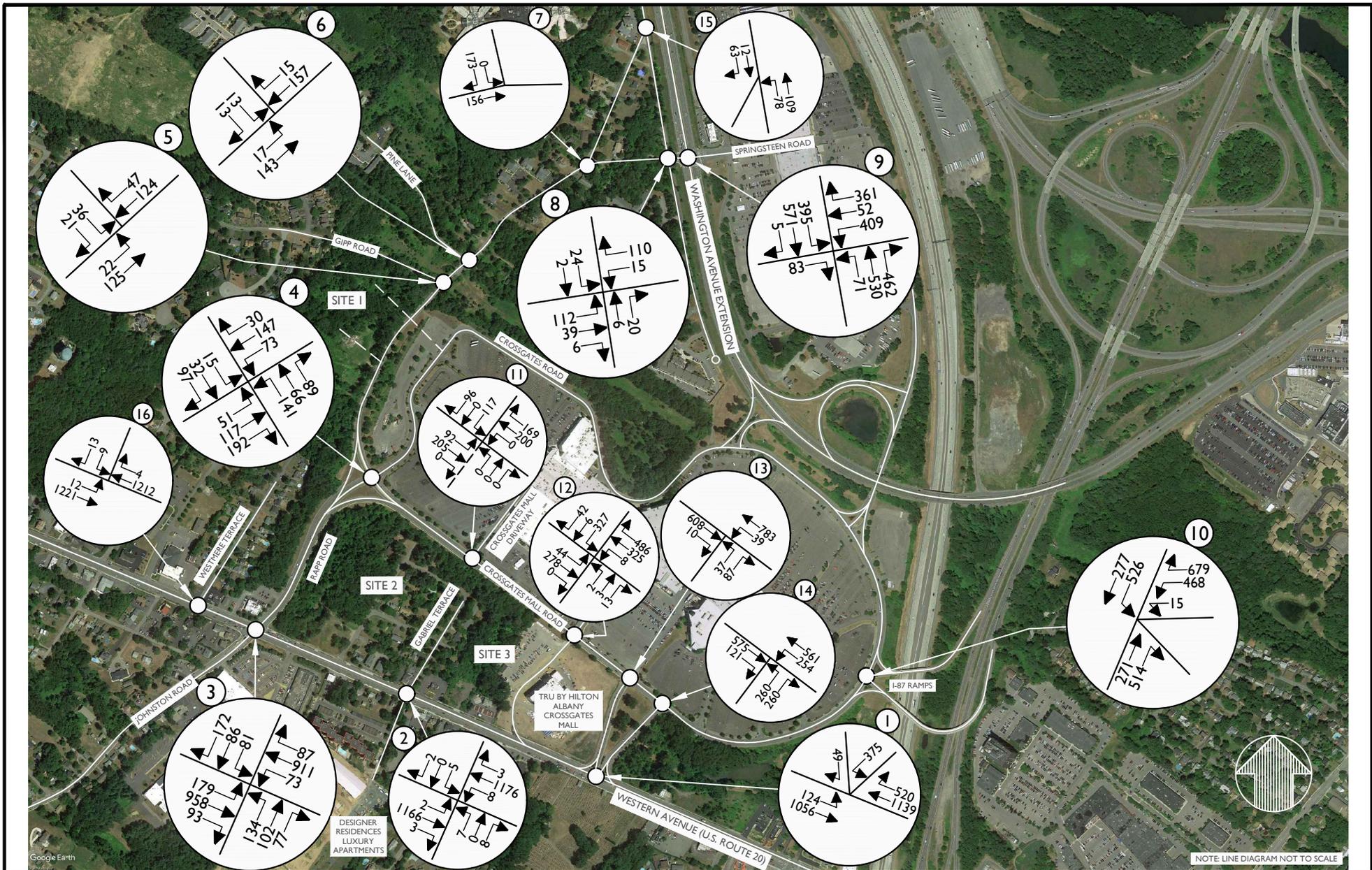
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FIGURE NO. 6			



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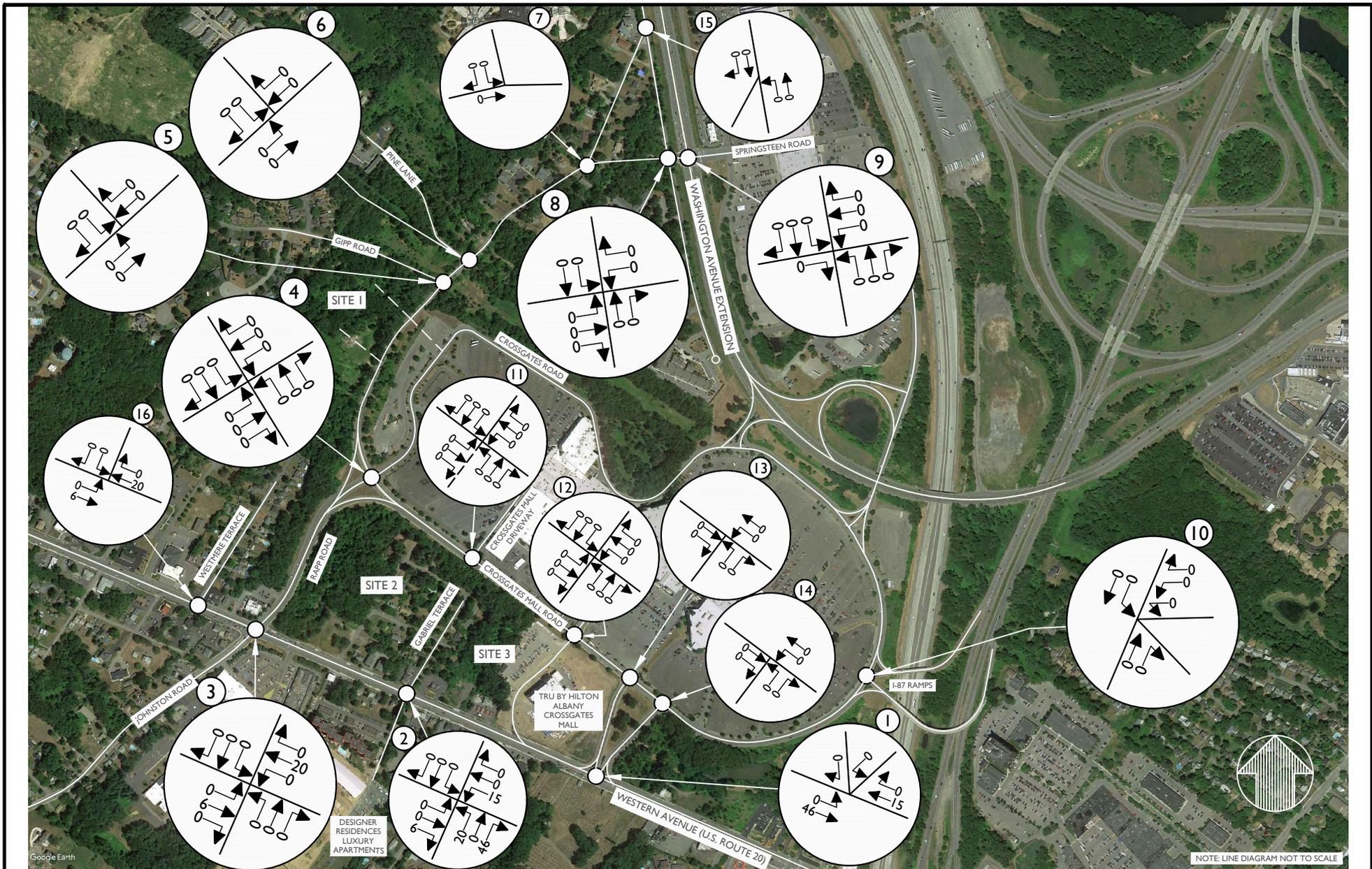
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FIGURE NO. 7			



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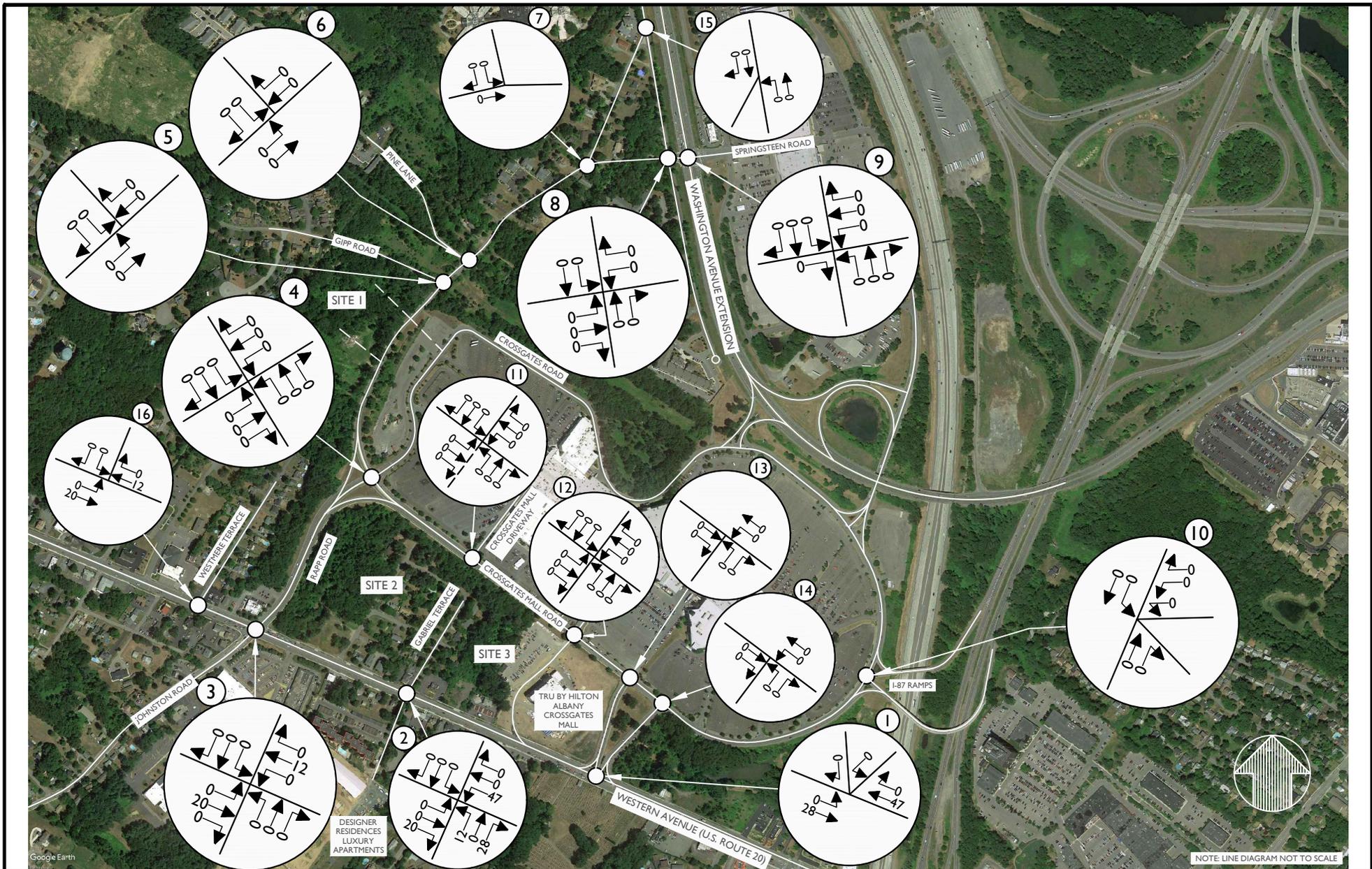
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OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
FIGURE NO. 8



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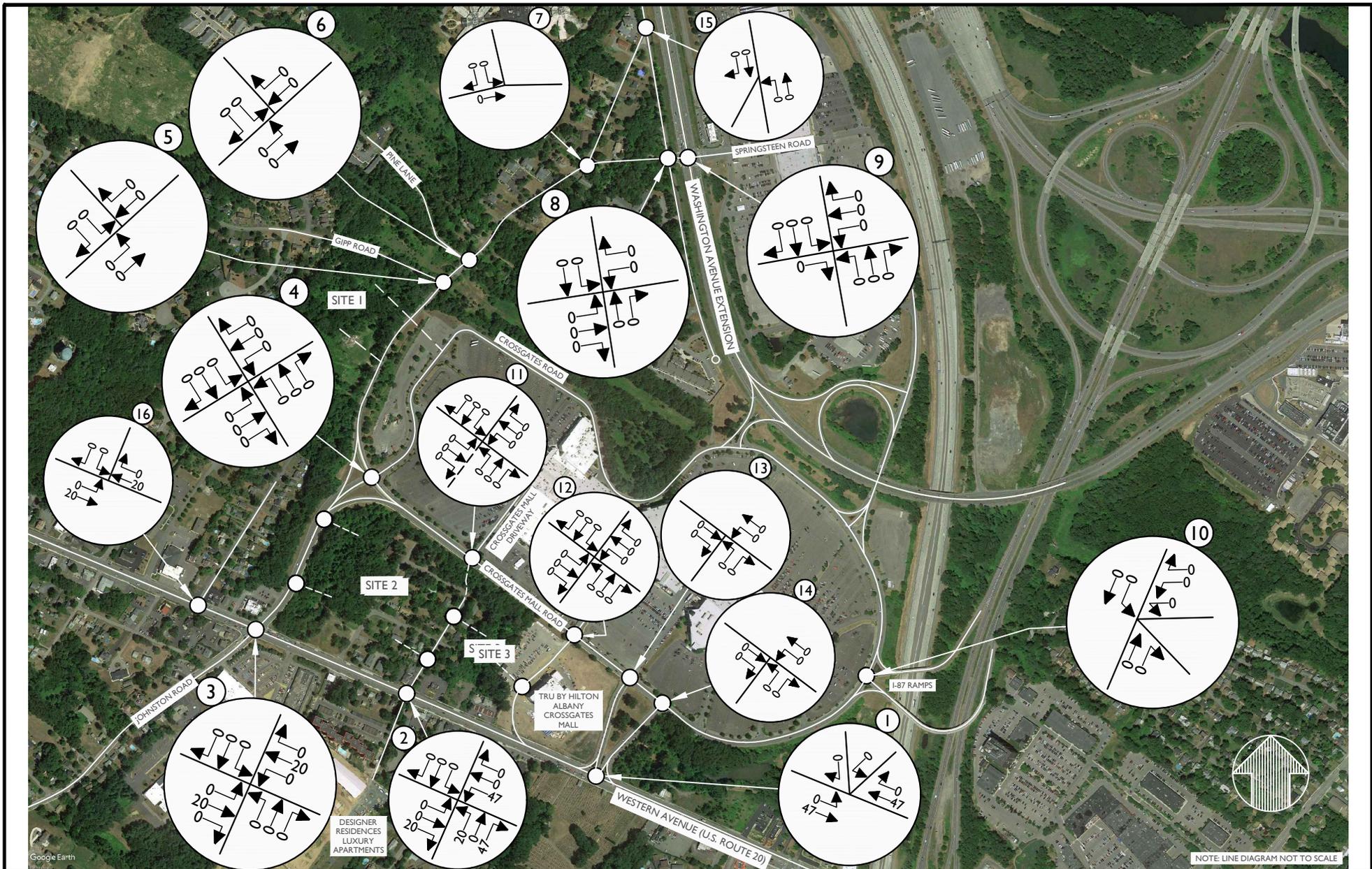
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FIGURE NO. 9			



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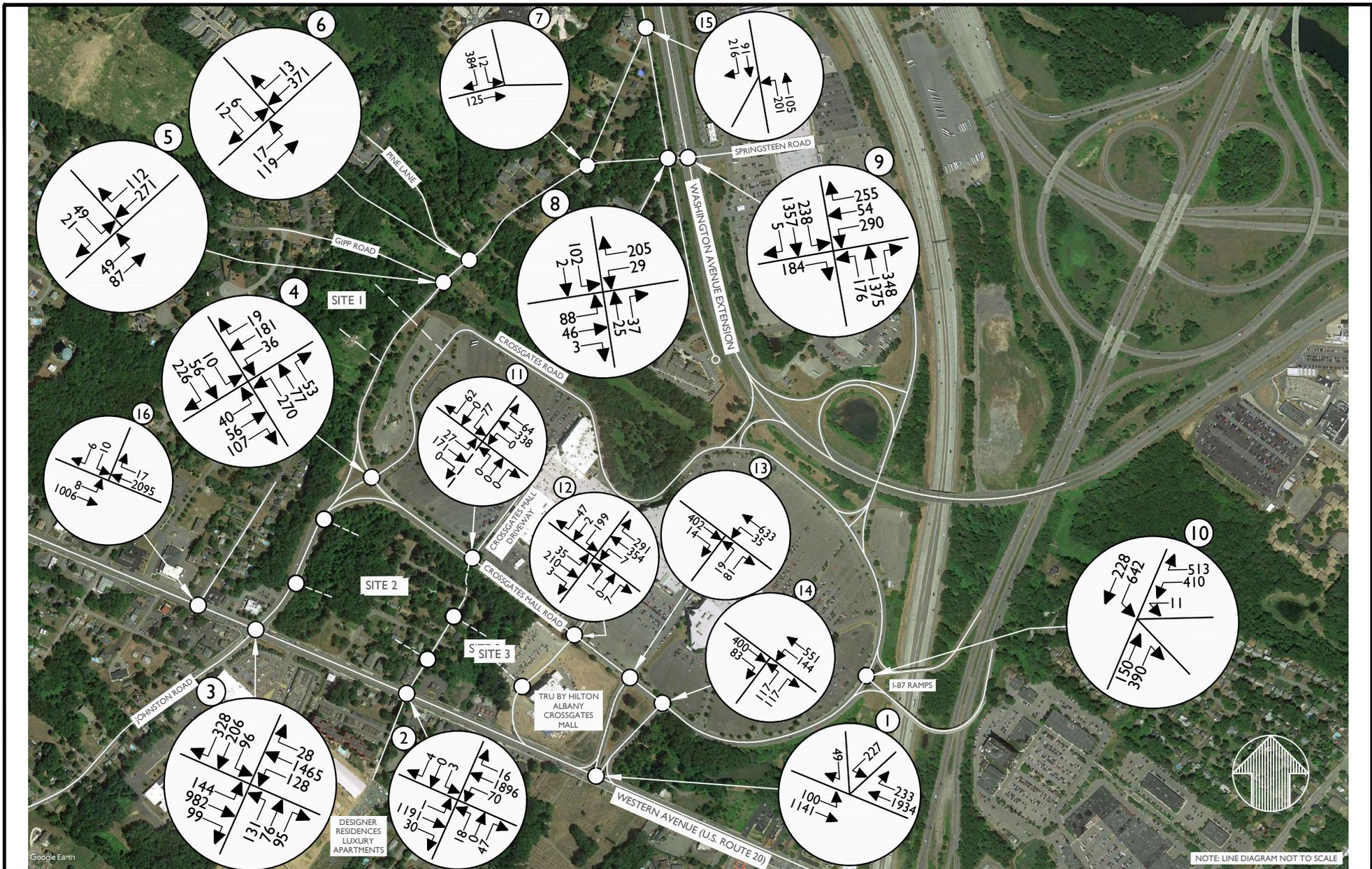
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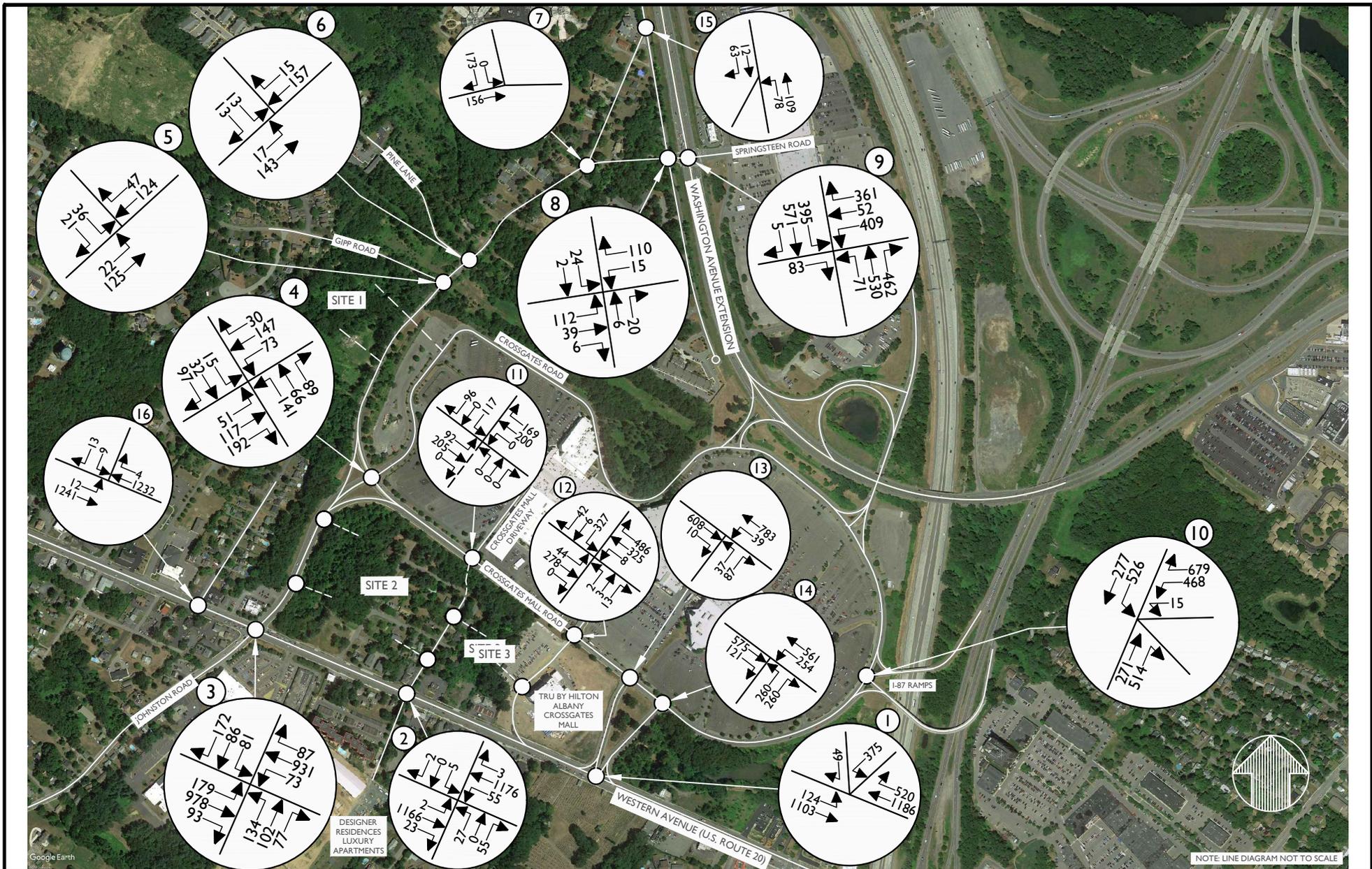
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FIGURE NO. 12			



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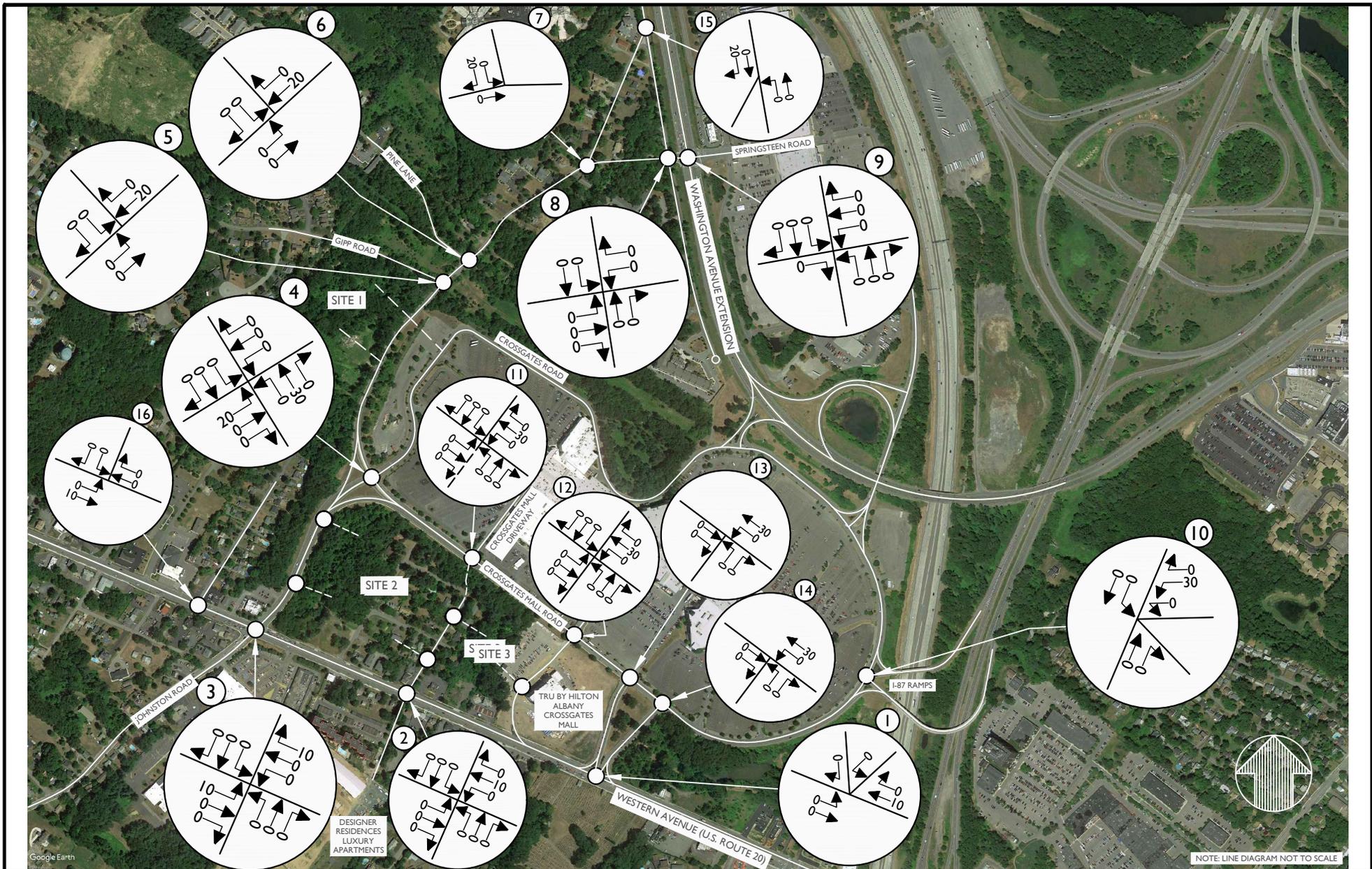


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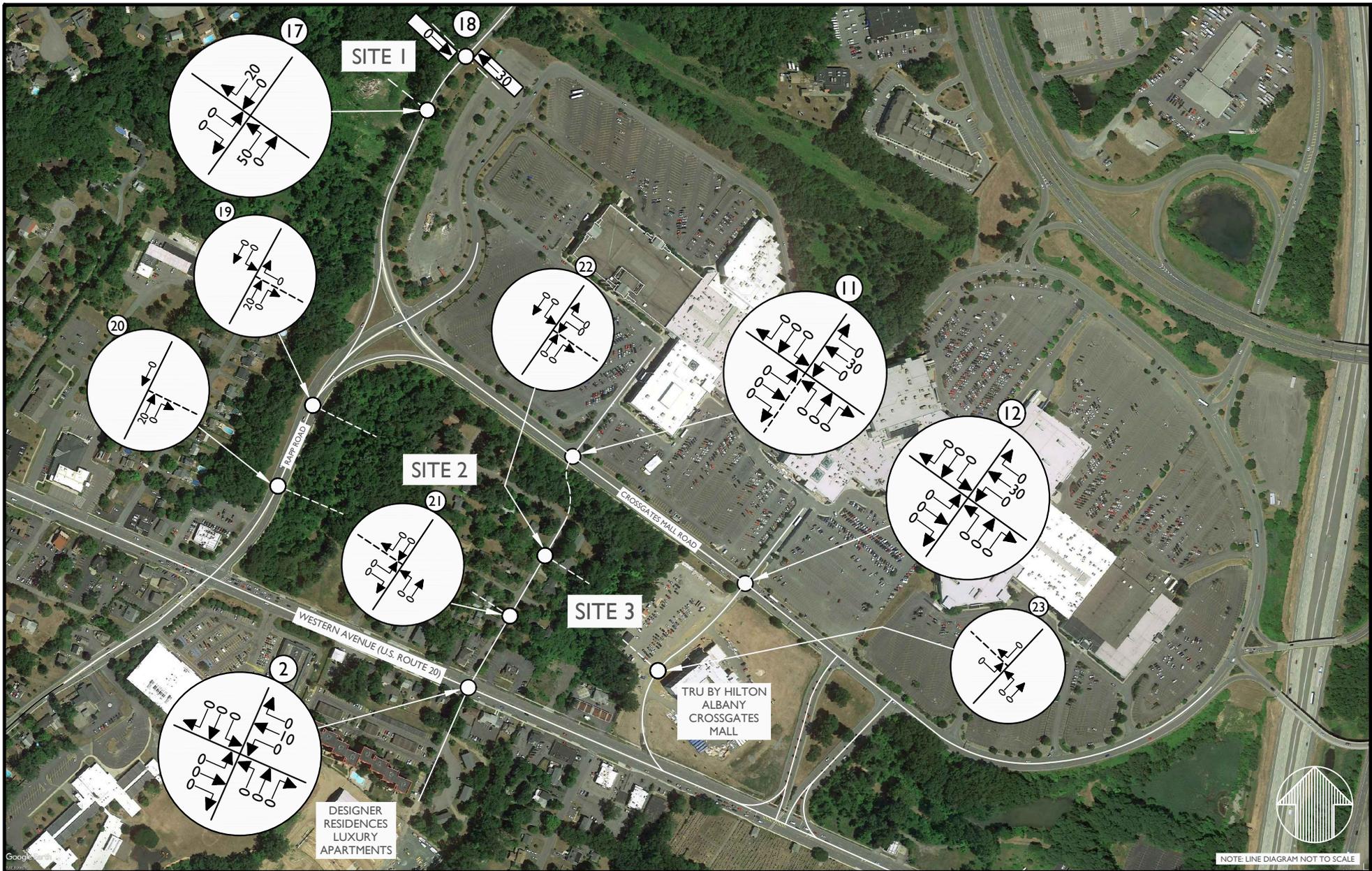


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SHEET TITLE ARRIVAL DISTRIBUTION SITE 1 - RAPP ROAD RESIDENTIAL (EXPRESSED AS A %)			
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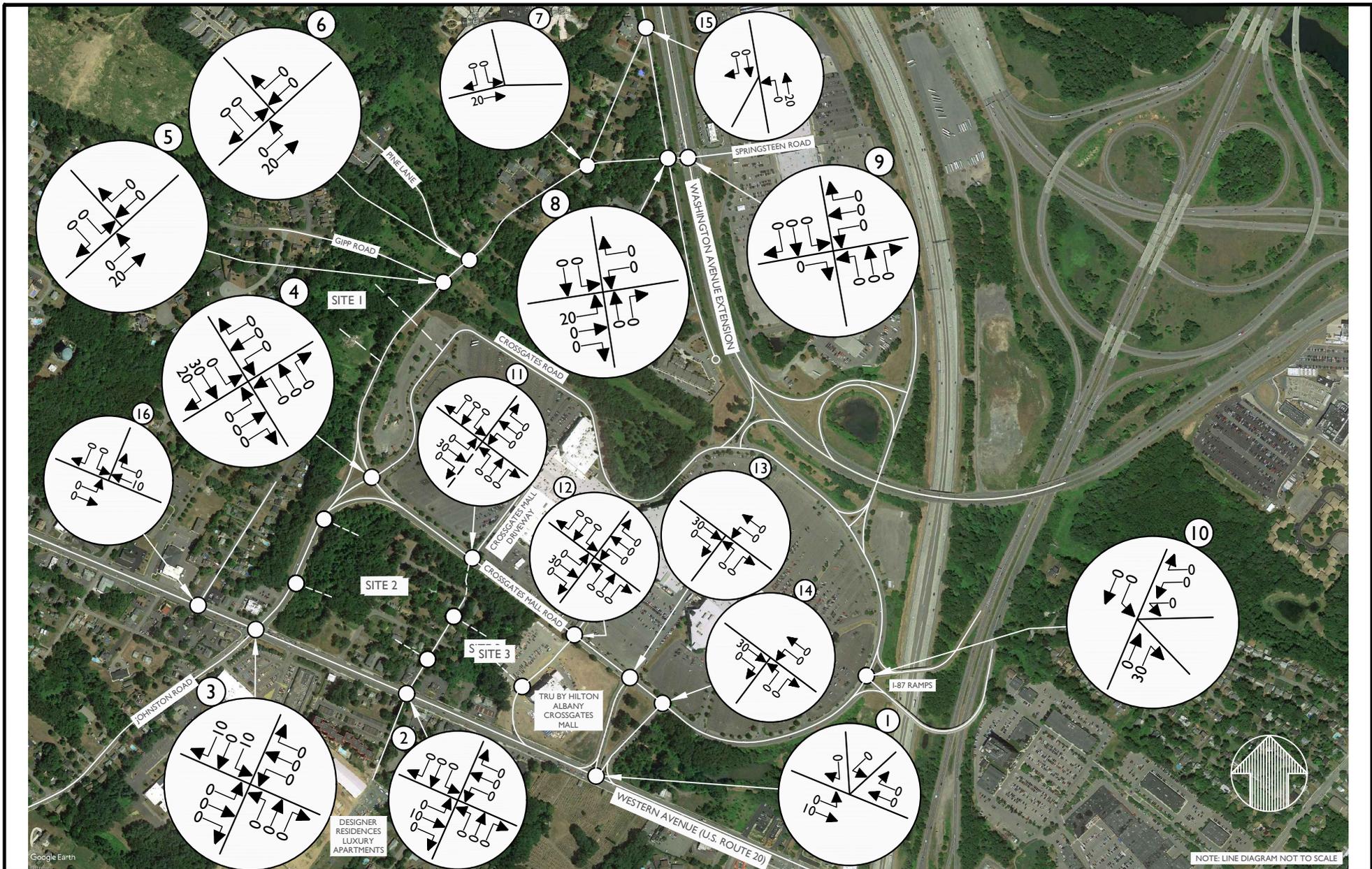
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FIGURE NO. 14-A			



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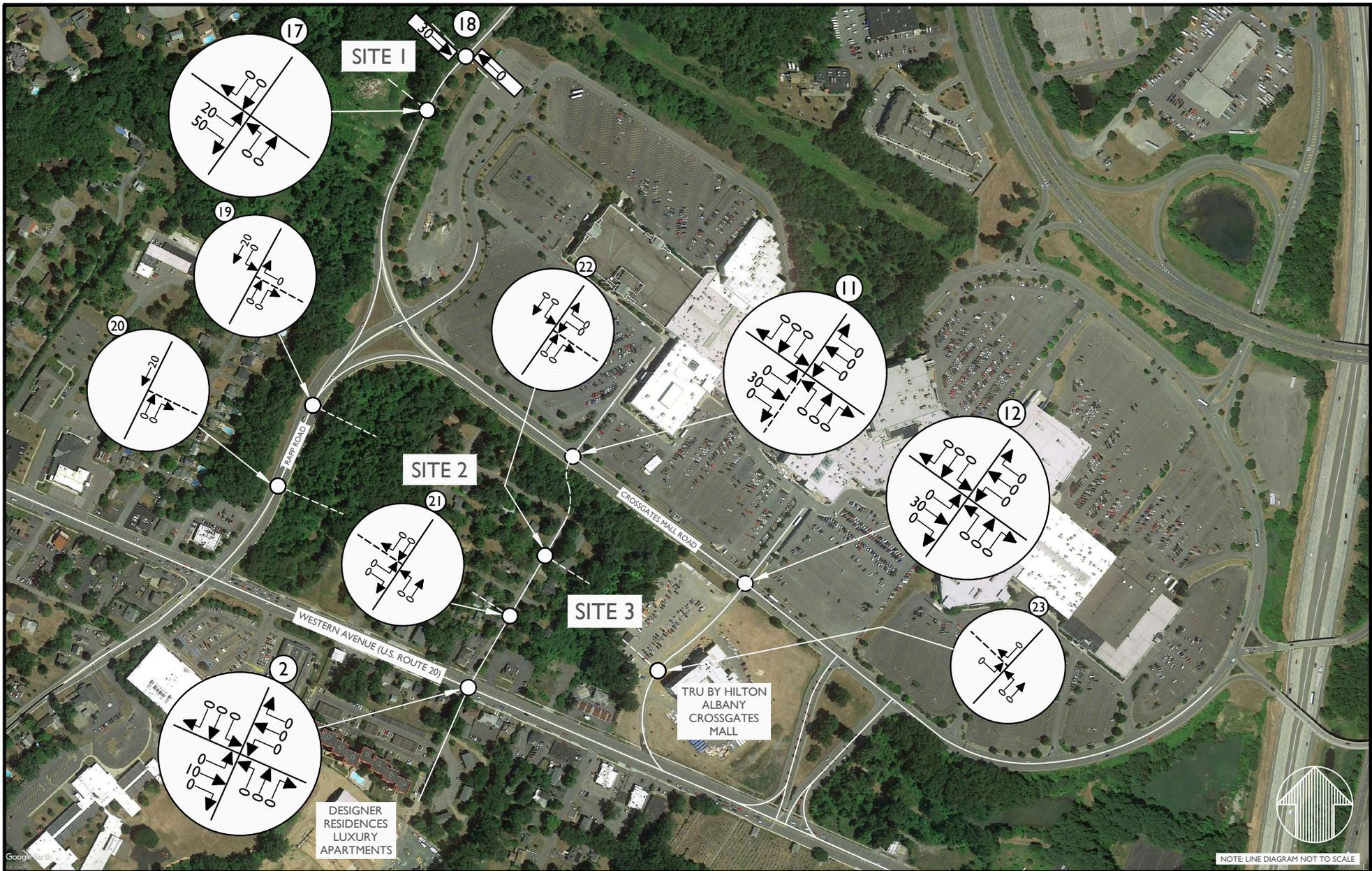
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FIGURE NO. 15			



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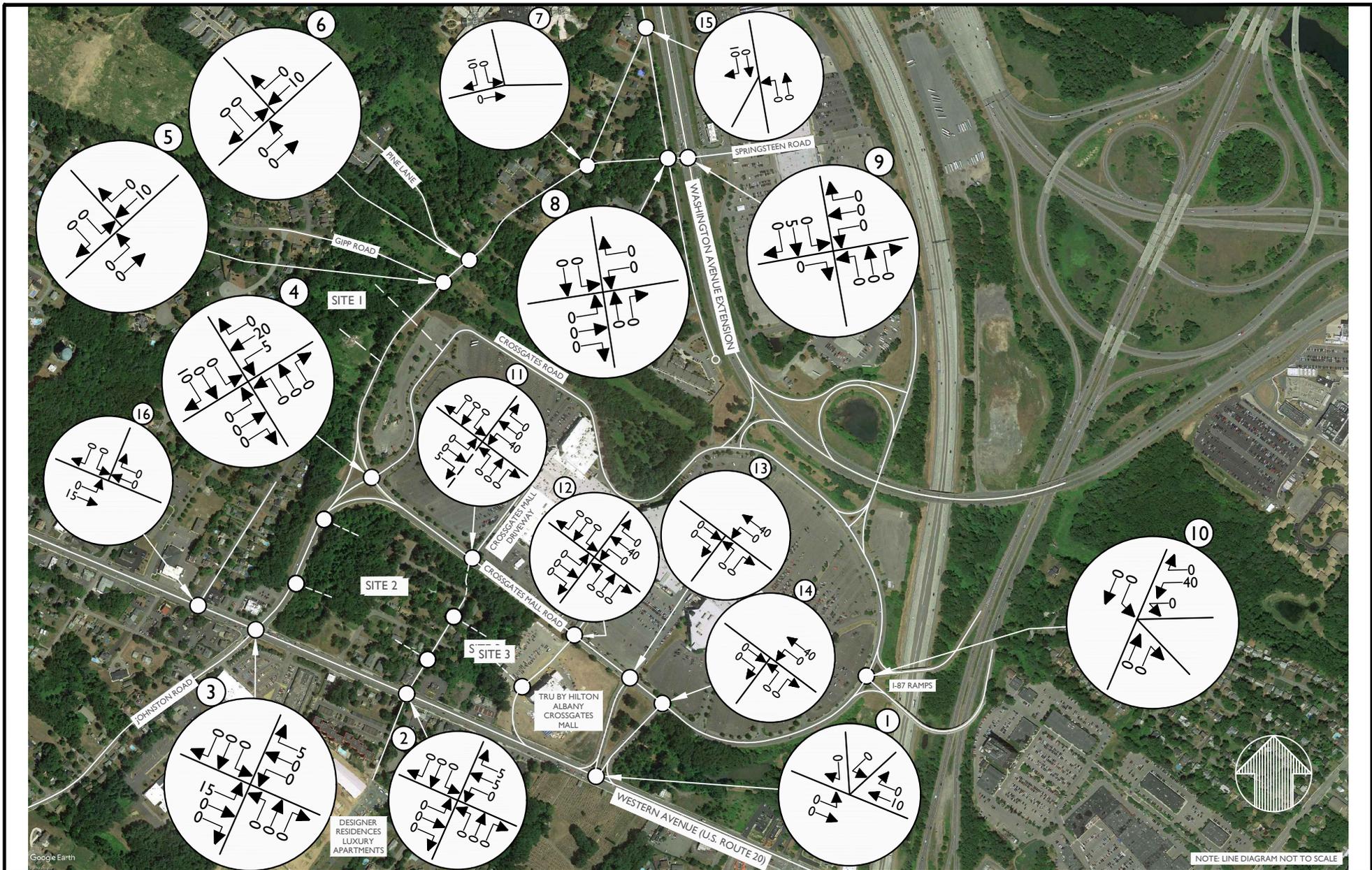
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FIGURE NO. 15-A			



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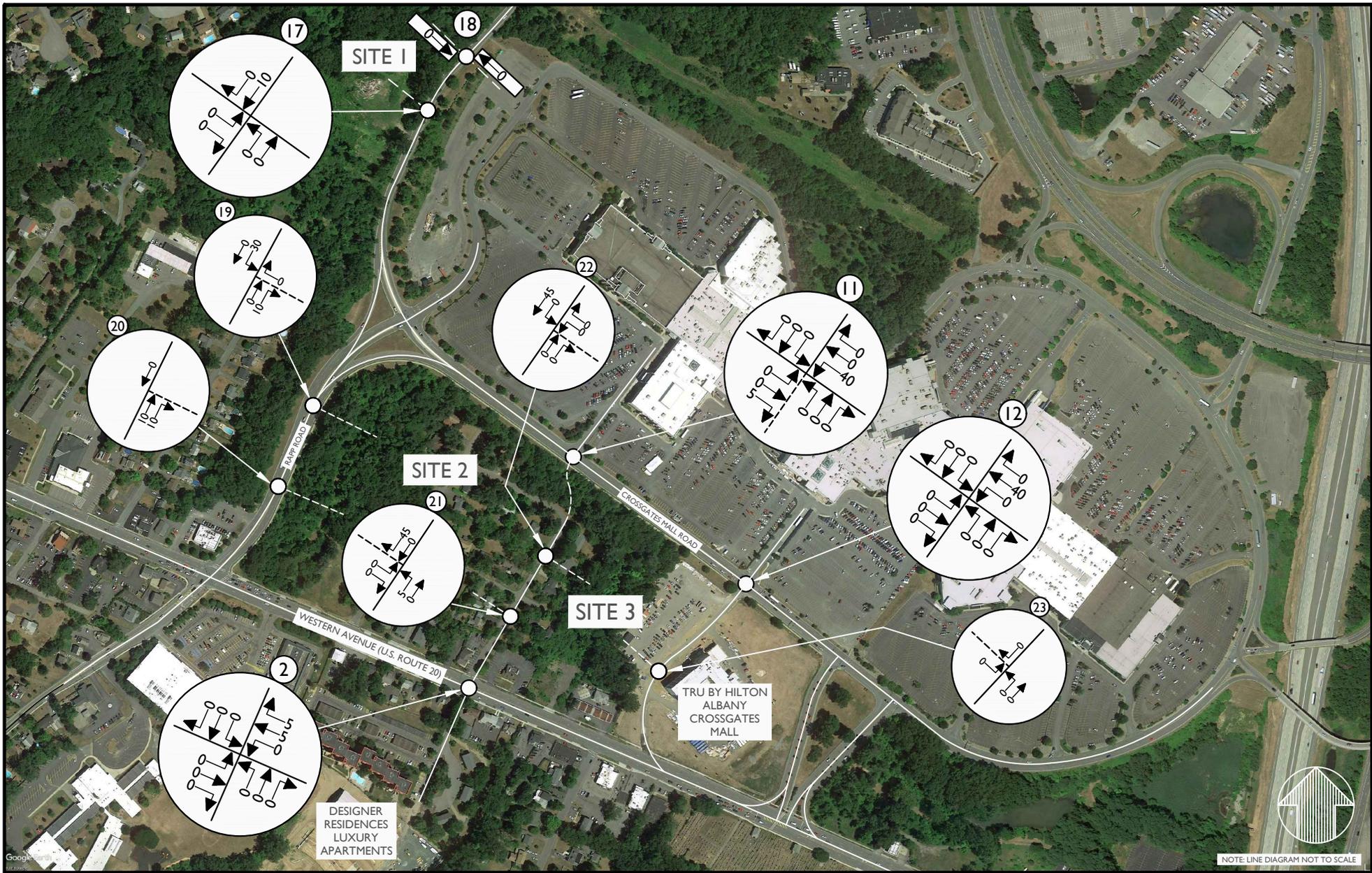
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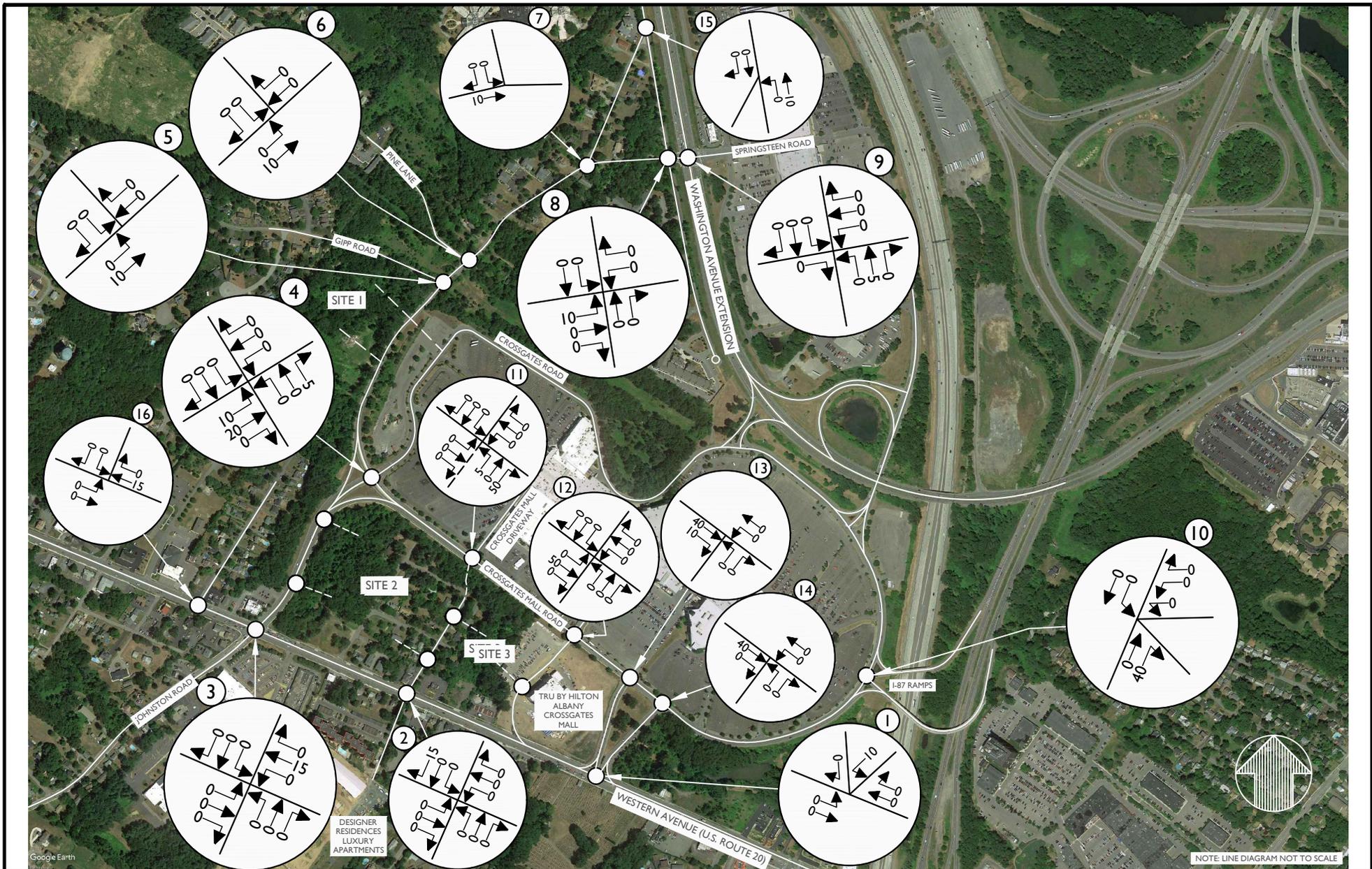
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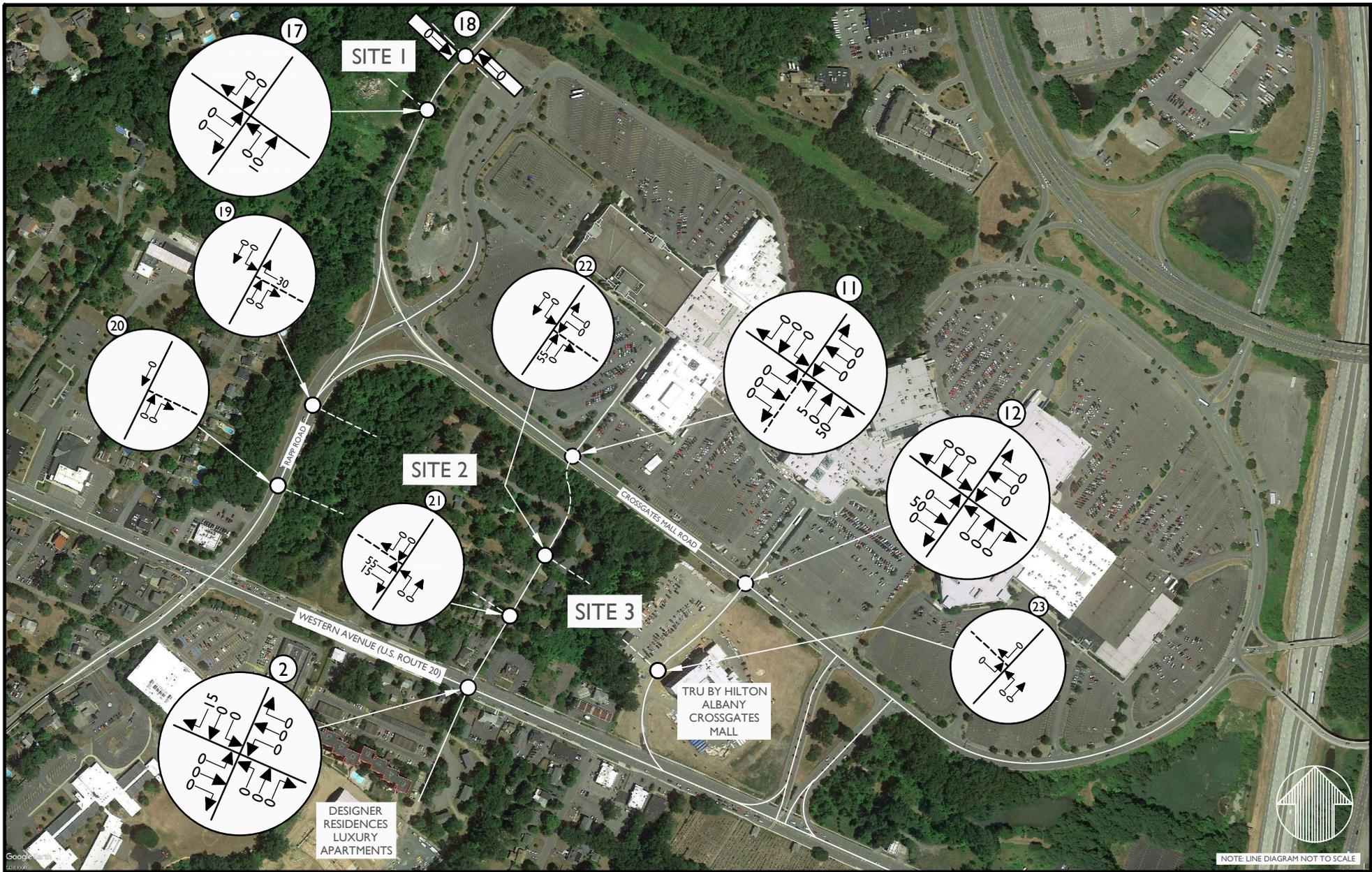
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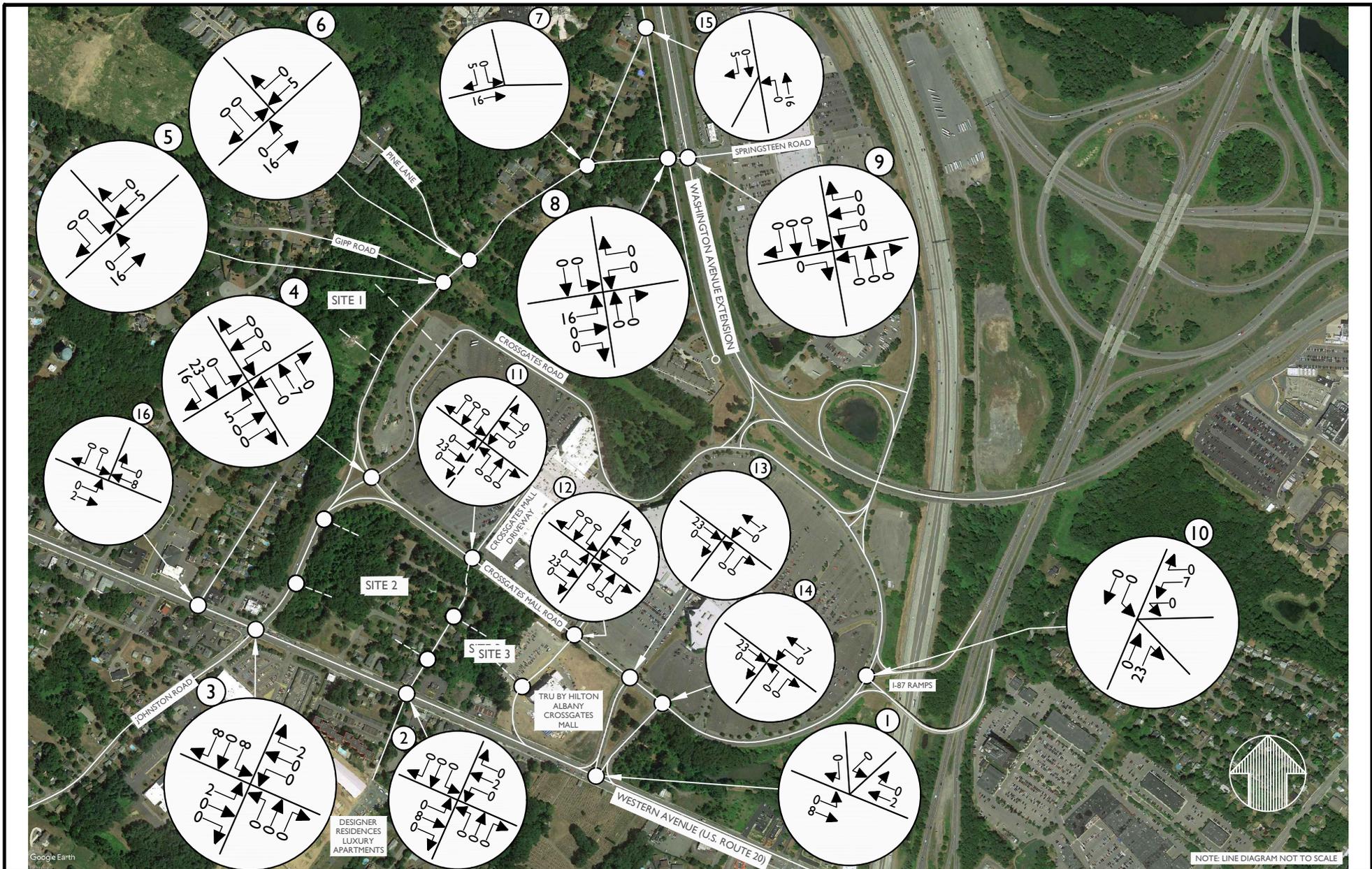
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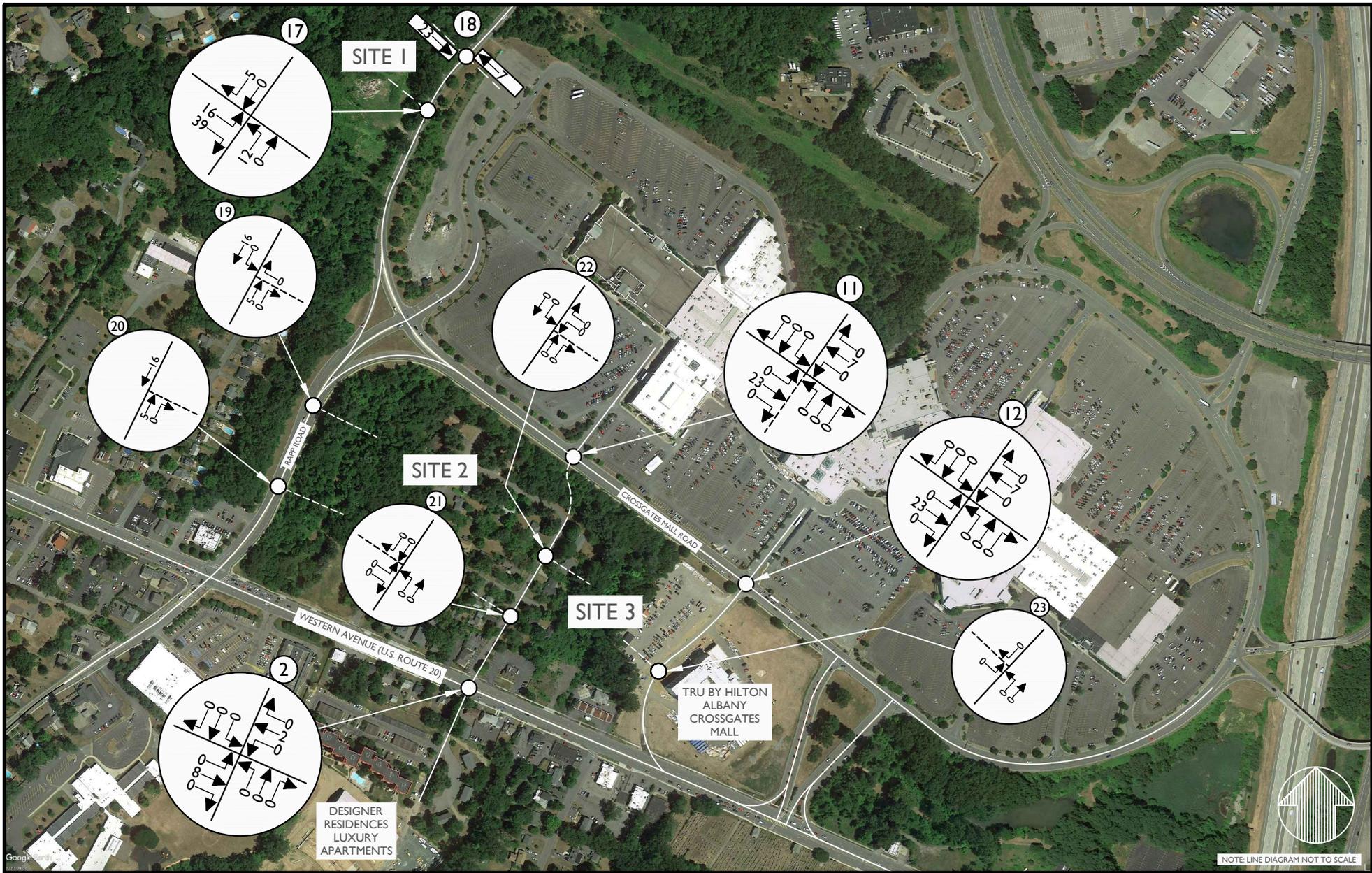
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SHEET TITLE SITE GENERATED TRAFFIC VOLUMES SITE 1 - RAPP ROAD RESIDENTIAL WEEKDAY PEAK AM HOUR			
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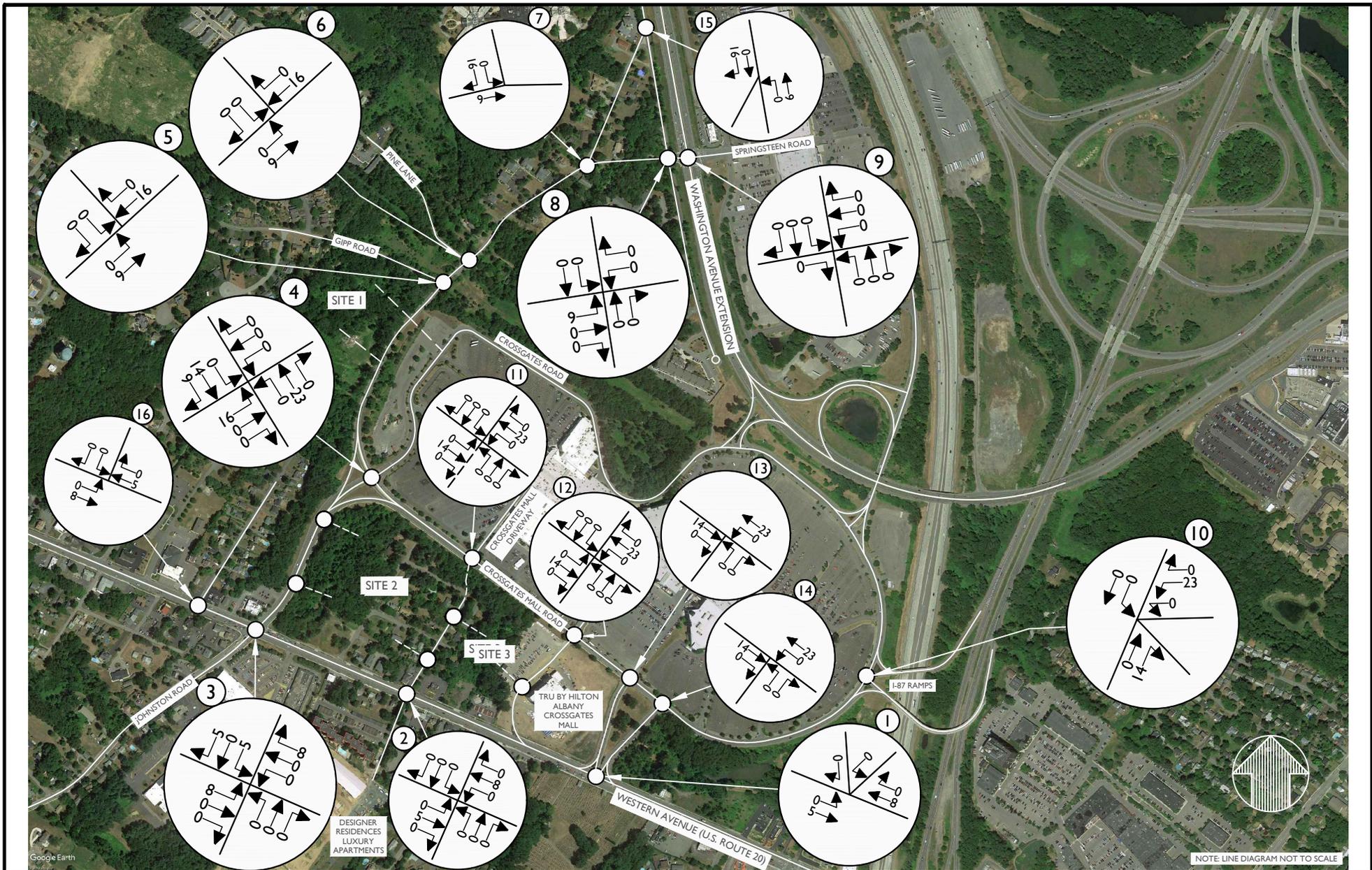
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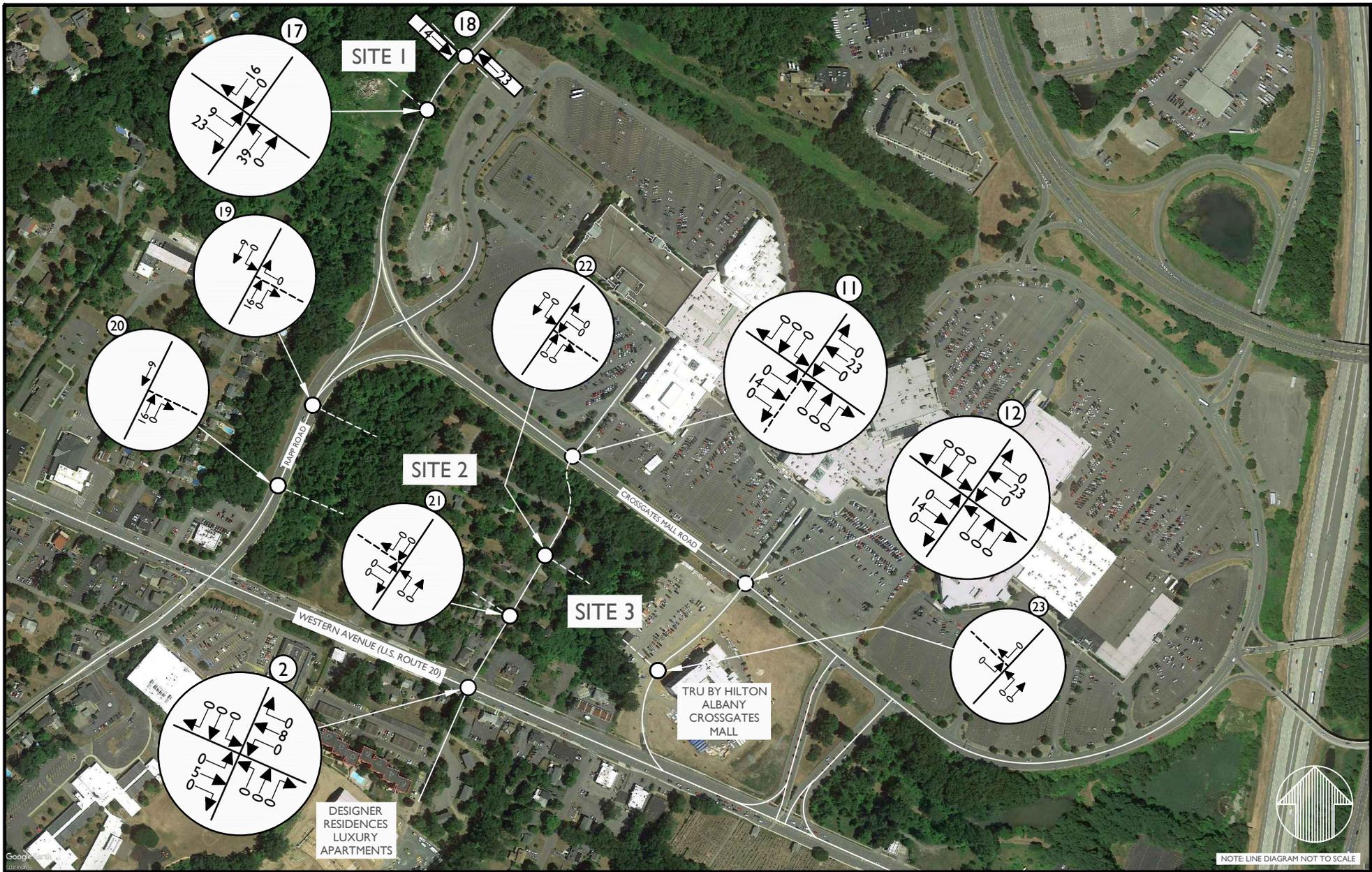


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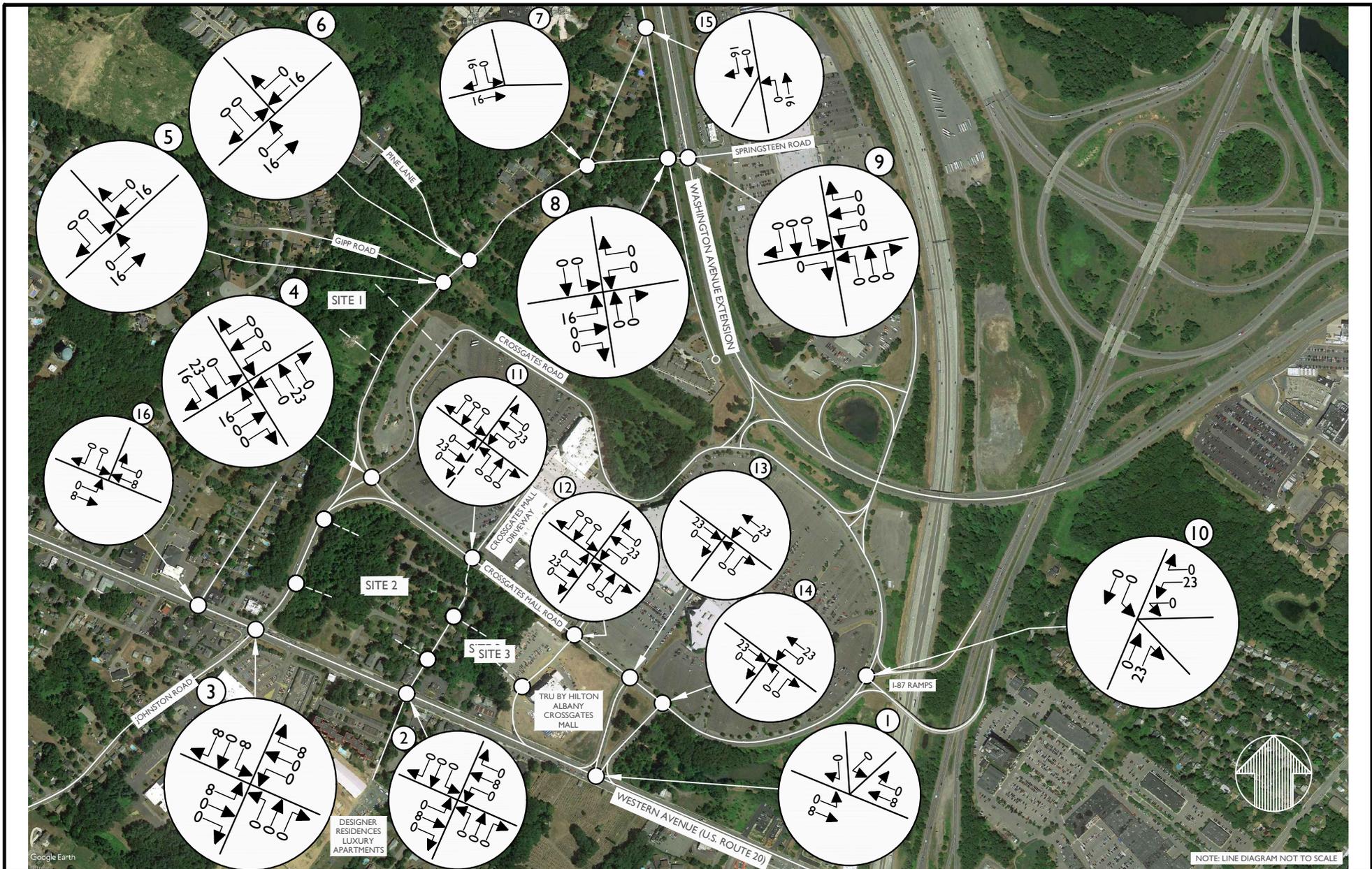
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SHEET TITLE			
SITE GENERATED TRAFFIC VOLUMES SITE 1 - RAPP ROAD RESIDENTIAL WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
FIGURE NO. 19-A			



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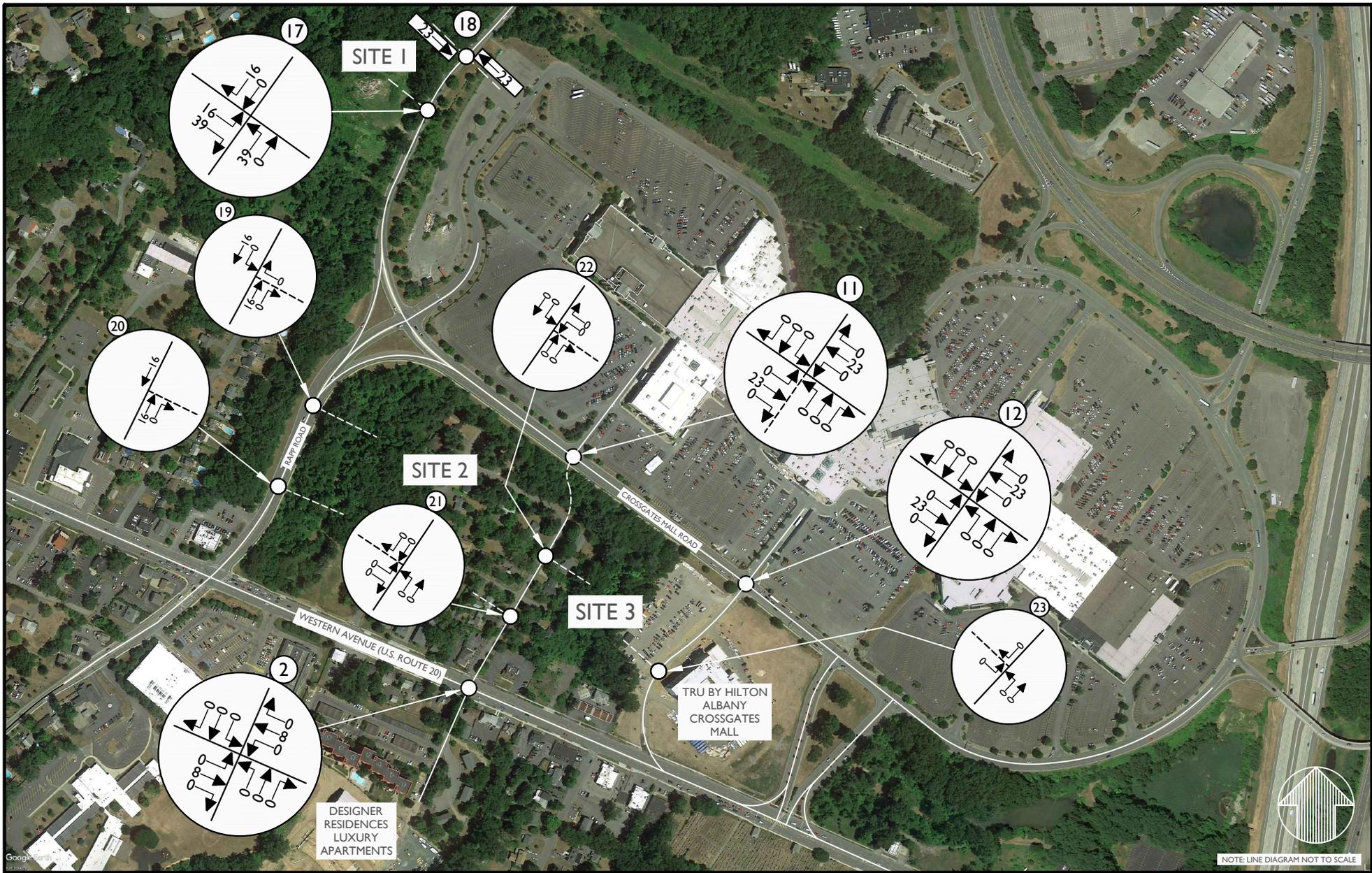
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PROJECT NUMBER	DRAWING NAME		
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SHEET TITLE:			
SITE GENERATED TRAFFIC VOLUMES SITE I - RAPP ROAD RESIDENTIAL SATURDAY PEAK HOUR			
SHEET NUMBER:			
FIGURE NO. 20			



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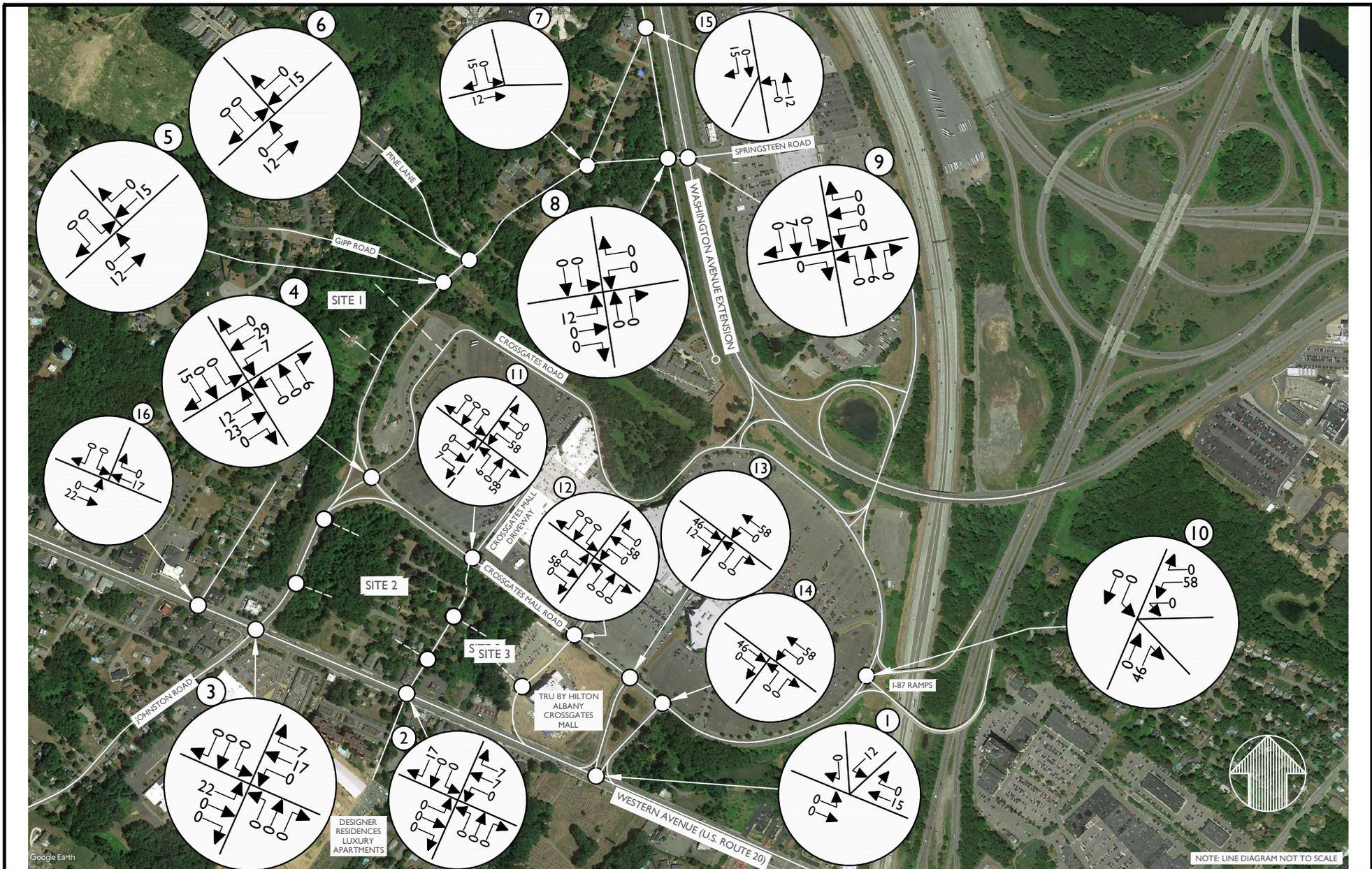
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PROJECT NUMBER	DRAWING NAME		
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SHEET TITLE			
SITE GENERATED TRAFFIC VOLUMES SITE 1 - RAPP ROAD RESIDENTIAL SATURDAY PEAK HOUR			
SHEET NUMBER:			
FIGURE NO. 20-A			



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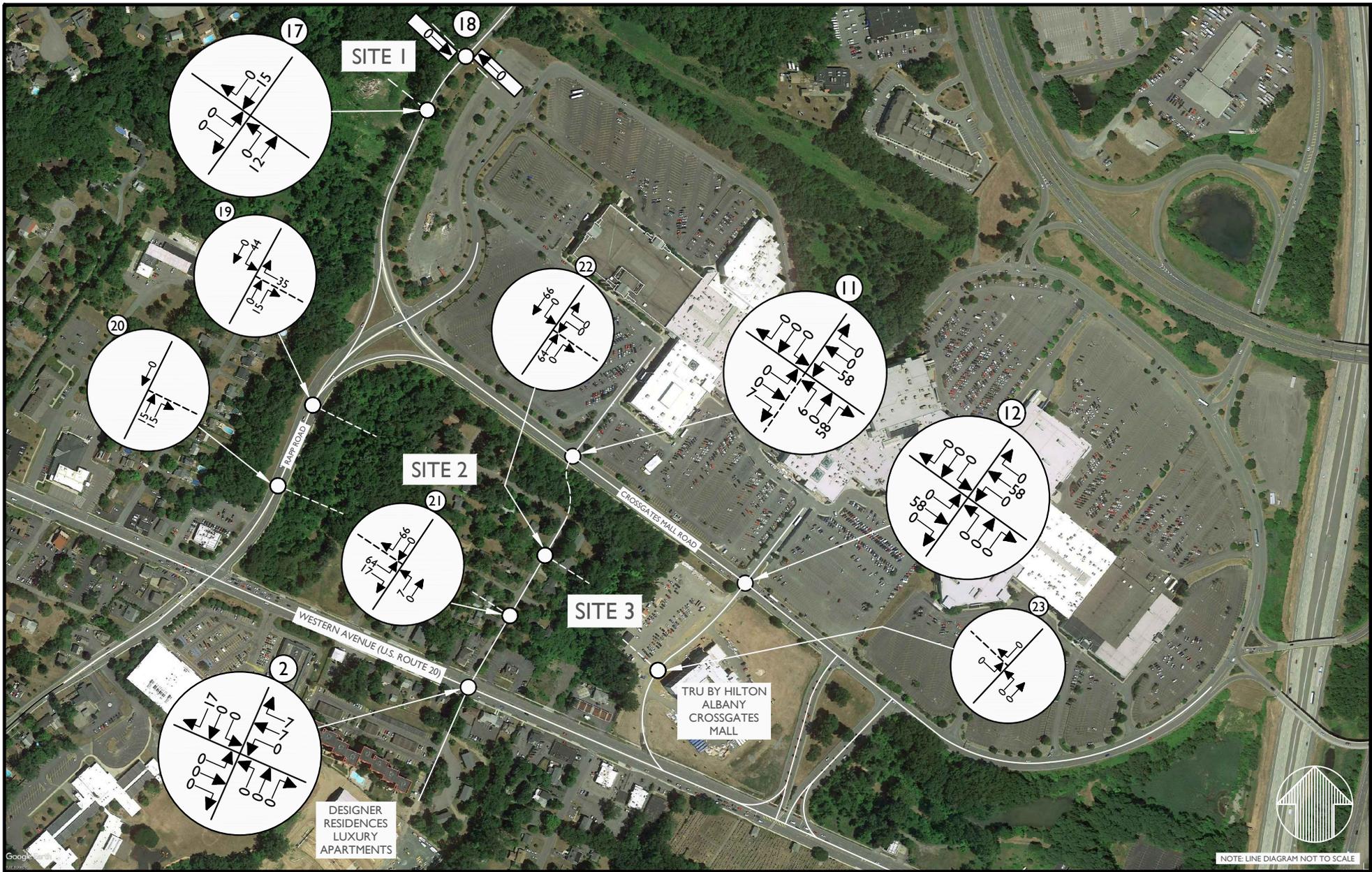
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SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
SITE 2 - COSTCO
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
FIGURE NO. 21



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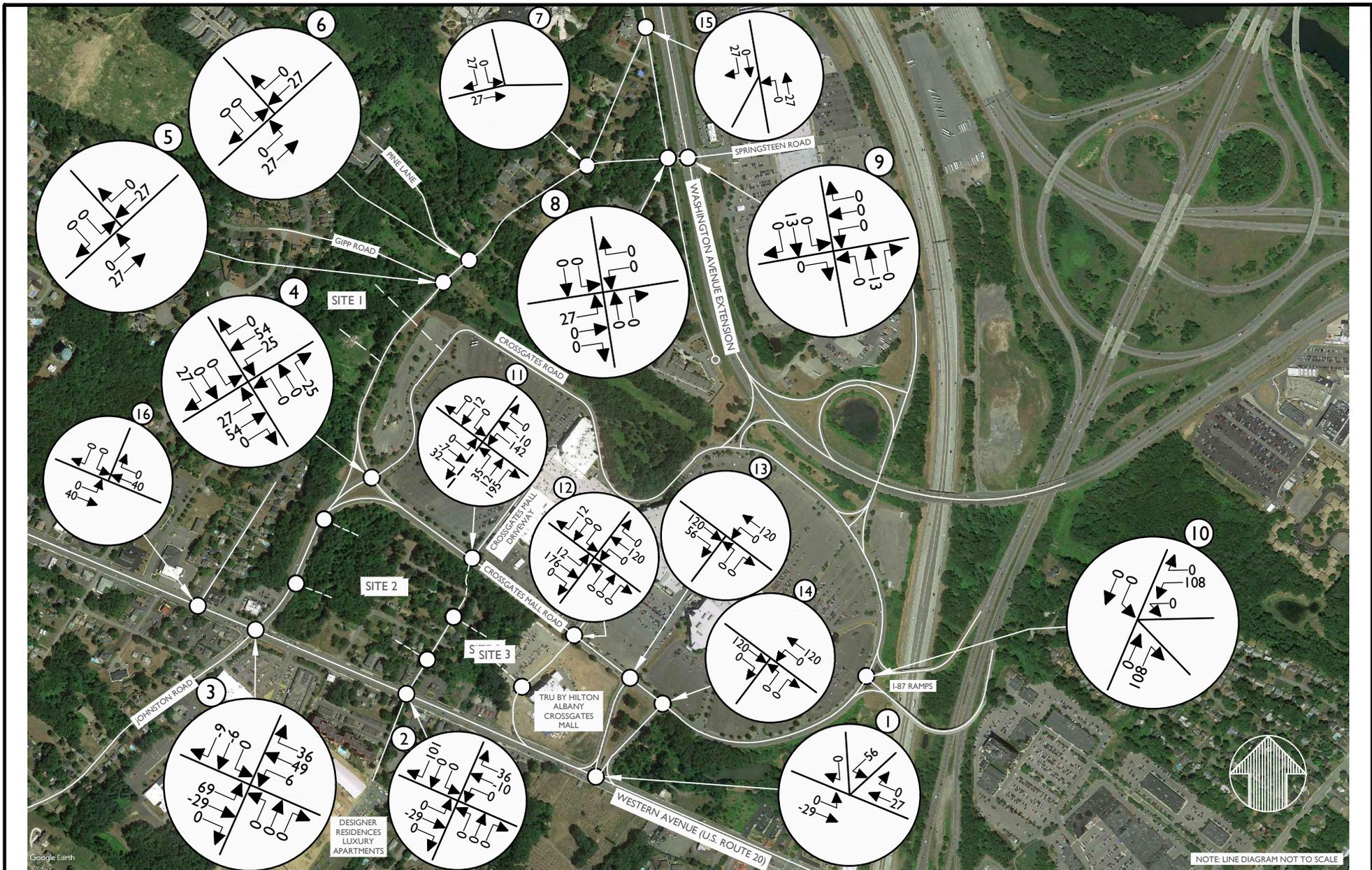
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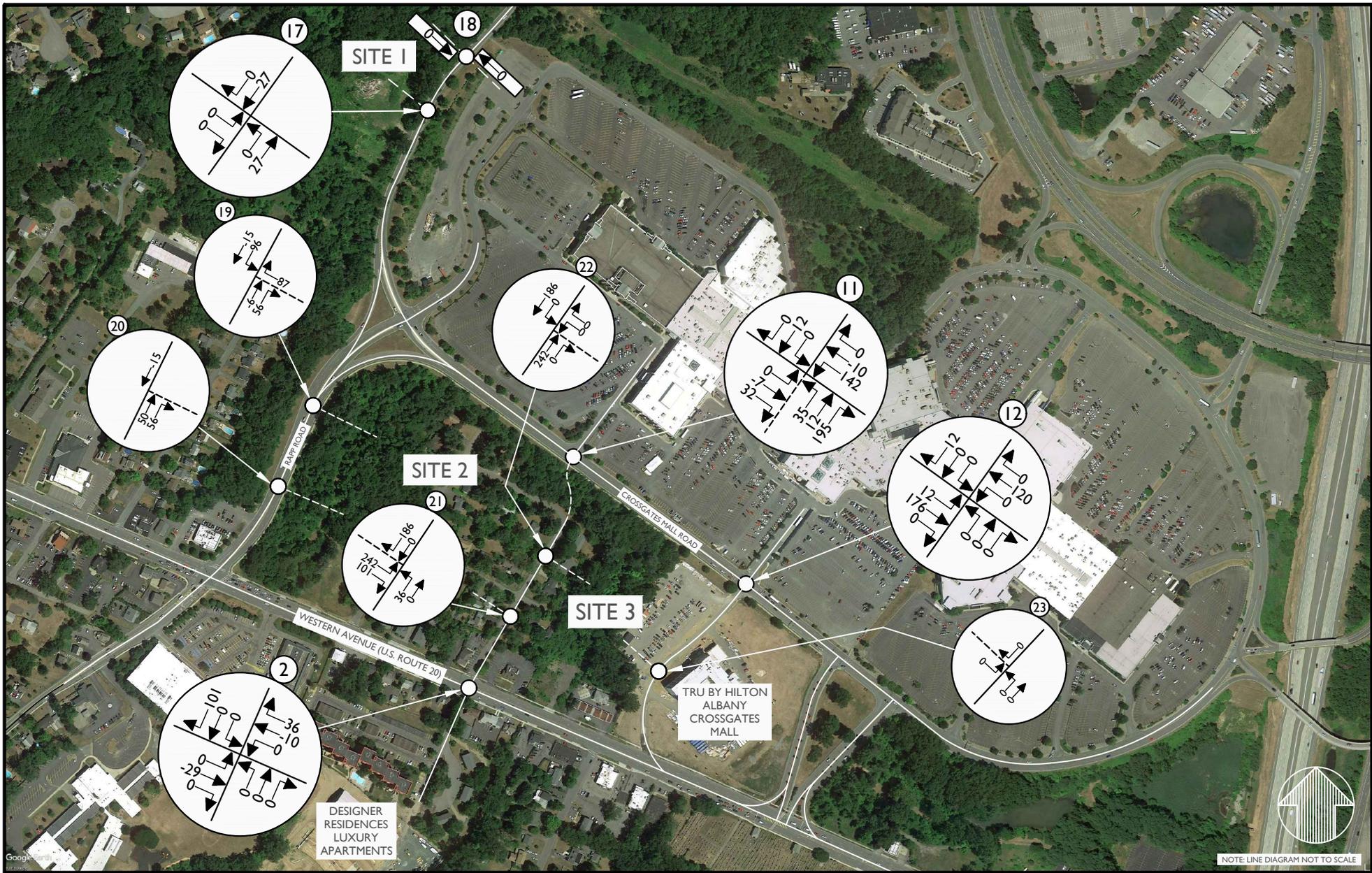
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SITE GENERATED TRAFFIC VOLUMES SITE 2 - COSTCO WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
FIGURE NO. 22			



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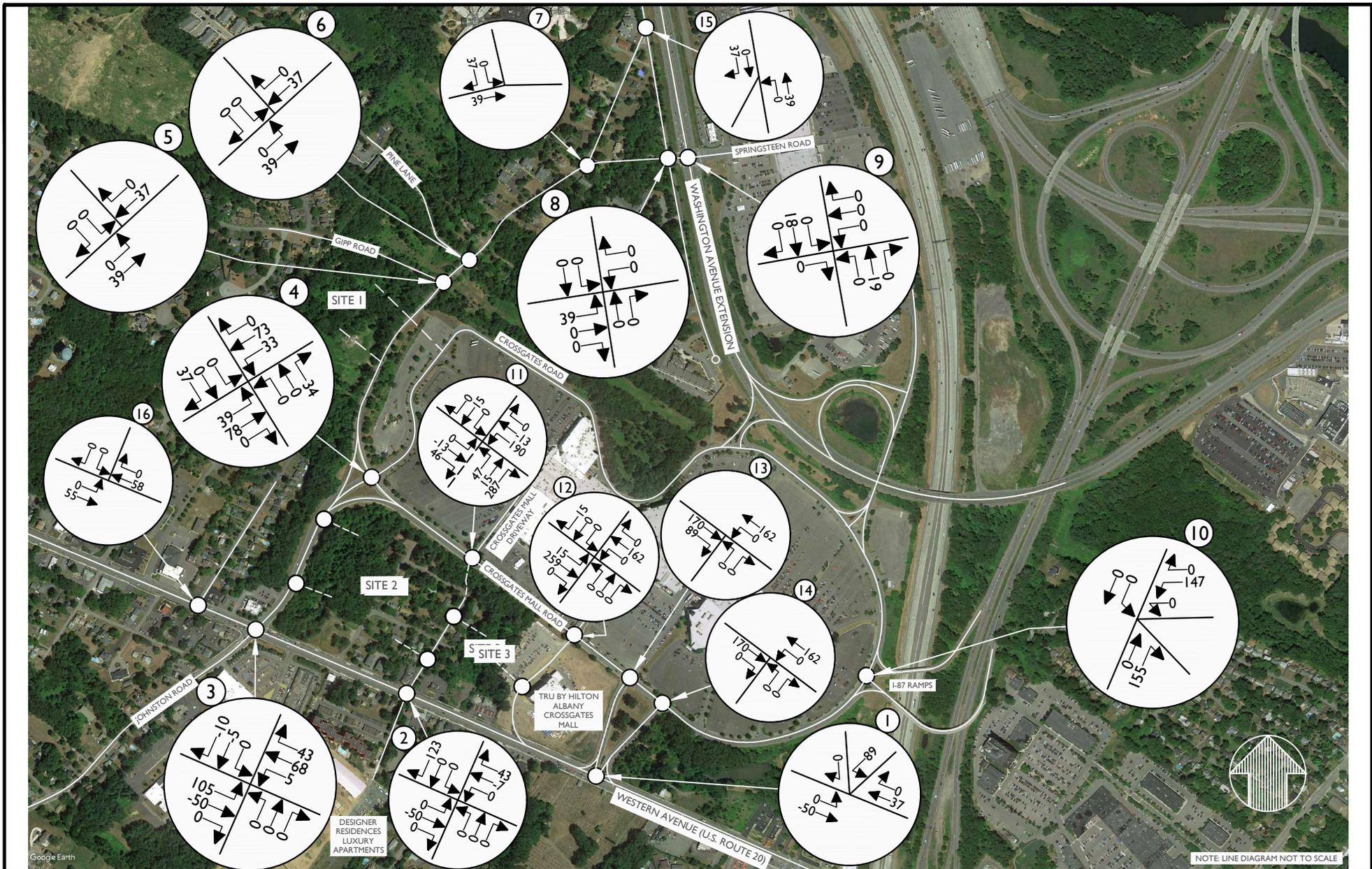
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SHEET TITLE			
SITE GENERATED TRAFFIC VOLUMES SITE 2 - COSTCO WEEKDAY PEAK PM HOUR			
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FIGURE NO. 22-A			



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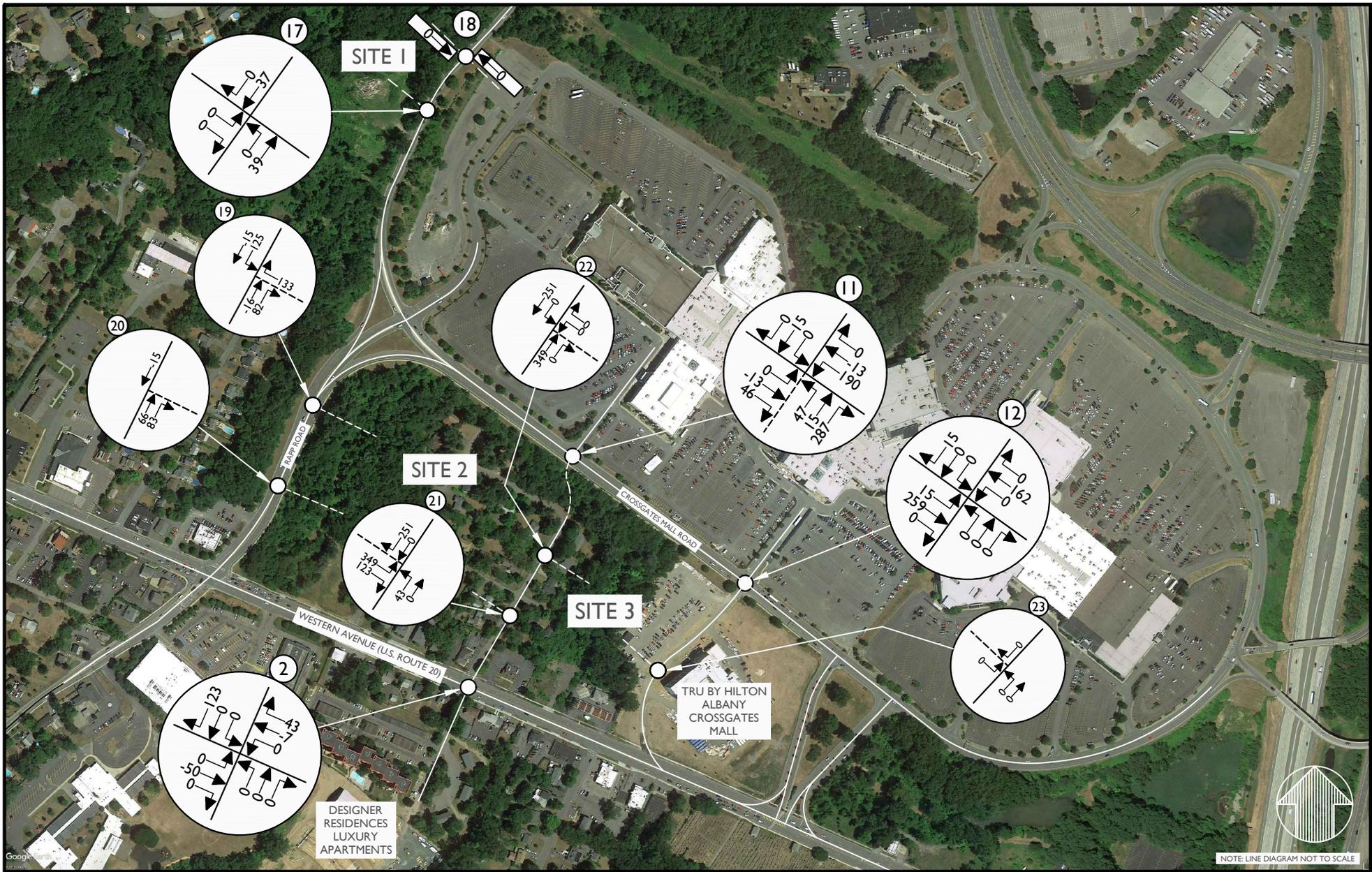


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SHEET NUMBER:			
FIGURE NO. 23			



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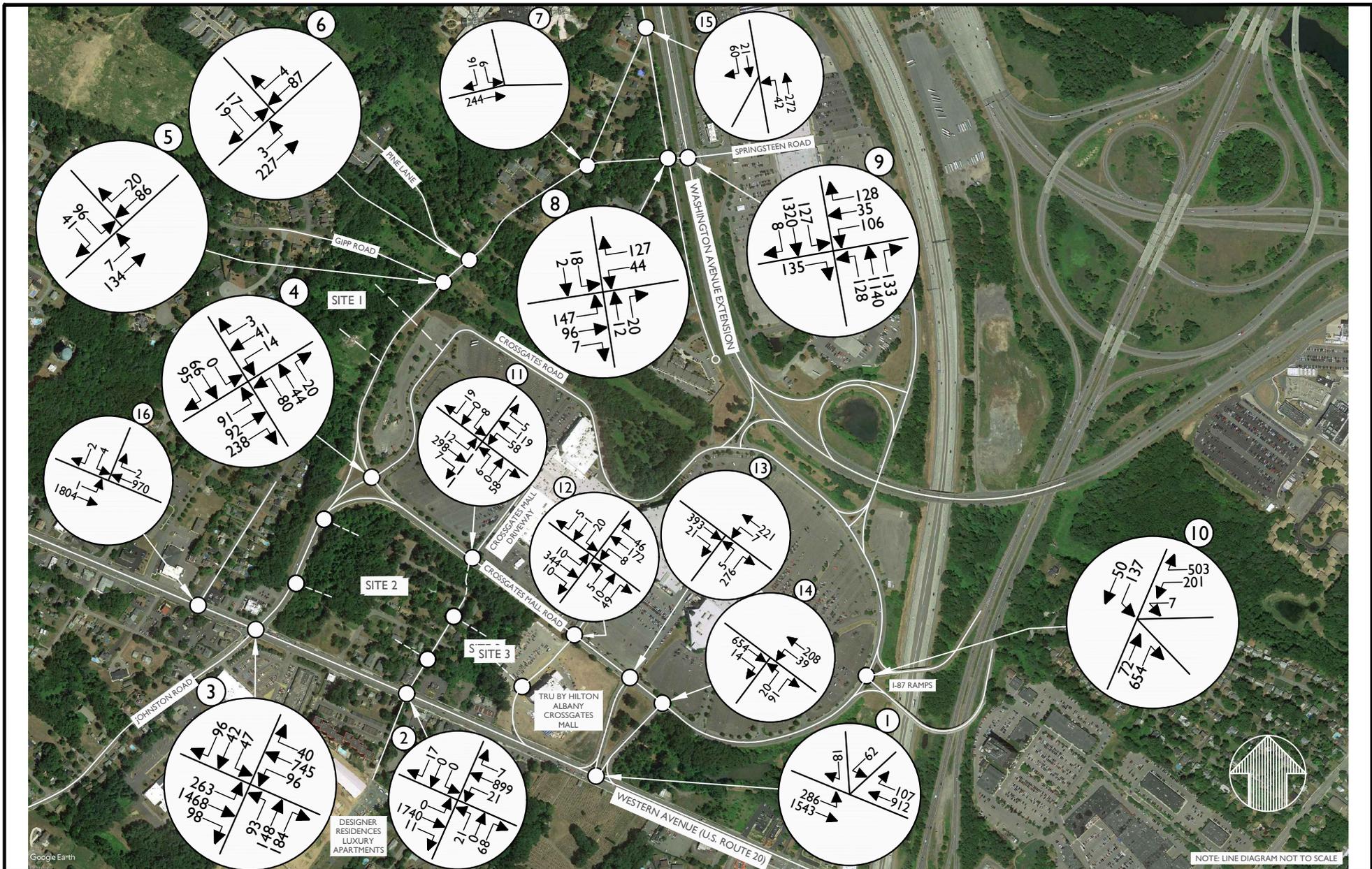
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SHEET TITLE			
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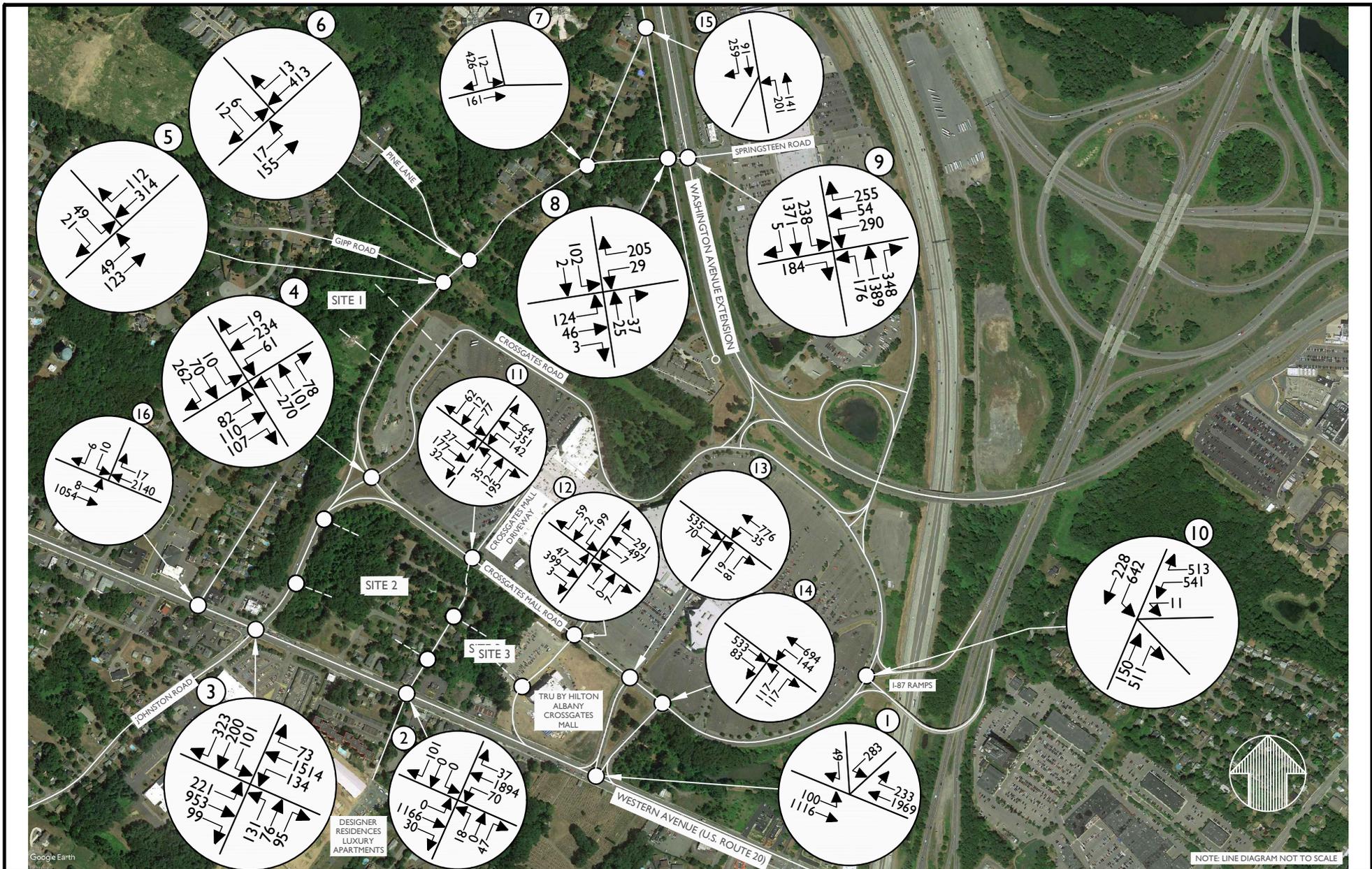
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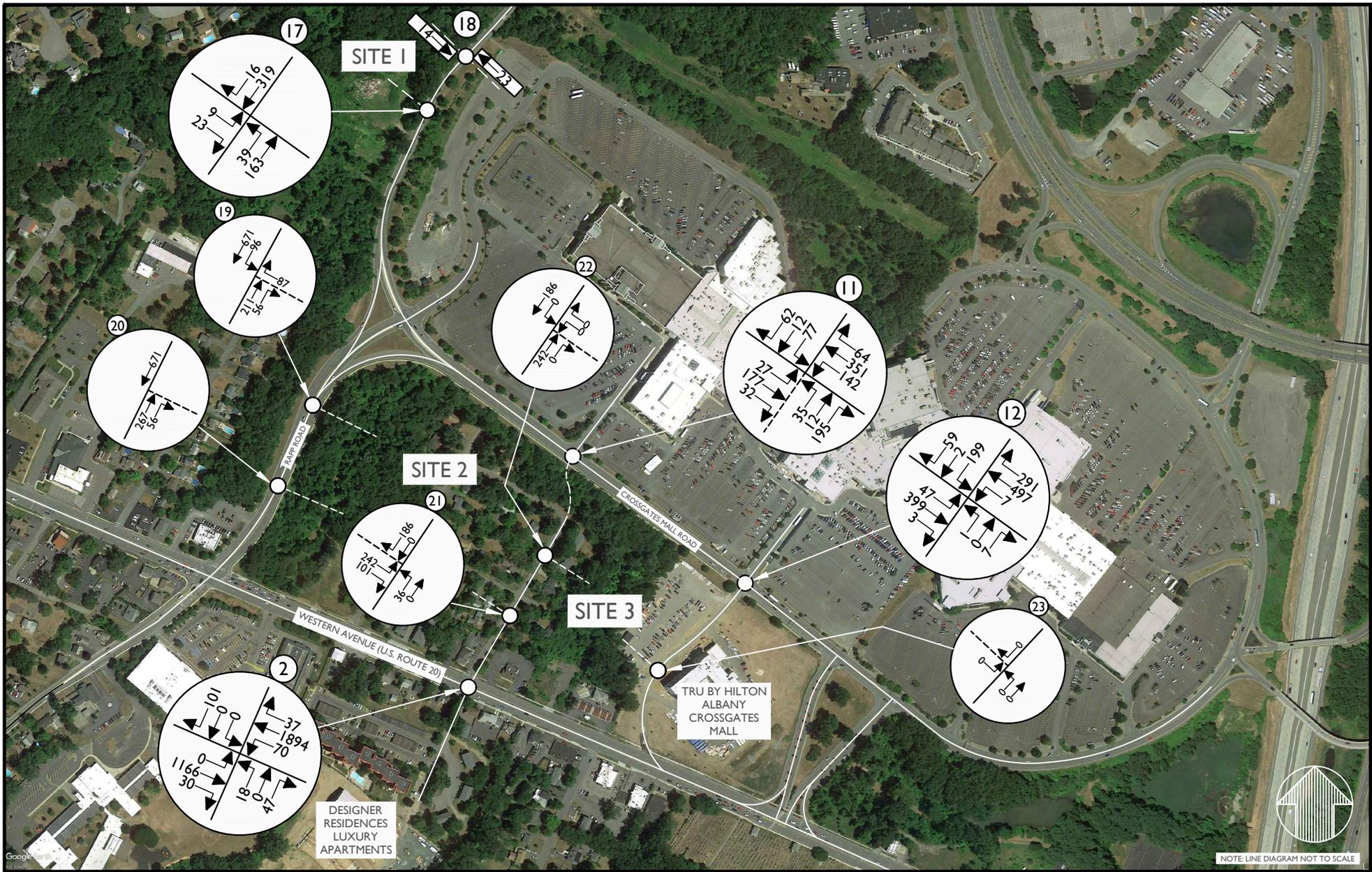
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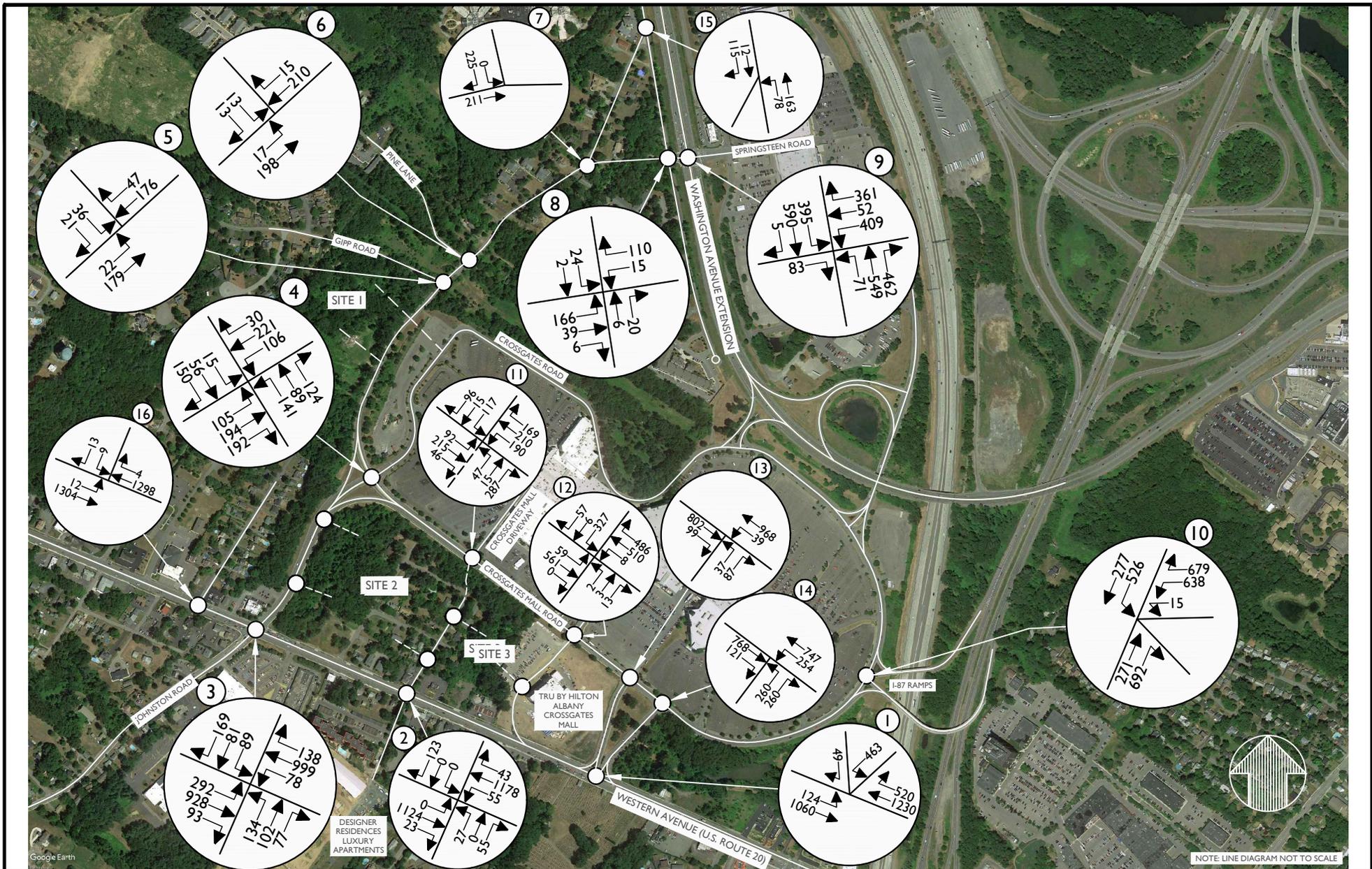
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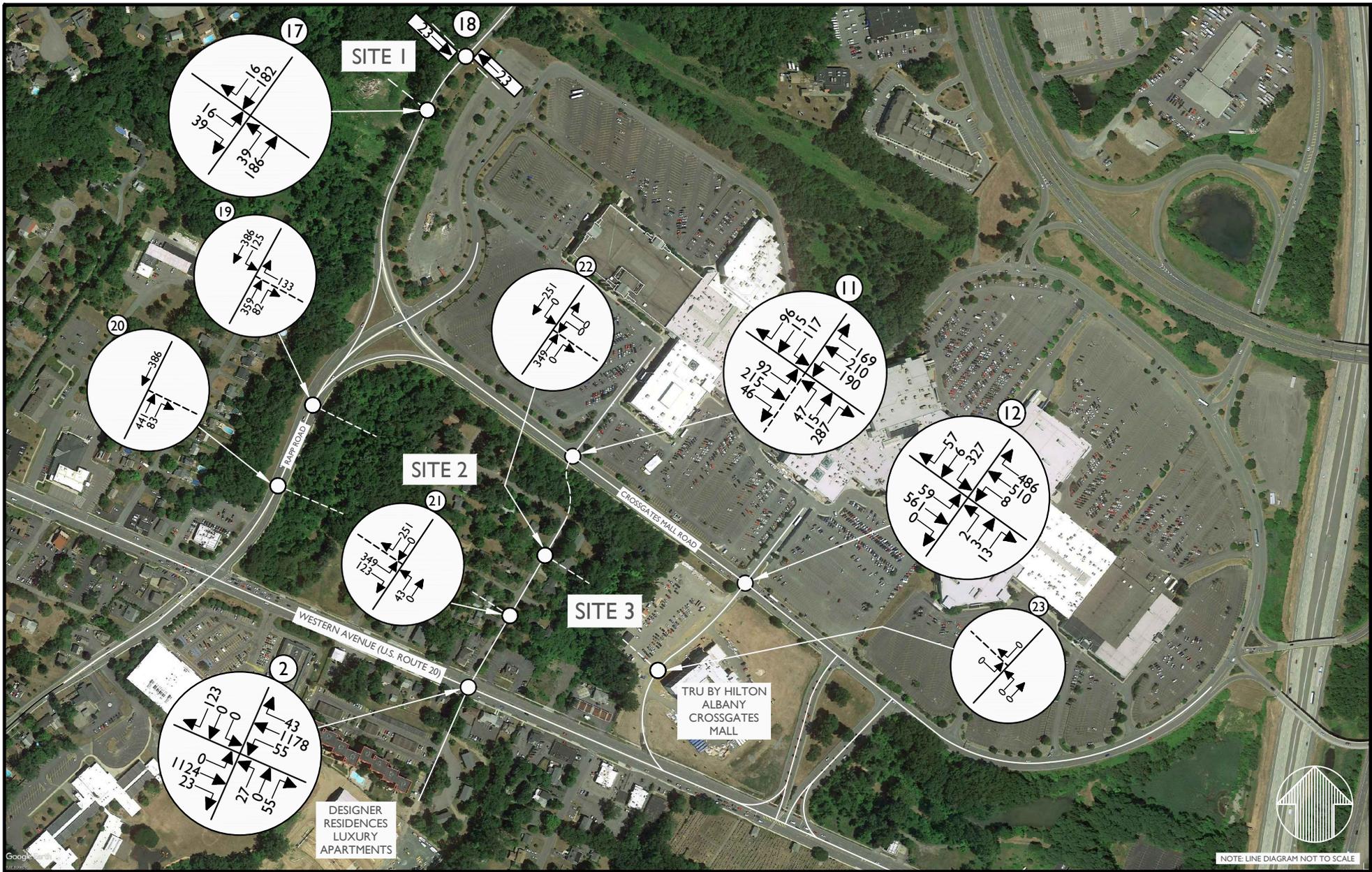
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PROJECT NUMBER: 19002502A	DRAWING NAME: 191021JFM_FIGURES - 02.17.2020		
SHEET TITLE: 2022 BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER: FIGURE NO. 26			



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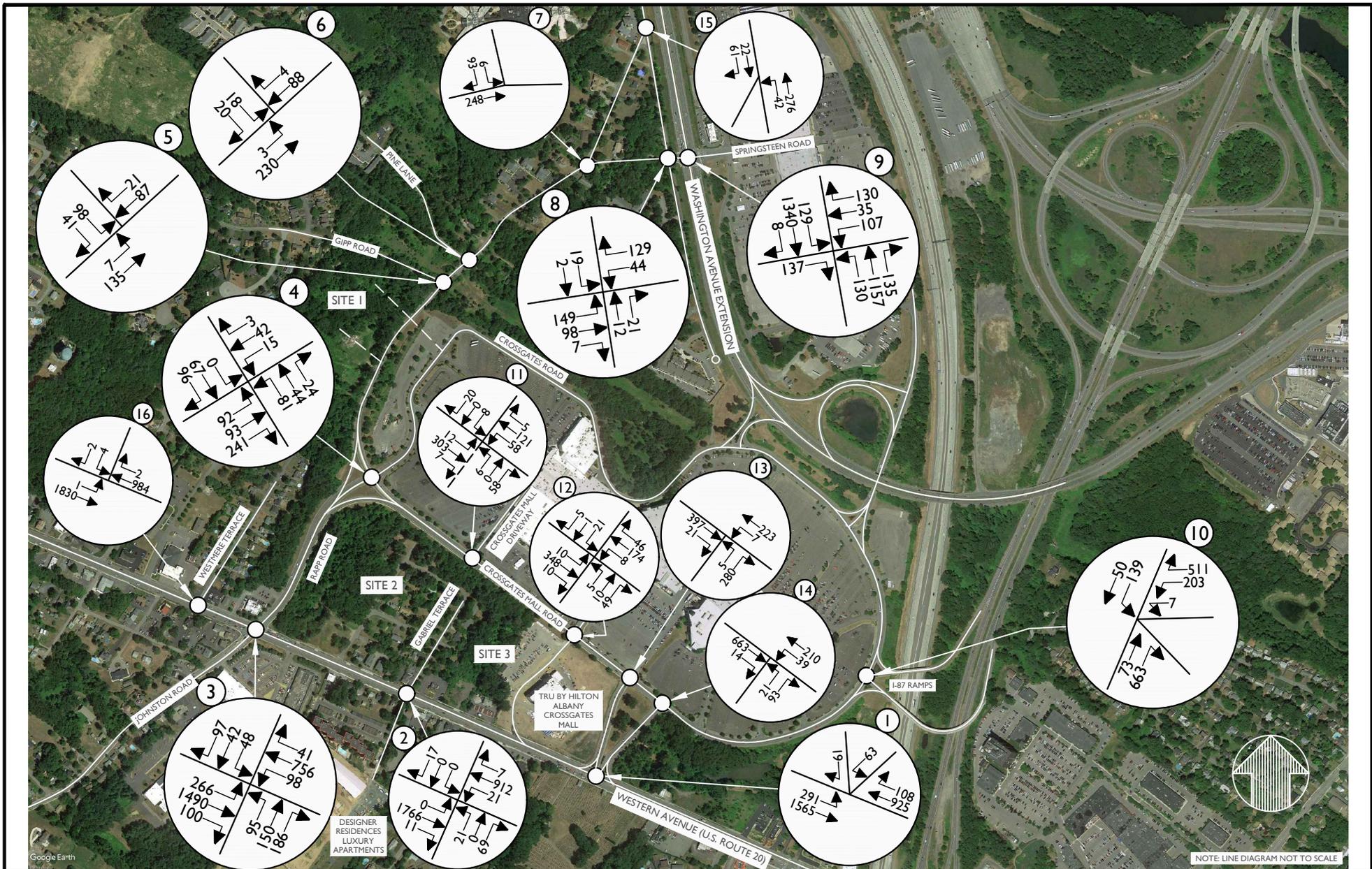
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19002502A	191021JFM FIGURES - 02.17.2020		
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SHEET NUMBER:			
FIGURE NO. 26-A			



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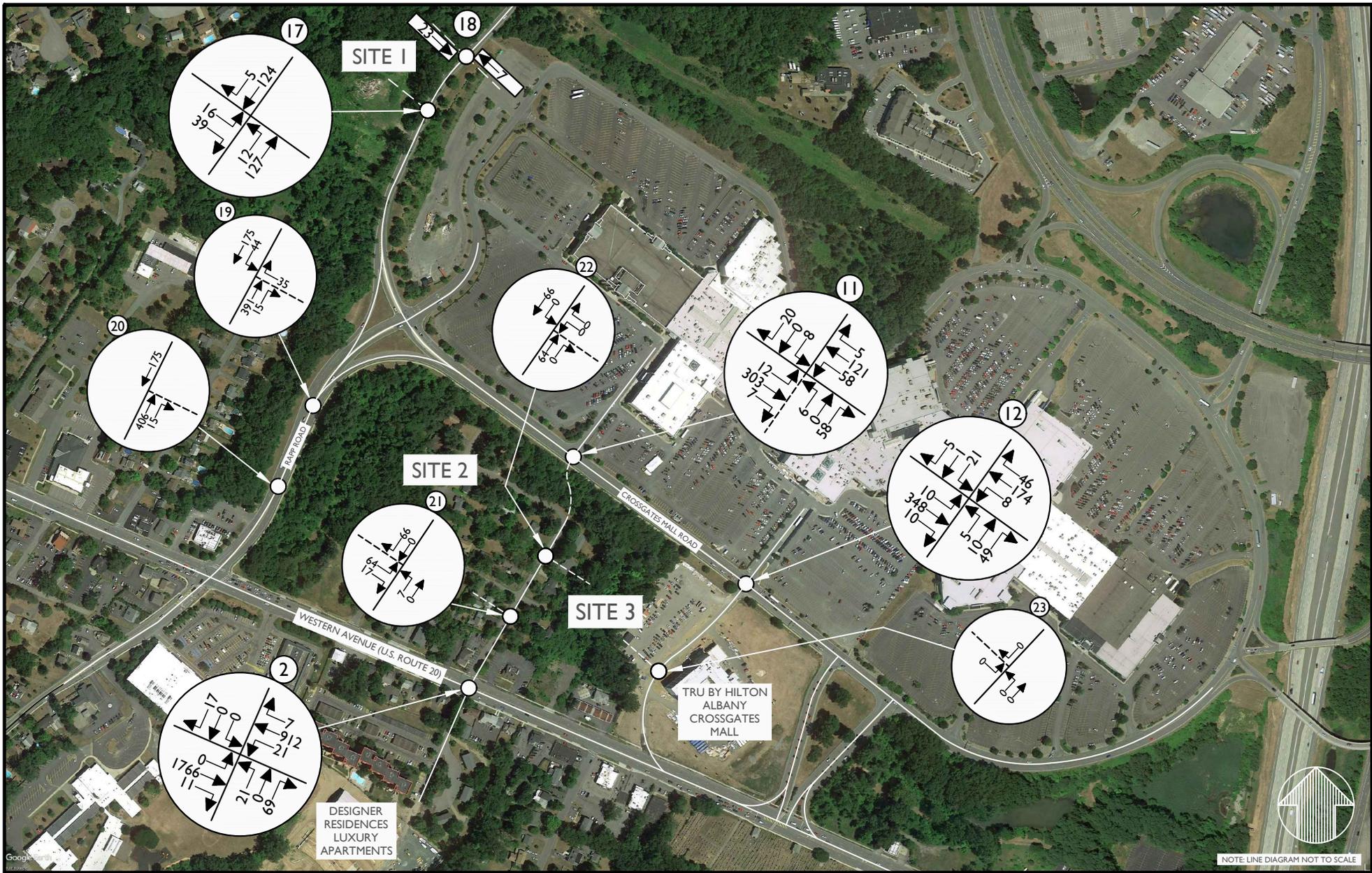


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2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			
FIGURE NO. 27			



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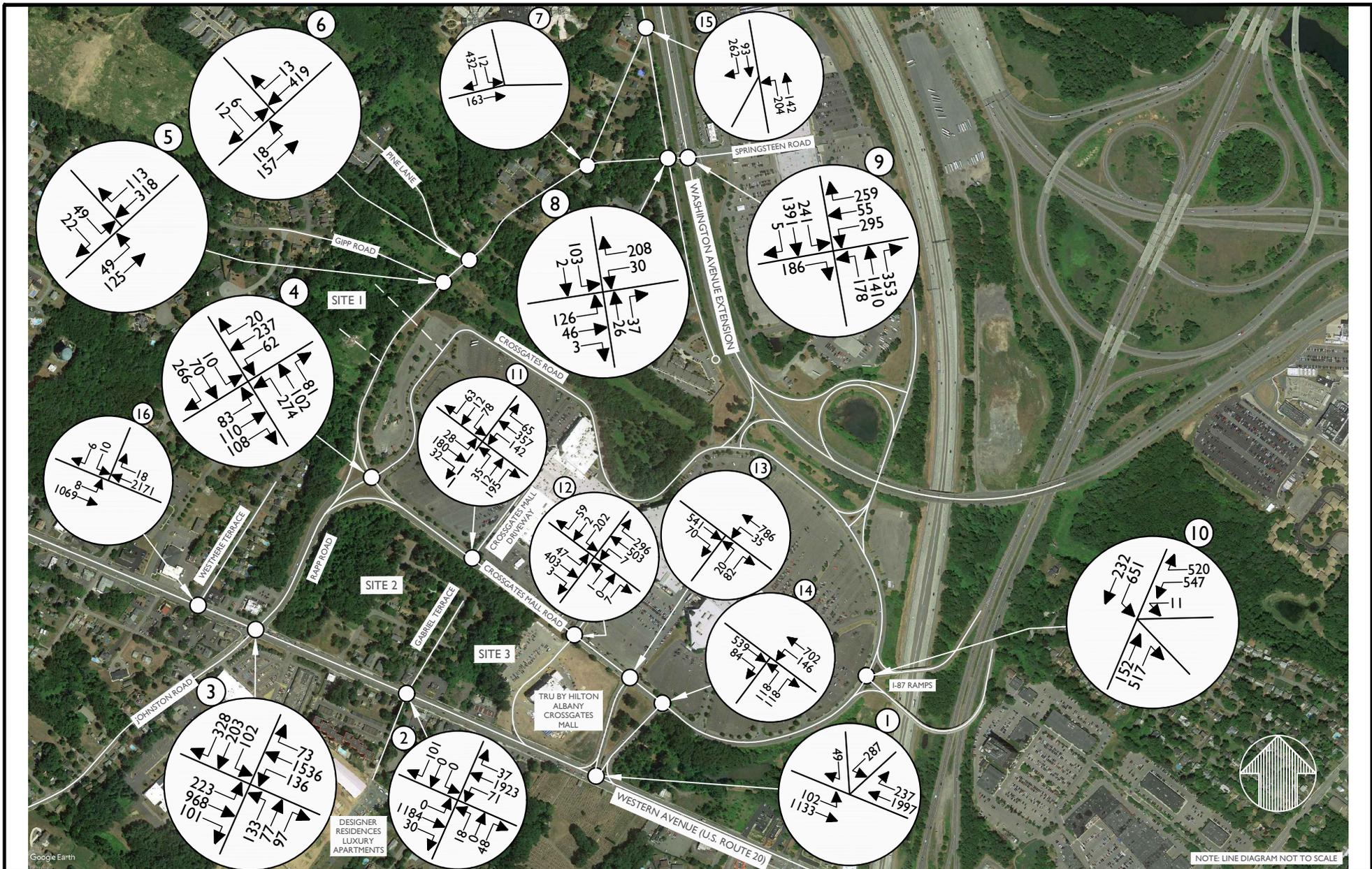
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SHEET TITLE:			
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FIGURE NO. 27-A			



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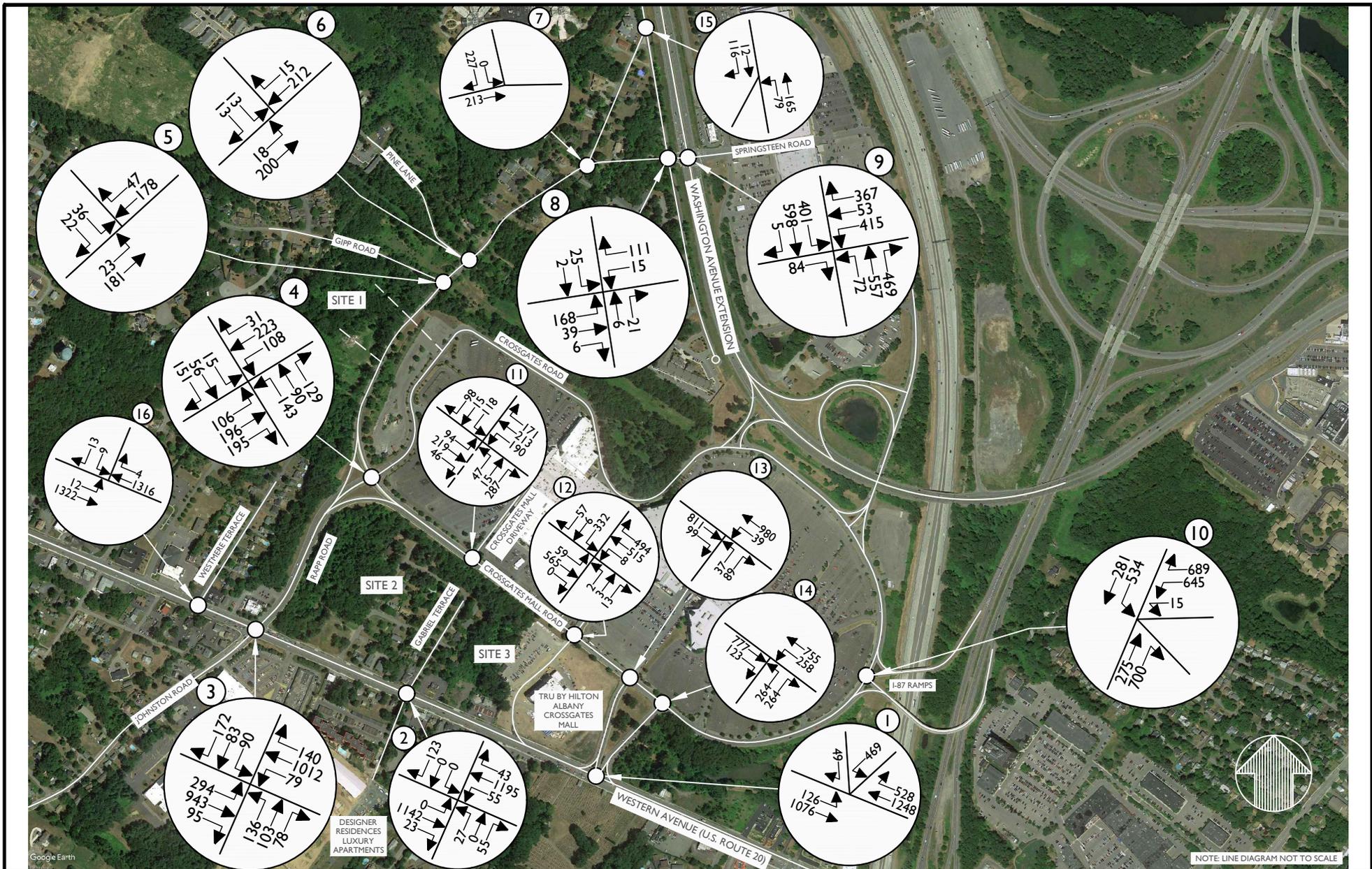
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SHEET TITLE: 2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER: FIGURE NO. 28			



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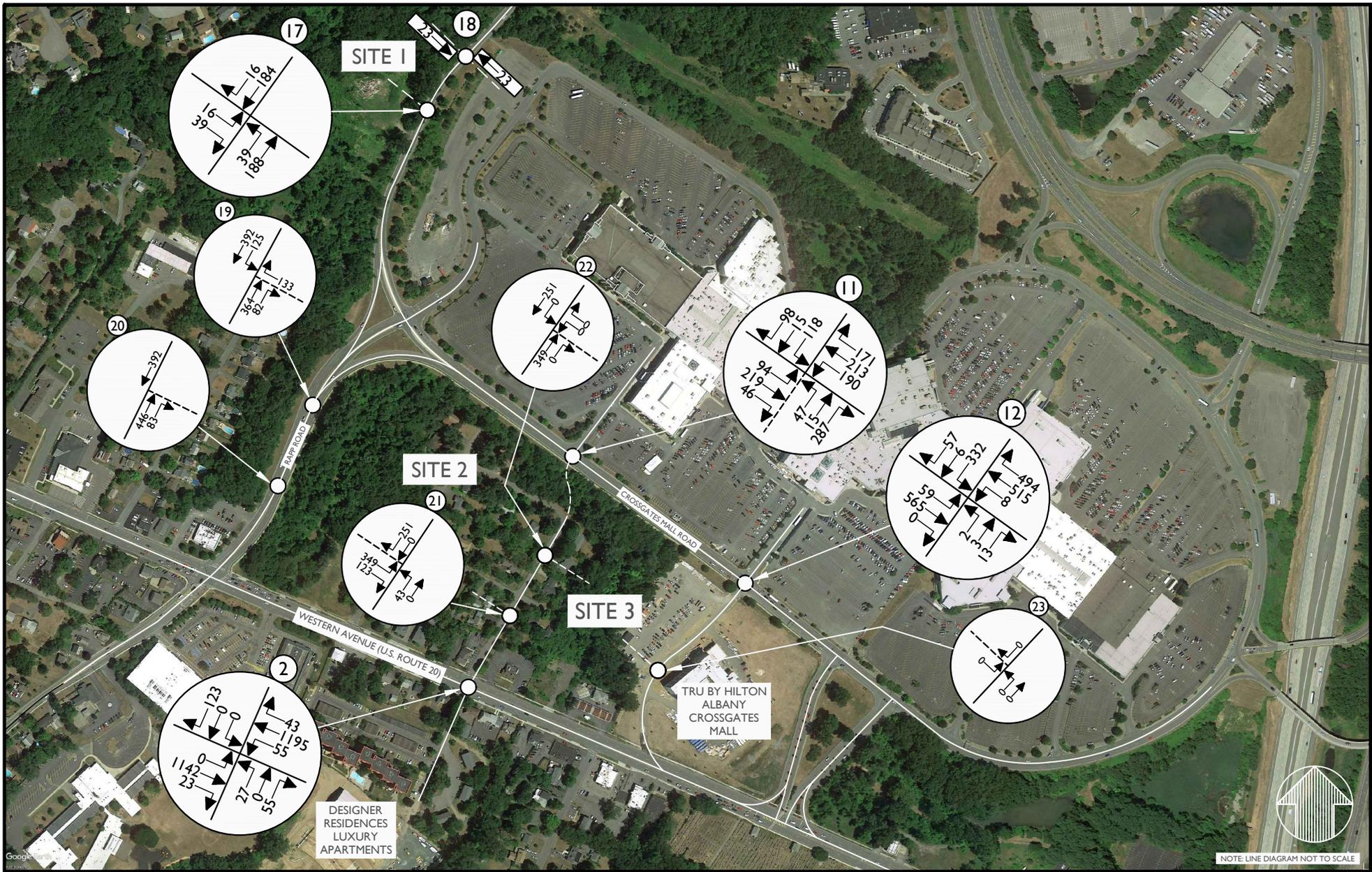
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SHEET TITLE:			
2025 NO-BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR			
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FIGURE NO. 29			



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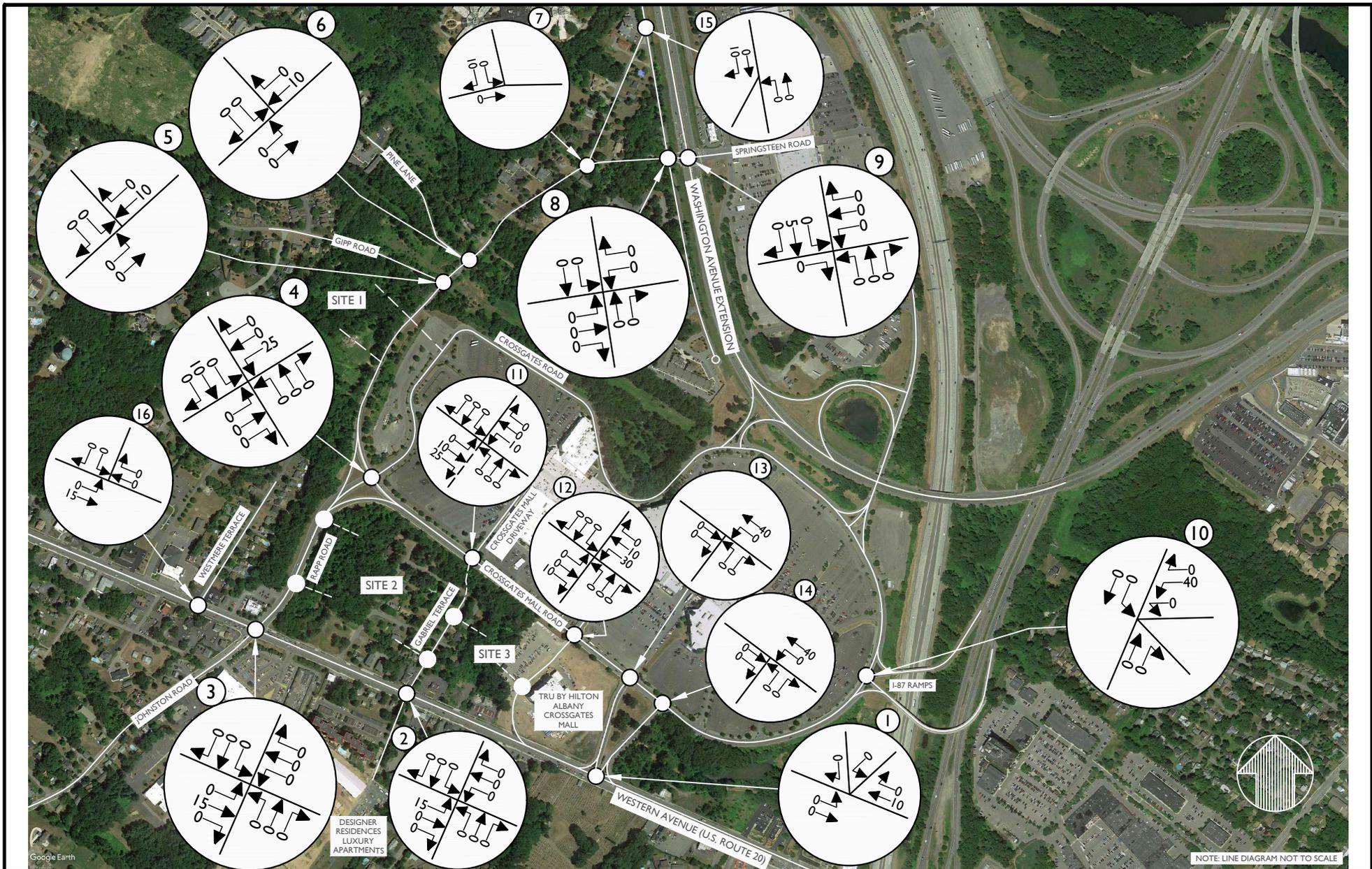
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SHEET TITLE: 2025 NO-BUILT TRAFFIC VOLUMES SATURDAY PEAK HOUR			
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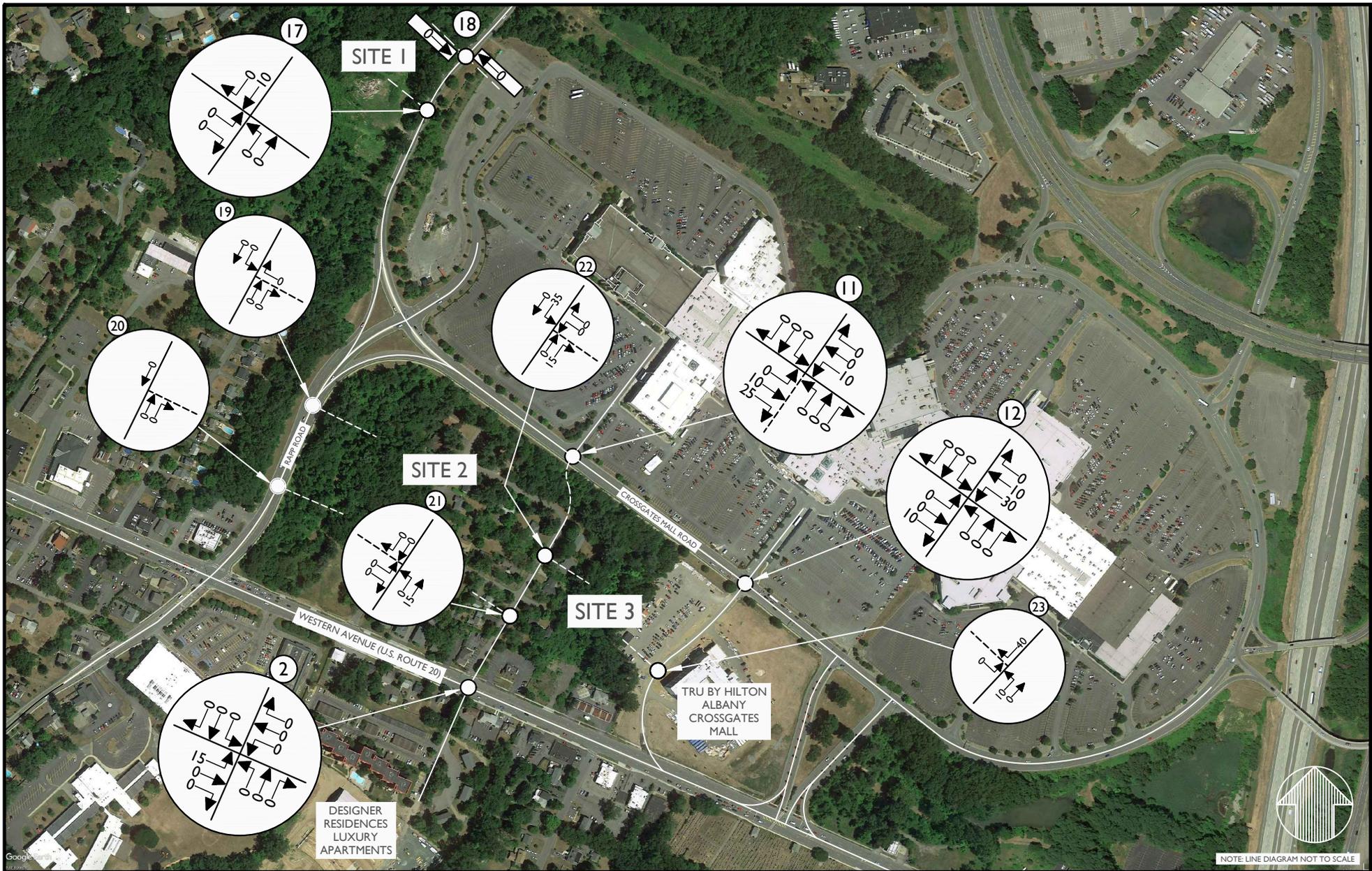
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PROJECT NUMBER 19002502A	DRAWING NAME [9102]JFM FIGURES - PHASE 2 - 02-17-2020		
ARRIVAL DISTRIBUTION SITE 3 POTENTIAL FUTURE MIXED-USE (EXPRESSED AS A %)			
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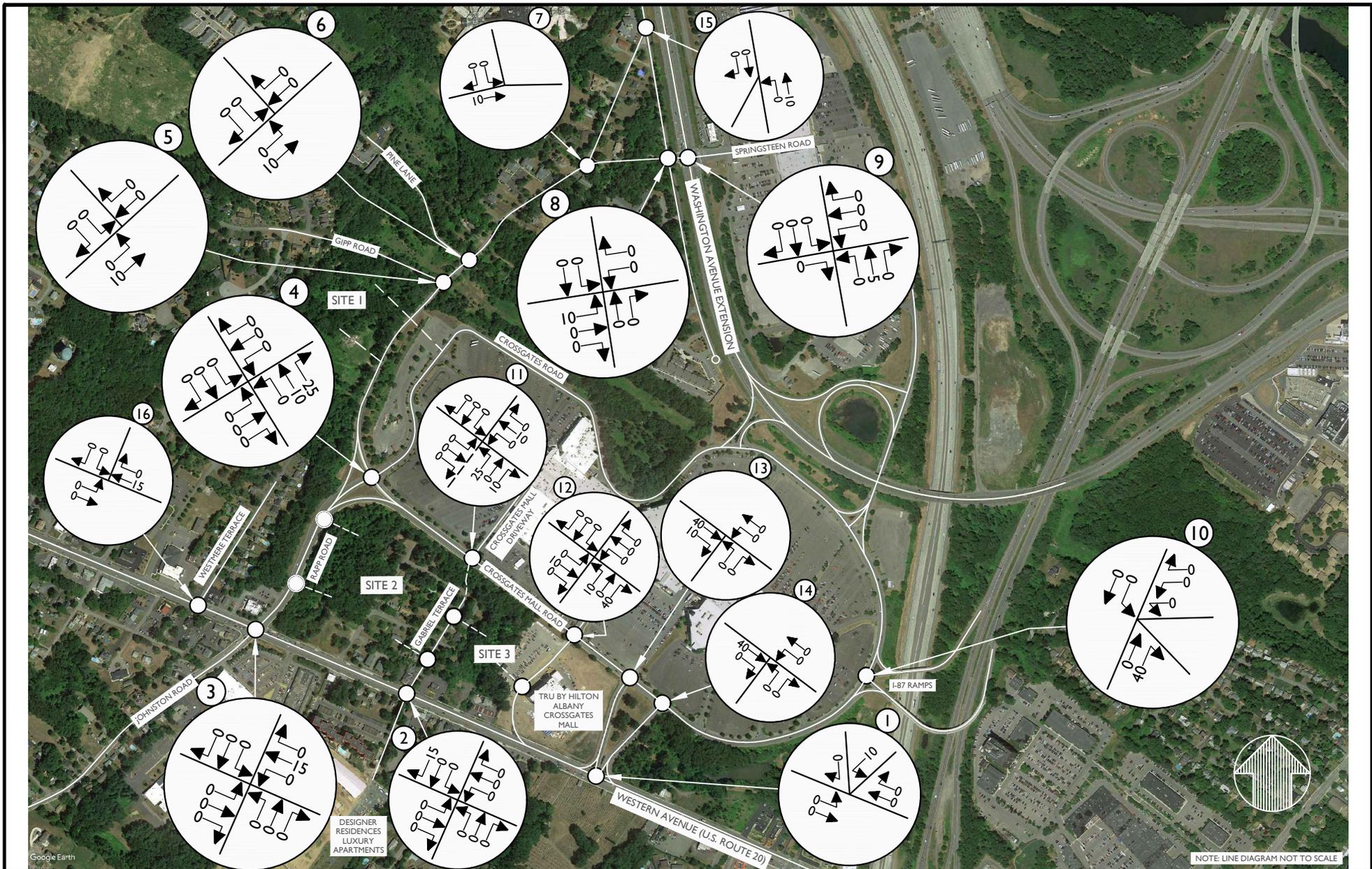
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FIGURE NO. 30-A			



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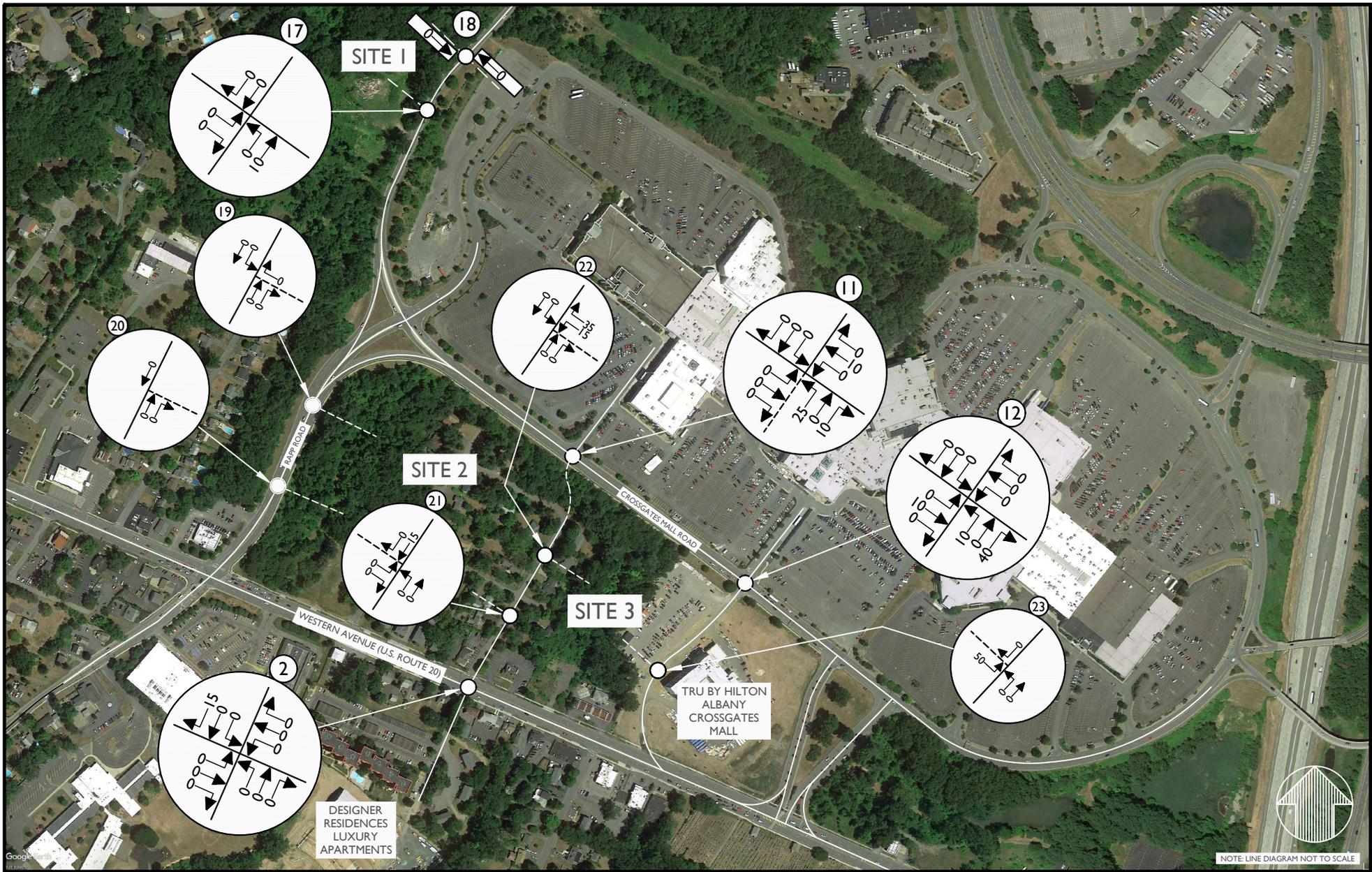
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SHEET DEPARTURE DISTRIBUTION SITE 3 POTENTIAL MIXED-USE (EXPRESSED AS A %)			
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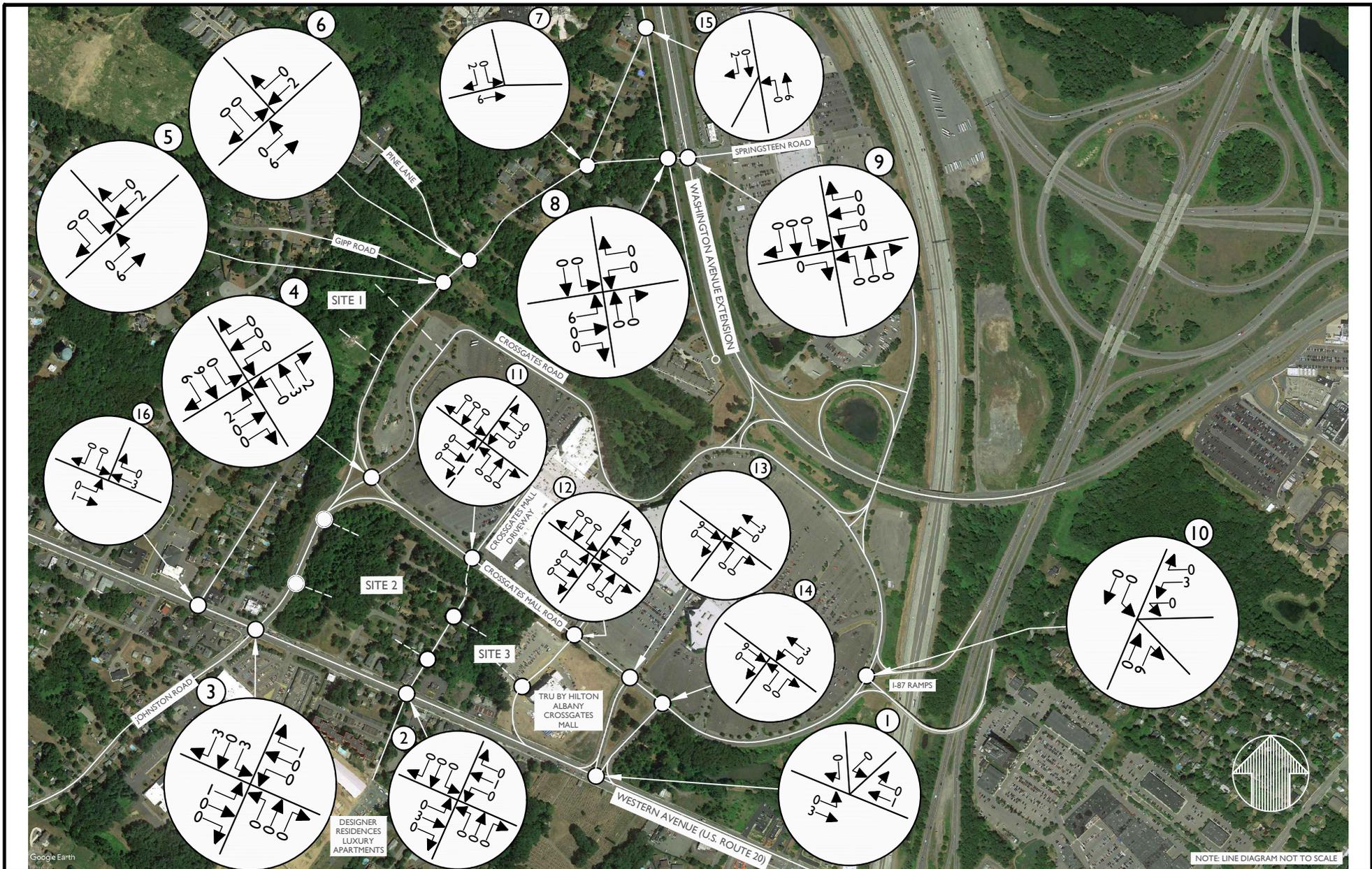
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	SITE 3		
	POTENTIAL MIXED-USE (EXPRESSED AS A %)		
SHEET NUMBER:	FIGURE NO. 31-A		



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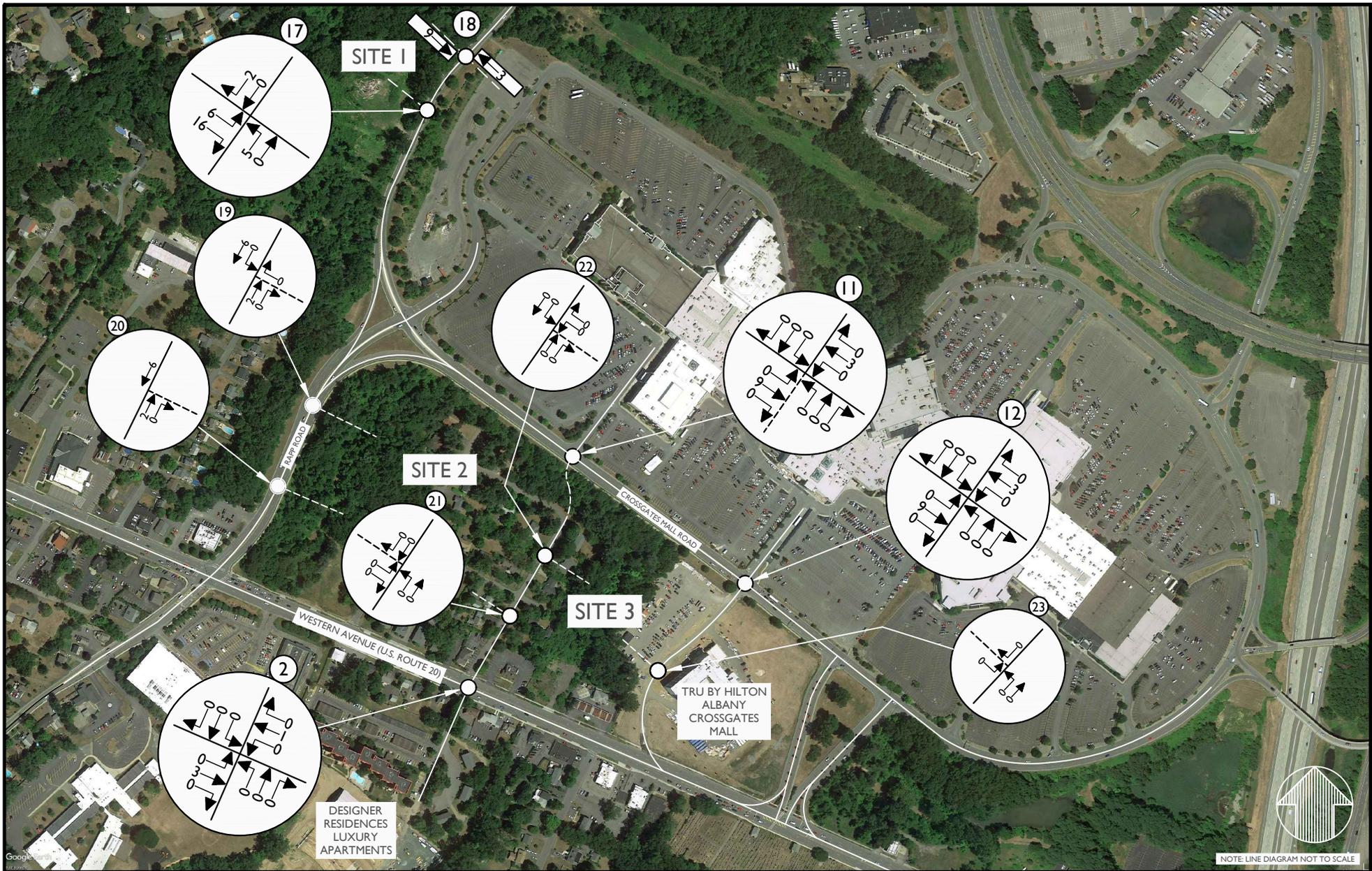
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SHEET TITLE SITE GENERATED TRAFFIC VOLUMES SITE 1 POTENTIAL FUTURE DEVELOPMENT AREA WEEKDAY PEAK AM HOUR			
SHEET NUMBER: FIGURE NO. 32			



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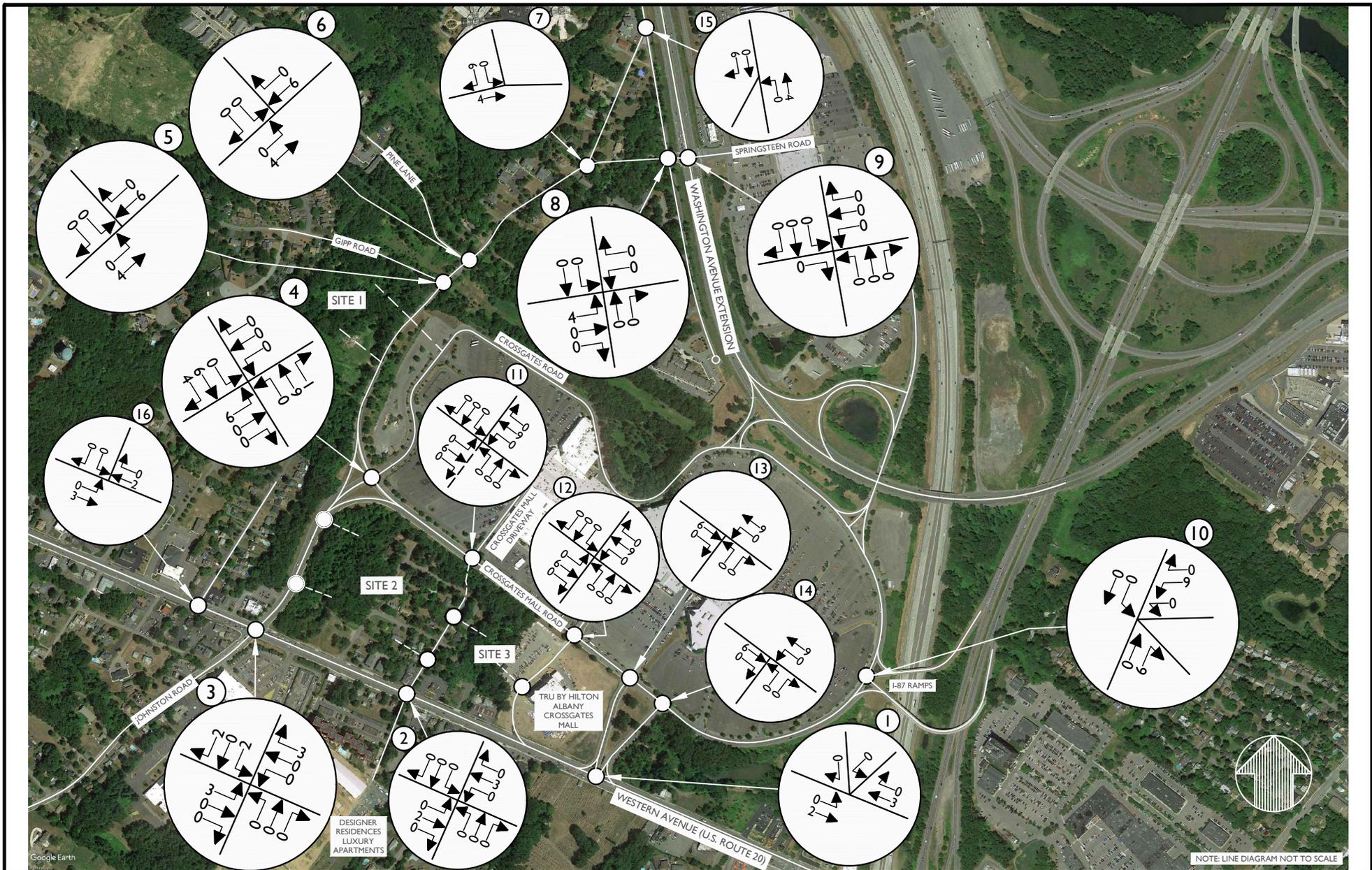
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FIGURE NO. 32-A			



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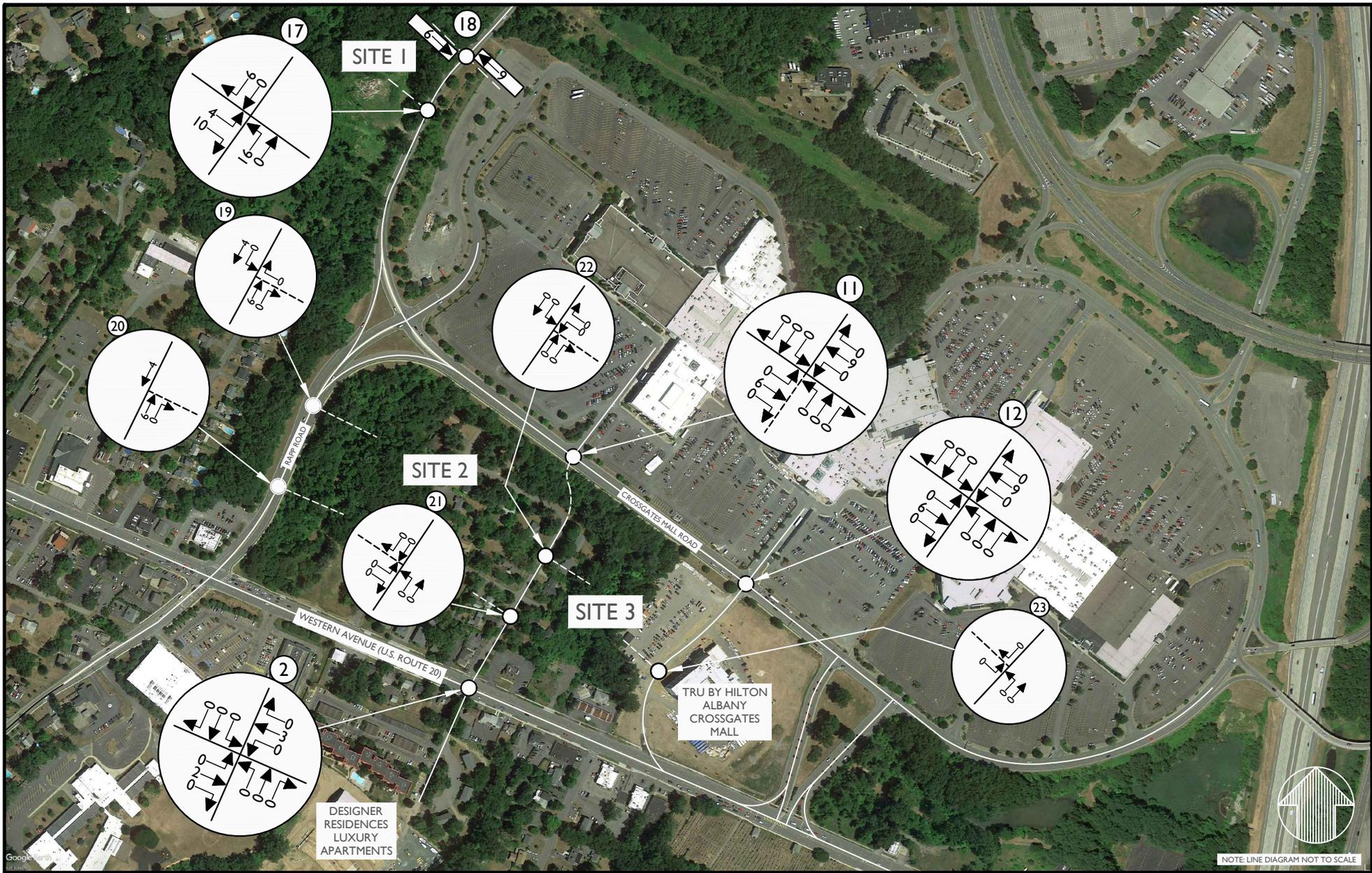
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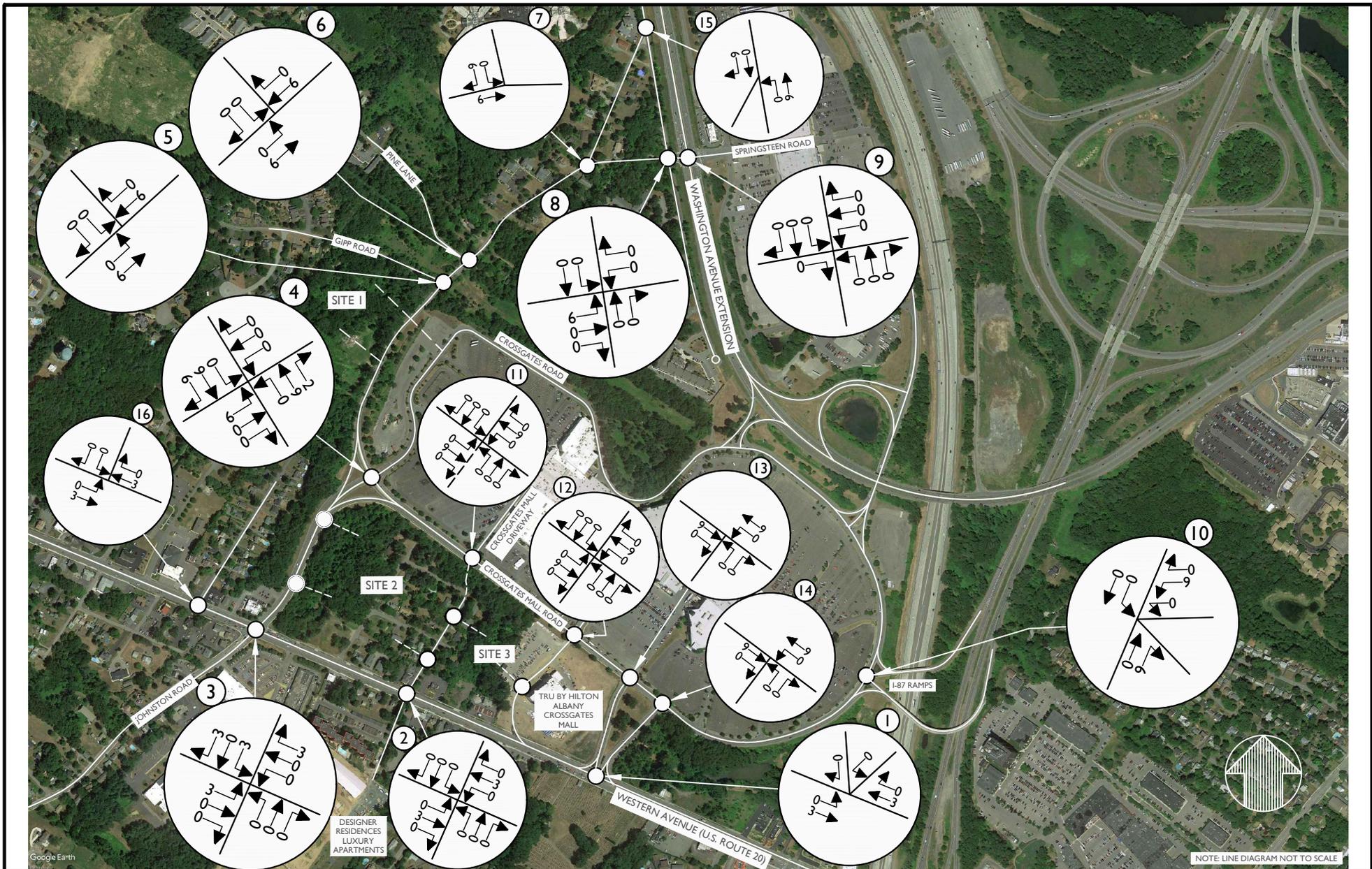
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FIGURE NO. 33-A			



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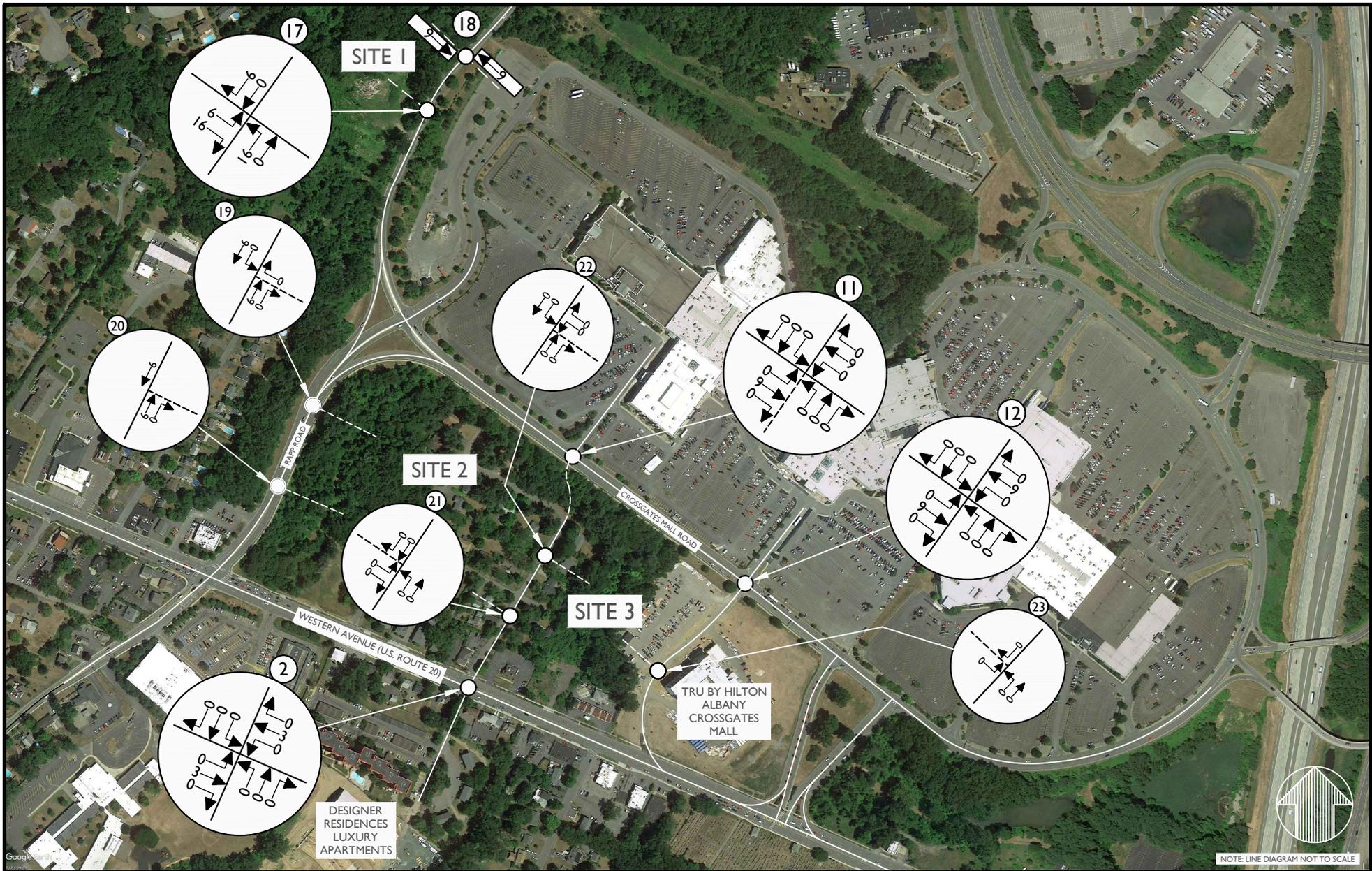
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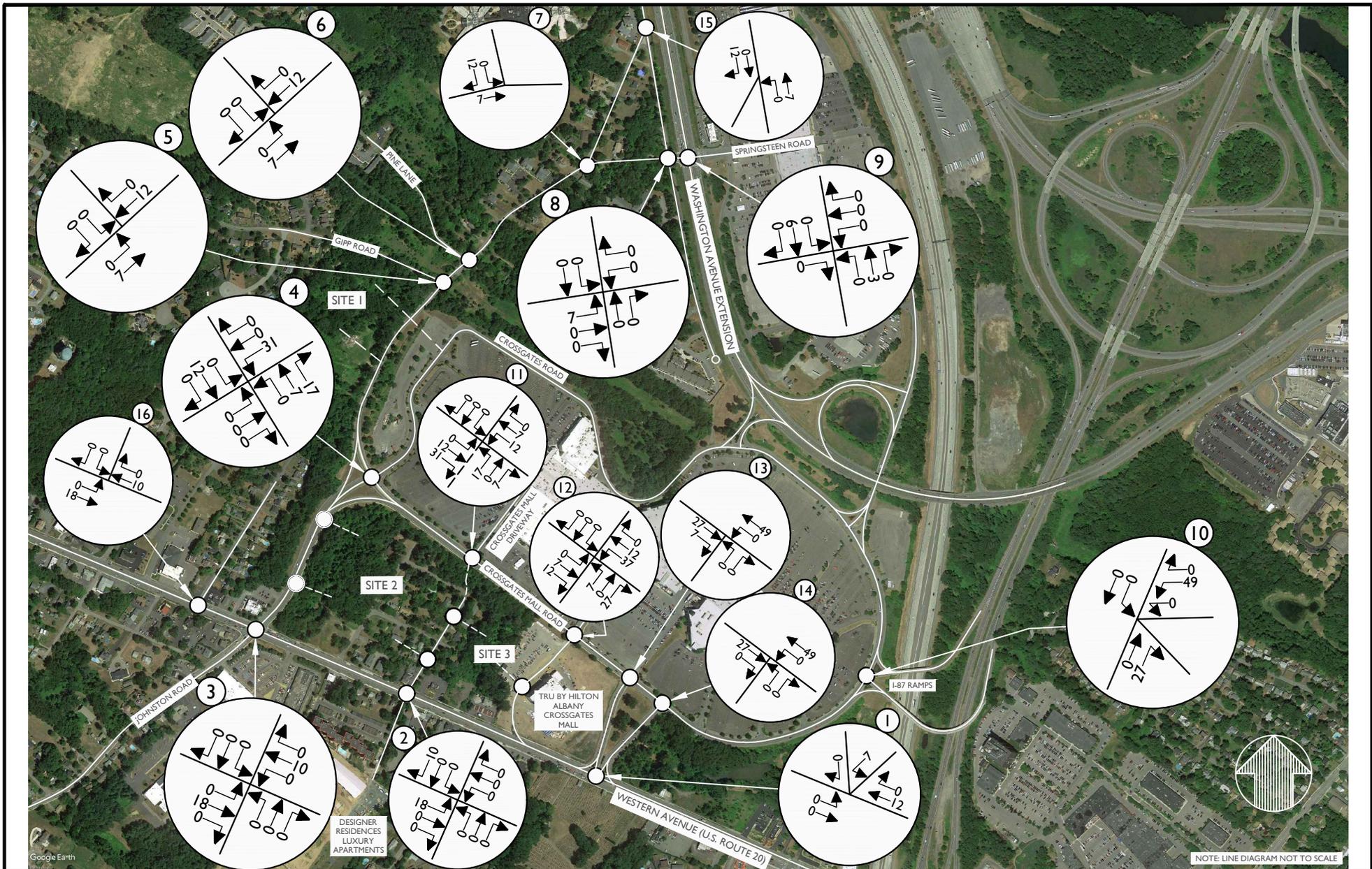
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SHEET TITLE			
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SHEET NUMBER:			
FIGURE NO. 34-A			



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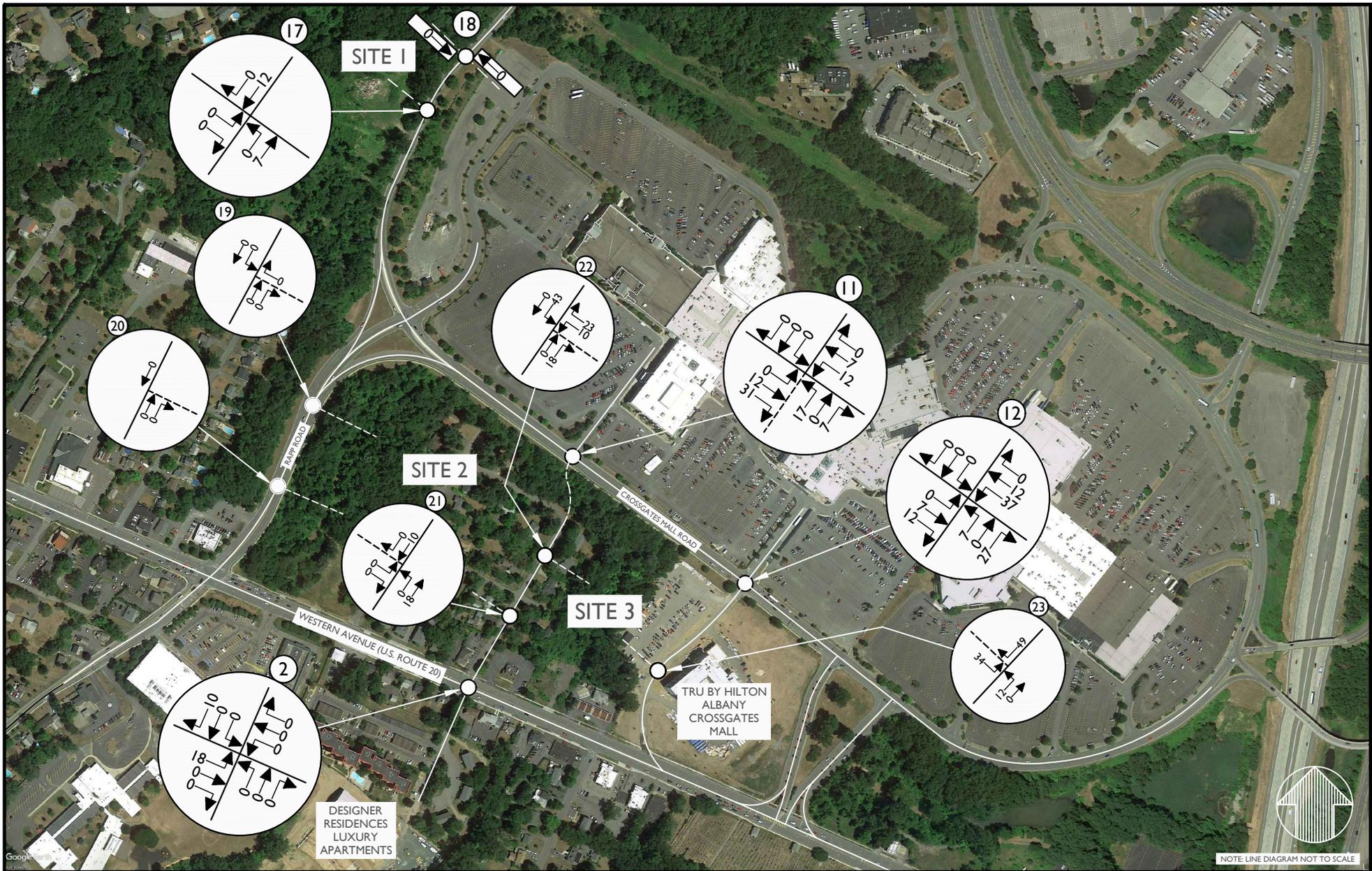
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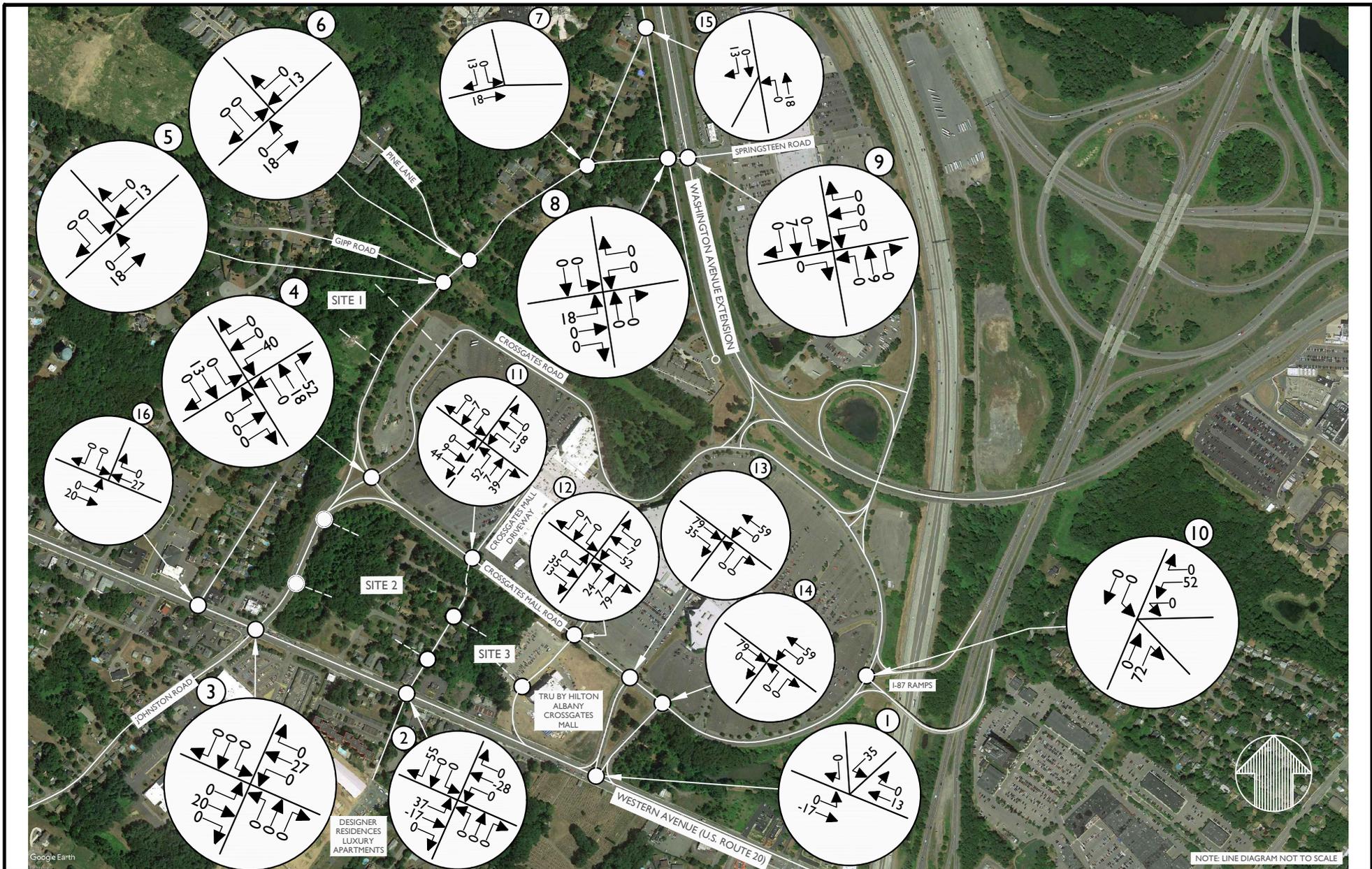
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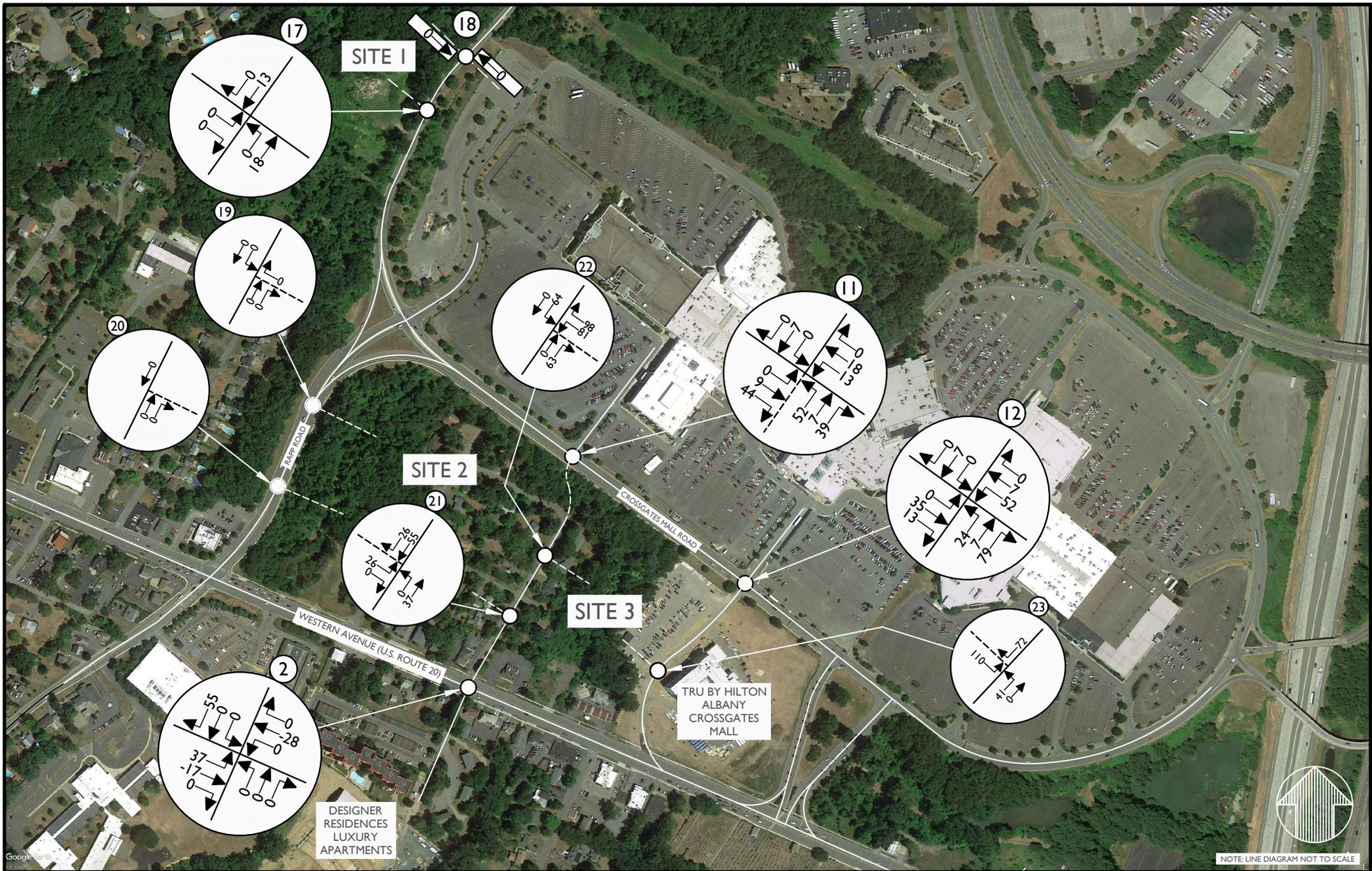


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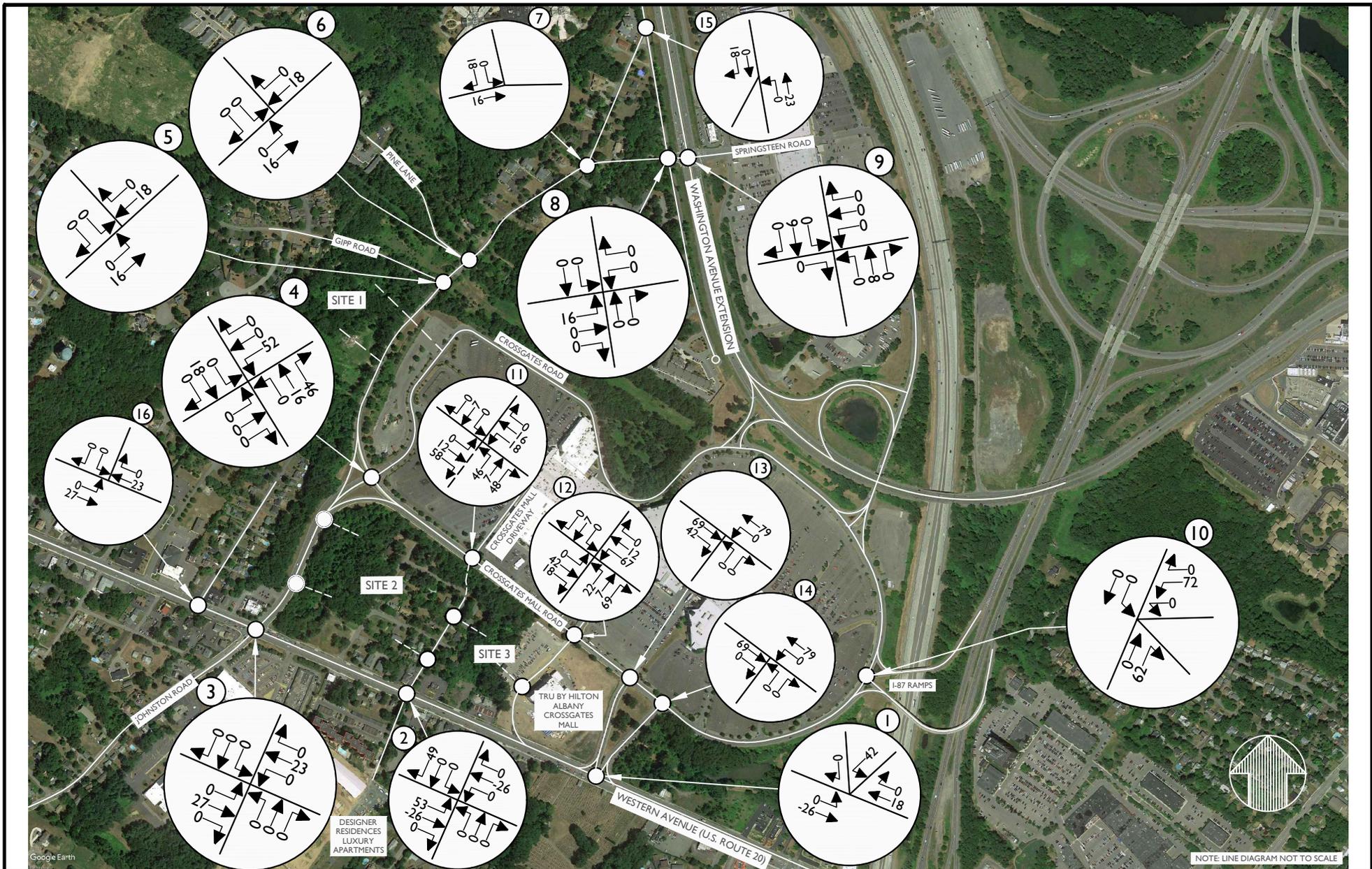
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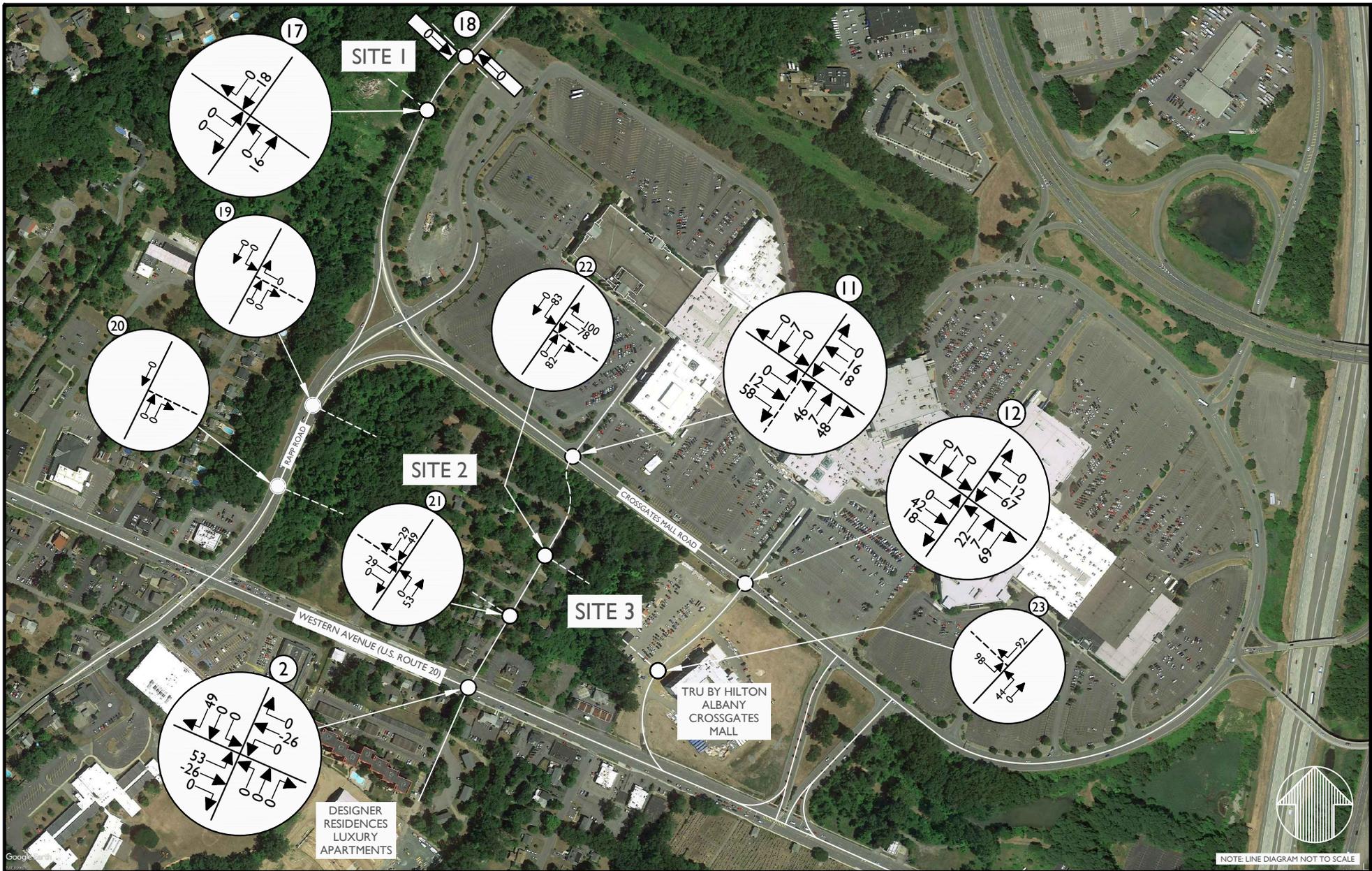
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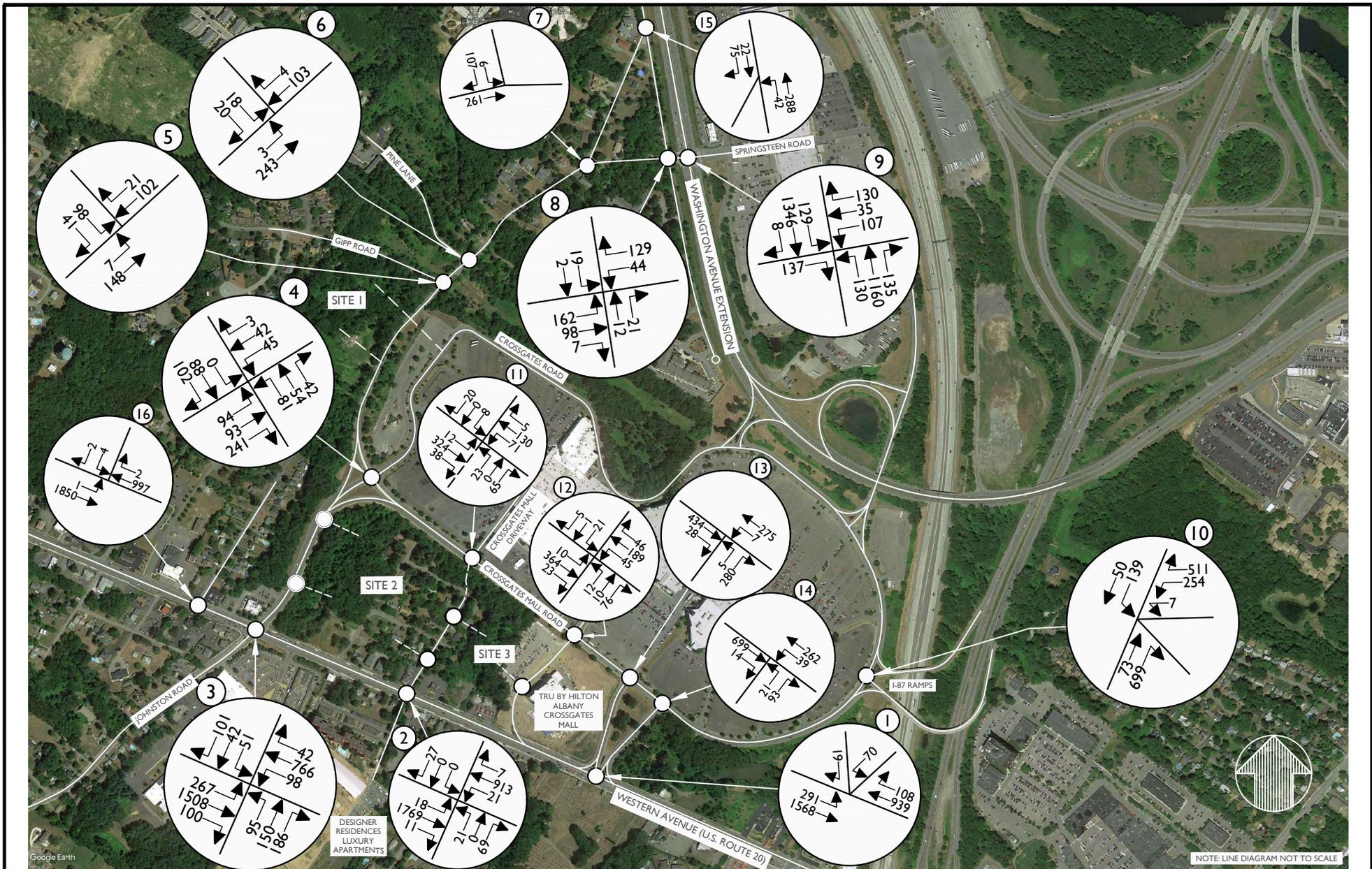
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**RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE
MIXED-USE DEVELOPMENT**

TOWN OF GUILDERLAND
ALBANY COUNTY
NEW YORK

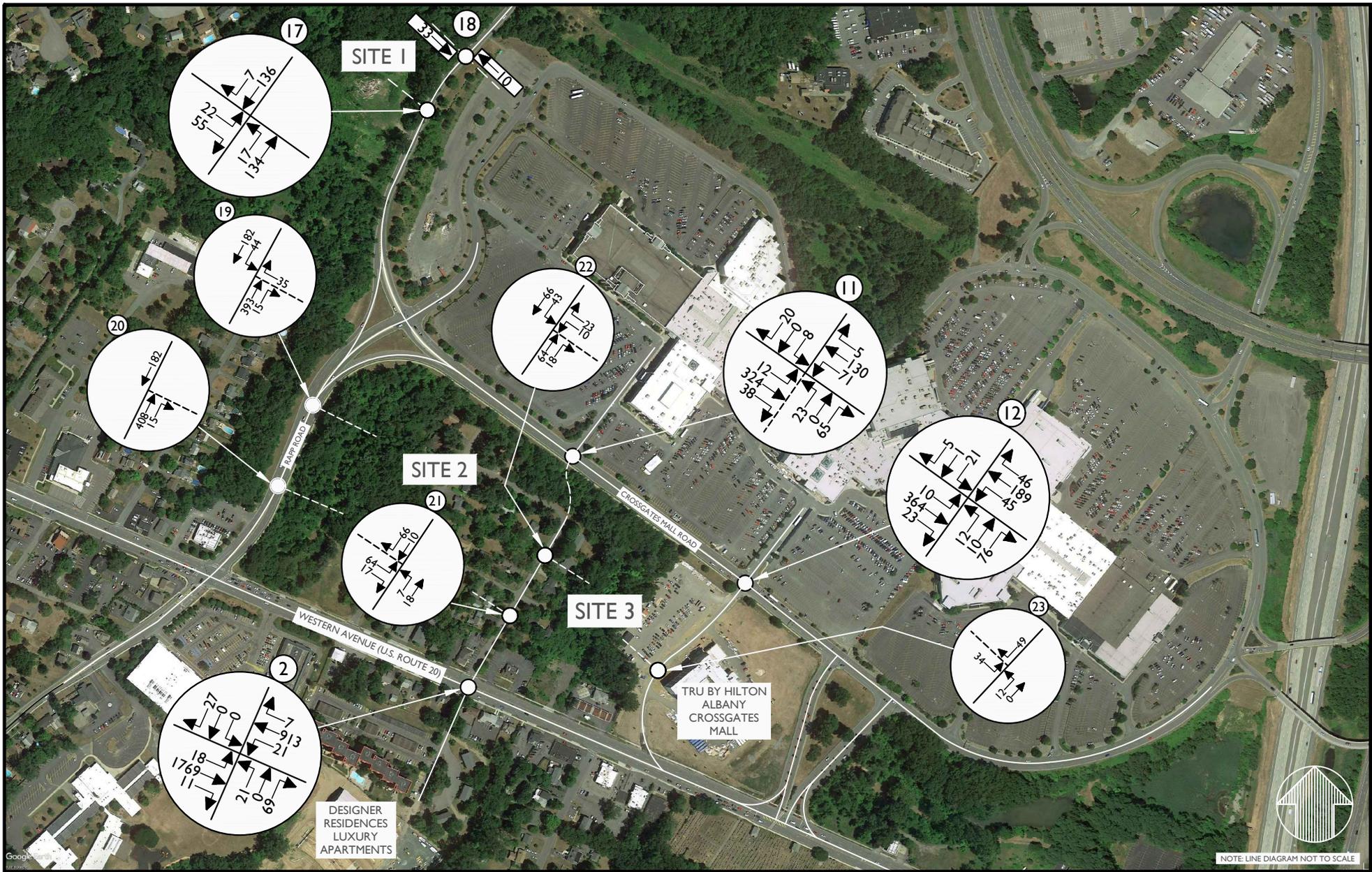


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SCALE: N.T.S.	DATE: 02/17/20	DRAWN BY: N.S.T.	CHECKED BY: R.P.R.
PROJECT NUMBER: 19002502A	DRAWING NAME: 191021JFM_FIGURES - PHASE 2 - 02.17.2020		
SHEET TITLE: 2025 BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER: FIGURE NO. 38			



NOTE: LINE DIAGRAM NOT TO SCALE

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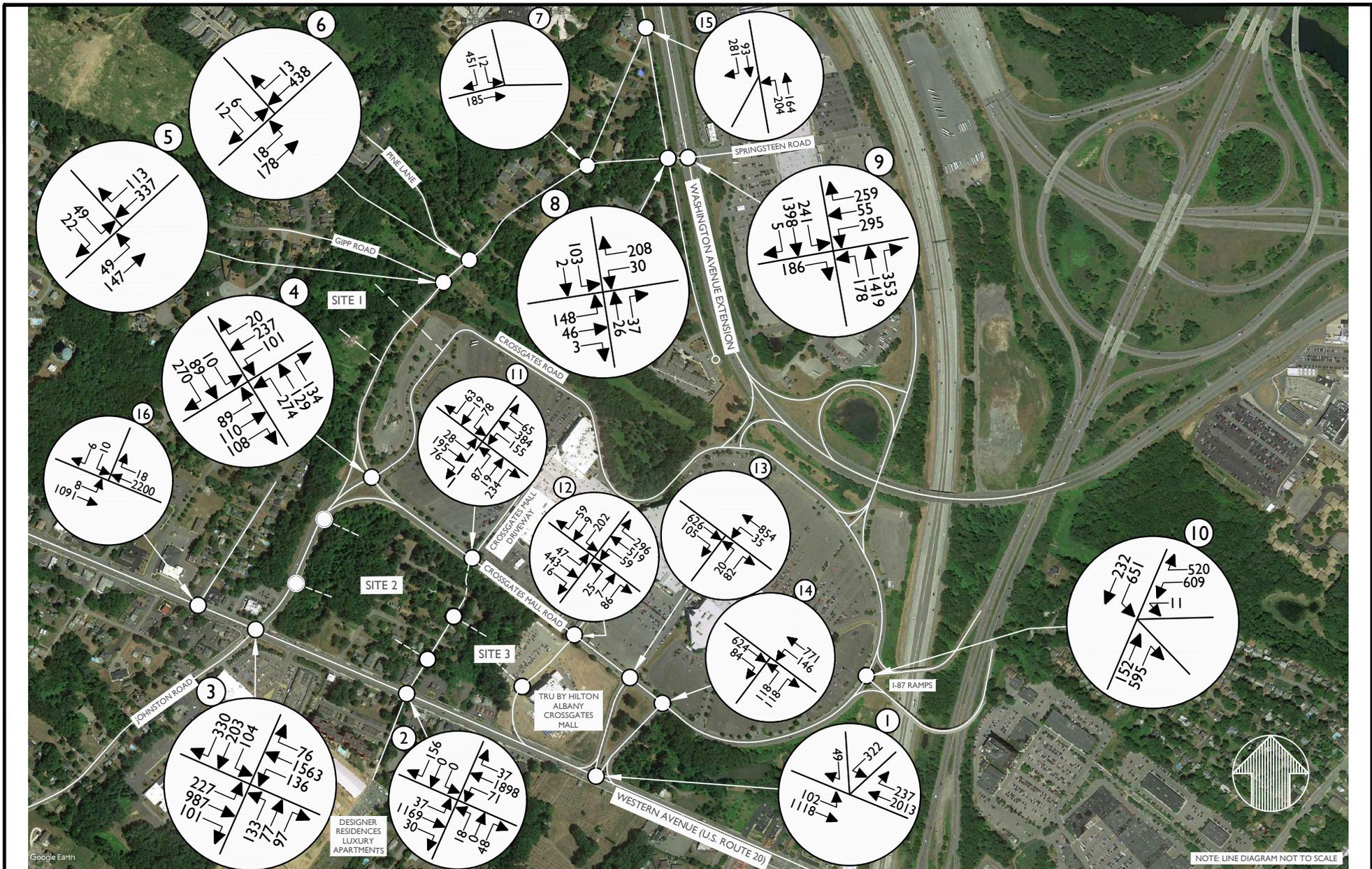
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19002502A	191021JFM FIGURES - PHASE 2 - 02.17.2020		
SHEET TITLE:			
2025 BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			
FIGURE NO. 38-A			



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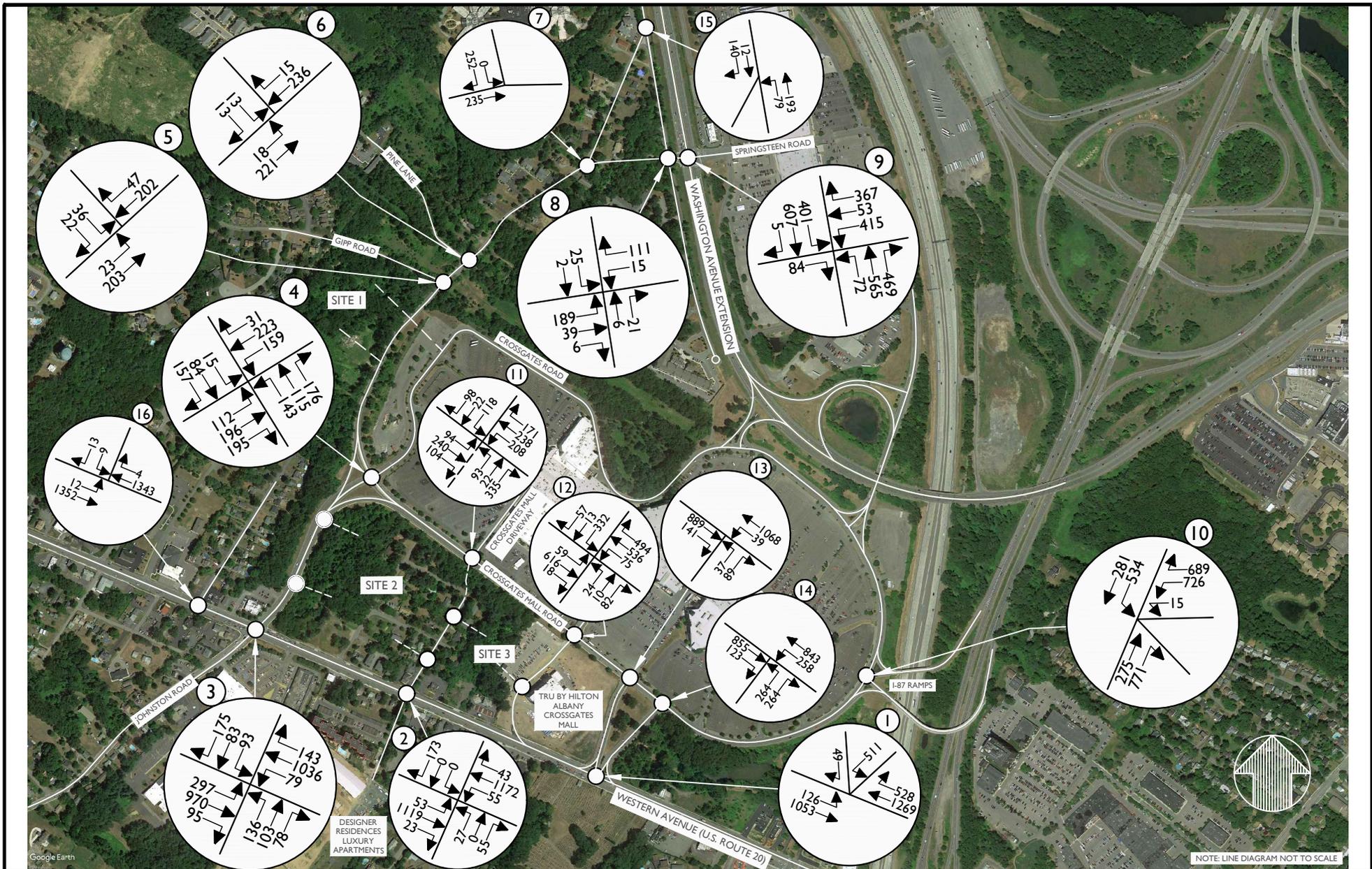


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PROJECT NUMBER 19002502A	DRAWING NAME 191021JFM FIGURES - PHASE 2 - 02.17.2020		
SHEET TITLE: 2025 BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER: FIGURE NO. 39			



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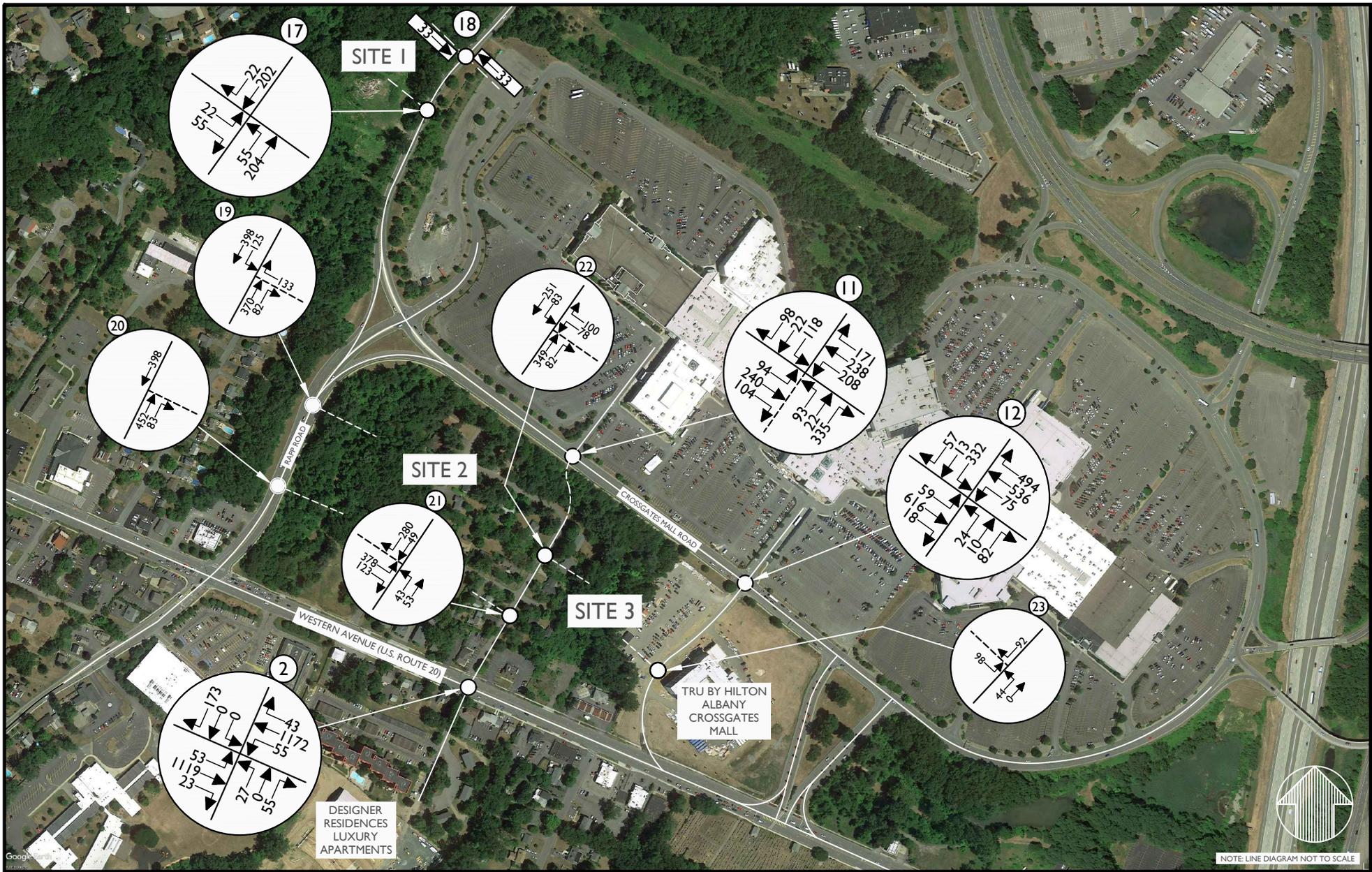


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PROJECT NUMBER	DRAWING NAME		
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SHEET TITLE:			
2025 BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
FIGURE NO. 40			



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PROJECT NUMBER	DRAWING NAME		
19002502A	191021JFM FIGURES - PHASE 2 - 02.17.2020		
SHEET TITLE:			
2025 BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
FIGURE NO. 40-A			



Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

APPENDIX B

TABLES

TABLE NO. 1
HOURLY TRIP GENERATION RATES
AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

SITE 1 RAPP ROAD RESIDENTIAL	ENTRY		EXIT		TOTAL	
	HTGR*	VOLUME	HTGR*	VOLUME	HTGR*	VOLUME
222 APARTMENT UNITS						
WEEKDAY PEAK AM HOUR	0.11	24	0.35	78	0.46	102
WEEKDAY PEAK PM HOUR	0.35	78	0.21	46	0.56	124
SATURDAY PEAK HOUR	0.35	78	0.35	78	0.70	156

THE ABOVE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE
INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10th EDITION, 2017.
* ITE LAND USE 220 - MULTIFAMILY HOUSING (LOW-RISE)

TABLE NO. 2

HOURLY TRIP GENERATION RATES
AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

SITE 2 COSTCO	ENTRY		EXIT		TOTAL	
	HTGR*	VOLUME	HTGR*	VOLUME	HTGR*	VOLUME
160,000 S.F.						
WEEKDAY PEAK AM HOUR	0.34	54	0.15	24	0.49	78
WEEKDAY PEAK PM HOUR	2.09	334	2.09	334	4.18	668
SATURDAY PEAK HOUR	3.12	499	3.25	520	6.37	1019
W/ 10% INTERPLAY W/ MALL						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-33	----	-33	----	-66
SATURDAY PEAK HOUR	----	-51	----	-51	----	-102
W/ 25 % PASS-BY						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-83	----	-83	----	-166
SATURDAY PEAK HOUR	----	-127	----	-127	----	-254
18 FUEING STATIONS						
WEEKDAY PEAK AM HOUR	5.14	92	5.14	92	10.28	184
WEEKDAY PEAK PM HOUR	7.015	126	7.015	126	14.03	252
SATURDAY PEAK HOUR	6.385	115	6.385	115	12.77	230
W/ 10% INTERPLAY W/ MALL						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-13	----	-13	----	-26
SATURDAY PEAK HOUR	----	-11	----	-11	----	-22
W/ 25% INTERPLAY W/ COSTCO						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-31	----	-31	----	-62
SATURDAY PEAK HOUR	----	-29	----	-29	----	-58
W/ 25 % PASS-BY						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-31	----	-31	----	-62
SATURDAY PEAK HOUR	----	-29	----	-29	----	-58
"NEW" TRIPS						
WEEKDAY PEAK AM HOUR	----	146	----	116	----	262
WEEKDAY PEAK PM HOUR	----	269	----	269	----	538
SATURDAY PEAK HOUR	----	367	----	388	----	755

THE ABOVE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10th EDITION, 2017.
* ITE LAND USE 857 - DISCOUNT CLUB & ITE LAND USE 944 - GASOLINE/SERVICE STATION

TABLE NO. 3

LEVEL OF SERVICE SUMMARY TABLE

	LOCATION	YEAR 2019 EXISTING									YEAR 2022 NO-BUILD									YEAR 2022 BUILD									
		WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY			
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS
1	WESTERN AVENUE (U.S. ROUTE 20) & CROSSGATES MALL DRIVEWAY <u>SIGNALIZED (COUPLET)</u> WESTERN AVENUE (U.S. ROUTE 20) EB T / T EB APPROACH WESTERN AVENUE (U.S. ROUTE 20) WB T / T WB T-R WB APPROACH CROSSGATES MALL DRIVEWAY SB L / L SB R SB APPROACH OVERALL INTERSECTION	A	8.5	0.64	A	6.5	0.47	A	6.3	0.44	A	9.0	0.67	A	6.7	0.48	A	6.5	0.47	A	9.0	0.67	A	6.6	0.47	A	6.4	0.45	
2	WESTERN AVENUE (U.S. ROUTE 20) & GABRIEL TERRACE / 1700 DESIGNER RESIDENCES <u>UNSIGNALIZED</u> WESTERN AVENUE (U.S. ROUTE 20) EB L WESTERN AVENUE (U.S. ROUTE 20) WB L 1700 DESIGNER RESIDENCES NB L-T-R GABRIEL TERRACE SB L-T-R	B	12.2	0.004	C	17.5	0.004	B	11.3	0.004	B	12.3	0.004	C	17.8	0.004	B	11.4	0.004	A	0.00	0.000	A	0.0	0.000	A	0.0	0.000	
3	WESTERN AVENUE (U.S. ROUTE 20) & JOHNSTON ROAD / RAPP ROAD <u>SIGNALIZED</u> WESTERN AVENUE (U.S. ROUTE 20) EB L EB T EB T-R EB APPROACH WESTERN AVENUE (U.S. ROUTE 20) WB L WB T WB T-R WB APPROACH JOHNSTON ROAD NEB L NEB T-R NEB R RAPP ROAD NEB APPROACH SWB L SWB T SWB R SWB APPROACH OVERALL INTERSECTION	C	25.6	0.37	E	55.5	0.83	C	22.5	0.49	C	26.9	0.39	E	57.8	0.84	C	23.2	0.51	C	28.5	0.44	E	66.0	0.90	C	30.3	0.85	

TABLE NO. 3
LEVEL OF SERVICE SUMMARY TABLE

ID	LOCATION		YEAR 2019 EXISTING									YEAR 2022 NO-BUILD									YEAR 2022 BUILD														
			WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY								
			LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C			
4	RAPP ROAD & CROSSGATES MALL ROAD																																		
	<u>SIGNALIZED</u>																																		
	RAPP ROAD	EB L-T	B	19.4	0.27	B	18.3	0.18	B	19.3	0.27	B	19.4	0.27	B	18.4	0.19	B	19.4	0.28	B	18.5	0.31	C	22.1	0.40	B	17.0	0.43						
		EB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	C	20.7	0.45	B	18.1	0.21	B	14.4	0.28						
	CROSSGATES MALL ROAD	WB L-T	B	19.4	----	B	18.3	----	B	19.3	----	B	19.4	----	B	18.4	----	B	19.4	----	B	19.7	----	C	20.6	----	B	16.0	----						
		WB T-R	B	16.9	0.02	B	18.8	0.22	B	18.9	0.23	B	16.9	0.02	B	18.9	0.22	B	18.9	0.23	B	16.0	0.07	C	23.6	0.40	C	22.8	0.39						
	RAPP ROAD	WB APPROACH	B	16.9	0.02	B	19.0	0.23	B	19.0	0.23	B	16.9	0.02	B	19.1	0.23	B	19.1	0.23	B	15.9	0.06	B	23.6	0.40	C	14.5	0.29						
		SEB L-T	B	16.9	----	B	18.9	----	B	19.0	----	B	16.9	----	B	19.0	----	B	19.0	----	B	15.9	----	C	21.5	----	B	18.2	----						
	CROSSGATES MALL ROAD	SEB R	C	21.1	0.10	C	21.5	0.13	C	21.1	0.10	C	21.1	0.10	C	21.5	0.14	C	21.1	0.10	B	18.5	0.12	C	21.8	0.17	C	22.4	0.15						
		SEB APPROACH	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	B	19.4	0.20	C	32.2	0.67	C	25.6	0.37						
	CROSSGATES MALL ROAD	NWB L	C	21.1	----	C	21.5	----	C	21.1	----	C	21.1	----	C	21.5	----	C	21.1	----	B	19.0	----	C	29.8	----	C	24.6	----						
		NWB T-R	B	10.1	0.13	B	12.2	0.35	B	10.4	0.17	B	10.1	0.13	B	12.3	0.36	B	10.4	0.17	B	11.9	0.14	B	14.3	0.46	B	16.1	0.27						
	CROSSGATES MALL ROAD	NWB T-R	A	8.6	0.07	A	9.3	0.16	A	9.4	0.18	A	8.6	0.07	A	9.3	0.16	A	9.5	0.18	A	9.7	0.08	B	10.4	0.23	B	15.3	0.31						
		NWB APPROACH	A	9.5	----	B	11.3	----	A	9.9	----	A	9.5	----	B	11.3	----	A	9.9	----	B	10.9	----	B	12.7	----	B	15.6	----						
OVERALL INTERSECTION		B	15.6	----	B	15.2	----	B	15.7	----	B	15.6	----	B	15.3	----	B	15.7	----	B	17.7	----	C	20.5	----	B	17.8	----							
5	RAPP ROAD & GIPP ROAD																																		
	<u>UNSIGNALIZED</u>																																		
	RAPP ROAD	NEB L-T	A	7.4	0.005	A	8.3	0.049	A	7.6	0.018	A	7.4	0.005	A	8.4	0.050	A	7.7	0.018	A	7.5	0.006	A	8.5	0.052	A	7.8	0.019						
GIPP ROAD	EB L-R	B	10.6	0.195	B	13.6	0.160	B	10.7	0.092	B	10.6	0.198	B	13.8	0.165	B	10.7	0.095	B	11.0	0.211	C	15.1	0.184	B	11.7	0.108							
6	RAPP ROAD & PINE LANE																																		
	<u>UNSIGNALIZED</u>																																		
	RAPP ROAD	NEB L-T	A	8.5	0.256	A	8.6	0.195	A	8.1	0.190	A	8.5	0.261	A	8.6	0.198	A	8.1	0.192	A	8.8	0.296	A	9.1	0.253	A	8.7	0.261						
	RAPP ROAD	SWB T-R	A	7.7	0.096	A	8.3	0.030	A	7.9	0.035	A	7.7	0.097	B	11.2	0.506	A	8.1	0.202	A	7.9	0.123	B	12.3	0.568	A	8.6	0.268						
	PINE LANE	EB L-R	A	7.6	0.049	B	11.0	0.498	A	8.1	0.200	A	7.6	0.050	A	8.3	0.030	A	7.9	0.035	A	7.7	0.051	A	8.5	0.031	A	8.1	0.037						
OVERALL INTERSECTION		A	8.2	----	B	10.3	----	A	8.1	----	A	8.2	----	B	10.4	----	A	8.1	----	A	8.5	----	B	11.3	----	A	8.6	----							
7	RAPP ROAD & SPRINGSTEEN ROAD																																		
	<u>UNSIGNALIZED</u>																																		
RAPP ROAD	SB L-R	A	8.8	0.08	B	10.8	0.426	A	9.0	0.166	A	8.8	0.084	B	10.9	0.433	A	9.0	0.169	A	8.9	0.104	B	11.4	0.479	A	9.2	0.220							
8	SPRINGSTEEN ROAD & S. FRONTAGE ROAD																																		
	<u>UNSIGNALIZED</u>																																		
	SPRINGSTEEN ROAD	EB L	A	9.3	0.201	A	9.4	0.150	A	9.0	0.174	A	9.4	0.204	A	9.4	0.151	A	9.1	0.177	A	8.8	0.249	A	9.9	0.213	A	9.8	0.261						
	SPRINGSTEEN ROAD	EB T-R	A	8.3	0.155	A	8.2	0.074	A	7.6	0.062	A	8.3	0.156	A	8.3	0.076	A	7.6	0.063	A	8.3	0.156	A	8.3	0.076	A	7.6	0.063						
	SPRINGSTEEN ROAD	WB L-R	A	8.4	0.224	A	8.8	0.289	A	7.5	0.142	A	8.4	0.229	A	8.9	0.293	A	7.5	0.144	A	8.5	0.231	A	9.0	0.298	A	7.6	0.147						
	S. FRONTAGE ROAD	NB T-R	A	7.9	0.048	A	8.1	0.085	A	7.3	0.032	A	8.0	0.048	A	8.1	0.087	A	7.3	0.032	A	8.0	0.049	A	8.2	0.089	A	7.5	0.034						
	S. FRONTAGE ROAD	SB L-T	A	8.4	0.033	A	9.1	0.157	A	8.0	0.037	A	8.4	0.034	A	9.1	0.161	A	8.0	0.037	A	8.5	0.034	A	9.3	0.164	A	8.2	0.039						
	OVERALL INTERSECTION		A	8.6	----	A	8.8	----	A	8.0	----	A	8.6	----	A	8.9	----	A	8.1	----	A	8.8	----	A	9.1	----	A	8.6	----						
9	WASHINGTON AVENUE EXTENSION & SPRINGSTEEN ROAD / CROSSGATES COMMONS																																		
	<u>SIGNALIZED</u>																																		
	SPRINGSTEEN ROAD	EB R	C	29.3	0.44	D	37.1	0.48	D	39.9	0.40	C	29.9	0.44	D	38.1	0.49	D	40.4	0.40	C	30.1	0.44	D	38.5	0.49	D	40.4	0.40						
	CROSSGATES COMMONS	EB APPROACH	C	29.3	----	D	37.1	----	D	39.9	----	C	29.9	----	D	38.1	----	D	40.4	----	C	30.1	----	D	38.5	----	D	40.4	----						
		WB L / L	D	39.4	0.61	D	50.3	0.81	D	41.8	0.82	D	40.3	0.62	D	51.8	0.81	D	42.6	0.82	D	40.5	0.62	D	52.4	0.81	D	42.7	0.82						
	WASHINGTON AVE. EXT.	WB T-R	C	27.7	0.47	D	36.4	0.69	D	37.4	0.92	C	28.5	0.49	D	37.6	0.70	D	37.9	0.92	C	28.7	0.49	D	38.0	0.70	D	40.0	0.92						
		WB APPROACH	C	32.3	----	D	43.1	----	D	39.6	----	C	33.2	----	D	44.5	----	D	40.3	----	C	33.4	----	D	45.0	----	D	48.3	----						
	WASHINGTON AVE. EXT.	NB L	D	39.7	0.79	E	58.2	0.86	D	50.8	0.77	D	40.5	0.80	E	61.7	0.86	D	51.6	0.77	D	40.8	0.80	E	62.8	0.86	D	51.6	0.77						
		NB T / T / T	B	15.8	0.52	C	29.2	0.69	C	24.0	0.31	B	16.1	0.52	C	29.0	0.70	C	24.2	0.31	B	16.1	0.52	C	29.2	0.70	C	24.3	0.32						
	WASHINGTON AVE. EXT.	NB APPROACH	B	13.3	0.21	C	27.0	0.57	D	36.2	0.87	B	13.5	0.21	C	27.6	0.58	D	36.7	0.87	B	13.5	0.21	C	27.6	0.57	D	36.6	0.87						
		NB T	B	17.8	----	C	30.7	----	C	31.1	----	B	18.1	----	C	31.8	----	C	31.5	----	B	18.1	----	C	32.0	----	C	31.4	----						
	WASHINGTON AVE. EXT.	SB L	D	39.8	0.80	E	69.1	0.90	F	111.1	1.09	D	40.6	0.80	E	72.8	0.90	F	125.2	1.12	D	40.9	0.80	E	73.9	0.90	F	126.0	1.13						
		SB T / T	C	21.6	0.85	C	34.6	0.90	B	15.2	0.33	C	22.2	0.85	D	36.2	0.90	B	15.6	0.33	C	22.3	0.85	D	36.9	0.91	B	15.7	0.35						
	WASHINGTON AVE. EXT.	SB R	B	11.9	0.01	B	17.5	0.01	B	12.7	0.01	B	12.0	0.01	B	17.9	0.01	B	13.0	0.01	B	12.0	0.01	B	17.9	0.01	B	13.0	0.01						
		SB APPROACH	C	23.2	----	D	39.7	----	D	54.2	----	C	23.8	----	D	41.6	----	E	60.2	----	C	23.9	----	D	42.3	----	E	59.7	----						
	OVERALL INTERSECTION		C	21.9	----	D	36.1	----	D	41.4	----	C	22.4	----	D	37.5	----	D	43.7	----	C	22.4	----	D	37.9	----	D	43.5	----						
	10	CROSSGATES MALL ROAD & I-87 ON/OFF RAMP																																	
<u>SIGNALIZED</u>																																			
I-87 OFF RAMP		WB L	A	7.4	0.22	C	22.8	0.68	C	23.3	0.63	A	7.4	0.22	C	23.6	0.69	C	24.1	0.64	A	7.8	0.31	C	32.4	0.85	D	35.6	0.86						
		WB L-R	B	11.7	0.79	D	35.8	0.89	D	49.7	0.96	B	11.8	0.79	D	38.2	0.90	D	54.0	0.97	B	11.6	0.79	D	41.9	0.92	D	54.0	0.97						
CROSSGATES MALL ROAD		WB APPROACH	B	10.7	----	C	29.9	----	D	38.7	----	B	10.8	----	C	31.6	----	D	41.6	----	B	10.5	----	D	37.2	----	D	45.0	----						
		NB T	B	16.0	0.37	D	36.0	0.71	E	59.1	0.88	B	16.3	0.38	D	37.1	0.72	E	61.7	0.88	B	16.5	0.39	D	38.4	0.73	E	61.7	0.88						
CROSSGATES MALL ROAD		NB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00						
		NB APPROACH	B	16.0	----	D	36.0	----	E	59.1	----	B	16.3	----	D	37.1	----	E	61.7	----	B	16.5	----	D	38.4	----	E	61.7	----						
CROSSGATES MALL ROAD		SB L	B	11.1	0.32	C	24.6	0.87	D	47.7	0.95	B	11.2	0.32	C	26.4	0.88	D	52.1	0.96	B	11.4	0.33	C	28.3	0.89	D	52.1	0.96						
		SB T	A	8.5	0.10	B	10.2	0.26	B	16.2	0.33	A	8.6	0.10	B	10.4	0.26	B	16.5	0.33	A	8.8	0.10	B	10.9	0.26	B	16.5							

TABLE NO. 4
HOURLY TRIP GENERATION RATES
AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

SITE 1A RAPP ROAD RESIDENTIAL	ENTRY		EXIT		TOTAL	
	HTGR*	VOLUME	HTGR*	VOLUME	HTGR*	VOLUME
POTENTIAL FUTURE DEVELOPMENT +90 APARTMENT UNITS						
WEEKDAY PEAK AM HOUR	0.11	10	0.35	31	0.46	41
WEEKDAY PEAK PM HOUR	0.35	31	0.21	19	0.56	50
SATURDAY PEAK HOUR	0.35	31	0.35	31	0.70	62

THE ABOVE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE
INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10th EDITION, 2017.
* ITE LAND USE 220 - MULTIFAMILY HOUSING (LOW-RISE)

TABLE NO. 5

HOURLY TRIP GENERATION RATES
AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

SITE 3 POTENTIAL WESTERN AVENUE MIXED-USE DEVELOPMENT	ENTRY		EXIT		TOTAL	
	HTGR*	VOLUME	HTGR*	VOLUME	HTGR*	VOLUME
RETAIL - 115,000 S.F						
WEEKDAY PEAK AM HOUR	0.58	67	0.36	42	0.94	109
WEEKDAY PEAK PM HOUR	1.83	211	1.98	228	3.81	439
SATURDAY PEAK HOUR	2.34	270	2.16	249	4.50	519
OFFICE - 50,000 S.F.						
WEEKDAY PEAK AM HOUR	1.00	50	0.16	8	1.16	58
WEEKDAY PEAK PM HOUR	0.18	9	0.97	49	1.15	58
SATURDAY PEAK HOUR	0.29	15	0.24	12	0.53	27
RESIDENTIAL - 48 UNITS						
WEEKDAY PEAK AM HOUR	0.11	5	0.35	17	0.46	22
WEEKDAY PEAK PM HOUR	0.35	17	0.21	10	0.56	27
SATURDAY PEAK HOUR	0.35	17	0.35	17	0.70	34
W/ 10% INTERPLAY W/ MALL						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-26	----	-26	----	-52
SATURDAY PEAK HOUR	----	-29	----	-29	----	-58
W/ 10 % INTERPLAY WITH COSTCO						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-26	----	-26	----	-52
SATURDAY PEAK HOUR	----	-29	----	-29	----	-58
W/ 25 % RETAIL PASS-BY						
WEEKDAY PEAK AM HOUR	----	----	----	----	----	----
WEEKDAY PEAK PM HOUR	----	-55	----	-55	----	-110
SATURDAY PEAK HOUR	----	-65	----	-65	----	-130
"NEW" TRIPS						
WEEKDAY PEAK AM HOUR	----	122	----	67	----	189
WEEKDAY PEAK PM HOUR	----	130	----	180	----	310
SATURDAY PEAK HOUR	----	179	----	155	----	334

THE ABOVE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10th EDITION, 2017.
* ITE LAND USE 820 - SHOPPING CENTER; ITE LAND USE 710 - OFFICE; ITE LAND USE 220 - MULTIFAMILY HOUSING

TABLE NO. 6

LEVEL OF SERVICE SUMMARY TABLE

	LOCATION	YEAR 2025 NO-BUILD									YEAR 2025 BUILD								
		WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY		
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C
1	WESTERN AVENUE (U.S. ROUTE 20) & CROSSGATES MALL DRIVEWAY	<u>SIGNALIZED (COUPLET)</u>																	
	WESTERN AVENUE (U.S. ROUTE 20) EB T / T	A	9.2	0.68	A	6.7	0.48	A	6.4	0.46	A	9.2	0.68	A	6.6	0.47	A	6.4	0.45
	WESTERN AVENUE (U.S. ROUTE 20) EB APPROACH	A	9.2	----	A	6.7	----	A	6.4	----	A	9.2	----	A	6.6	----	A	6.4	----
	WESTERN AVENUE (U.S. ROUTE 20) WB T / T	A	5.2	0.32	A	8.1	0.65	A	6.7	0.54	A	5.2	0.32	A	8.1	0.66	A	6.7	0.55
	WESTERN AVENUE (U.S. ROUTE 20) WB T-R	A	5.3	0.32	A	9.0	0.67	A	7.0	0.55	A	5.3	0.33	A	9.1	0.67	A	7.1	0.55
	WESTERN AVENUE (U.S. ROUTE 20) WB APPROACH	A	5.2	----	A	8.4	----	A	6.8	----	A	5.2	----	A	8.5	----	A	6.8	----
	CROSSGATES MALL DRIVEWAY SB L / L	C	34.7	0.11	D	40.3	0.53	D	49.9	0.86	C	34.8	0.13	D	41.7	0.59	E	55.7	0.94
	CROSSGATES MALL DRIVEWAY SB R	C	34.6	0.08	D	36.4	0.20	D	35.8	0.20	C	34.6	0.08	D	36.3	0.20	D	35.7	0.20
	CROSSGATES MALL DRIVEWAY SB APPROACH	C	34.7	----	D	39.8	----	D	48.6	----	C	34.8	----	D	41.0	----	D	53.9	----
	OVERALL INTERSECTION	A	8.4	----	B	10.7	----	B	13.1	----	A	8.5	----	B	11.1	----	B	14.4	----
	2	WESTERN AVENUE (U.S. ROUTE 20) & GABRIEL TERRACE / 1700 DESIGNER RESIDENCES	<u>UNSIGNALIZED</u>																
WESTERN AVENUE (U.S. ROUTE 20) EB L		A	0.0	0.000	A	0.0	0.000	A	0.0	0.000	B	12.9	0.040	C	20.2	0.143	B	12.3	0.101
WESTERN AVENUE (U.S. ROUTE 20) WB L		C	19.9	0.084	B	12.7	0.139	B	11.9	0.101	C	20.0	0.084	B	12.6	0.137	B	11.8	0.098
1700 DESIGNER RESIDENCES NB L-T-R		F	578.8	1.858	F	1739.2	3.901	F	372.6	1.415	F	637.6	1.974	F	5090.7	10.03	F	671.7	2.007
GABRIEL TERRACE SB L-T-R		B	11.9	0.033	D	32.4	0.455	C	17.2	0.306	B	12.0	0.053	E	47.5	0.689	C	19.4	0.424
3	WESTERN AVENUE (U.S. ROUTE 20) & JOHNSTON ROAD / RAPP ROAD	<u>SIGNALIZED</u>																	
	WESTERN AVENUE (U.S. ROUTE 20) EB L	C	29.2	0.44	E	68.3	0.90	C	30.7	0.85	C	29.7	0.44	E	70.6	0.90	C	31.6	0.86
	WESTERN AVENUE (U.S. ROUTE 20) EB T	C	25.0	0.83	D	44.7	0.83	B	19.9	0.71	C	25.6	0.84	D	45.1	0.83	C	20.3	0.72
	WESTERN AVENUE (U.S. ROUTE 20) EB T-R	C	25.8	0.84	D	44.7	0.83	B	19.9	0.71	C	26.4	0.85	D	45.1	0.83	C	20.2	0.72
	WESTERN AVENUE (U.S. ROUTE 20) EB APPROACH	C	25.9	----	D	48.7	----	C	22.3	----	C	26.5	----	D	49.5	----	C	22.7	----
	WESTERN AVENUE (U.S. ROUTE 20) WB L	E	62.1	0.82	D	37.4	0.26	B	19.8	0.18	E	63.0	0.82	D	38.3	0.27	C	20.4	0.18
	WESTERN AVENUE (U.S. ROUTE 20) WB T	D	45.7	0.82	D	44.9	0.92	B	17.9	0.71	D	46.1	0.82	D	48.4	0.93	B	18.2	0.72
	WESTERN AVENUE (U.S. ROUTE 20) WB T-R	D	45.5	0.82	D	45.9	0.93	B	17.9	0.72	D	45.9	0.82	D	49.8	0.94	B	18.2	0.72
	WESTERN AVENUE (U.S. ROUTE 20) WB APPROACH	D	47.4	----	D	44.8	----	B	18.0	----	D	47.9	----	D	48.3	----	B	18.3	----
	JOHNSTON ROAD NEB L	D	49.7	0.39	E	75.5	0.85	C	31.5	0.53	D	50.4	0.40	E	77.4	0.86	C	32.5	0.54
	JOHNSTON ROAD NEB T-R	D	50.9	0.68	E	58.9	0.46	C	32.7	0.60	D	51.7	0.69	E	59.8	0.47	C	33.7	0.61
	JOHNSTON ROAD NEB R	D	46.1	0.62	C	29.7	0.16	C	21.8	0.21	D	46.8	0.62	C	30.5	0.16	C	22.4	0.21
	JOHNSTON ROAD NEB APPROACH	D	48.8	----	E	57.8	----	C	29.5	----	D	49.6	----	E	59.1	----	C	30.4	----
	RAPP ROAD SWB L	E	59.6	0.51	D	54.6	0.39	C	31.9	0.40	E	60.7	0.54	E	55.5	0.39	C	33.0	0.42
	RAPP ROAD SWB T	D	52.3	0.25	E	58.3	0.72	C	32.6	0.52	D	53.1	0.26	E	59.5	0.73	C	33.6	0.53
	RAPP ROAD SWB R	C	21.8	0.16	D	52.3	0.79	C	27.3	0.58	C	22.2	0.16	D	53.0	0.79	C	28.0	0.58
	RAPP ROAD SWB APPROACH	D	38.4	----	D	54.6	----	C	29.8	----	D	39.0	----	E	55.5	----	C	30.7	----
	OVERALL INTERSECTION	D	35.3	----	D	48.7	----	C	22.2	----	D	35.9	----	D	50.6	----	C	22.6	----

TABLE NO. 6

LEVEL OF SERVICE SUMMARY TABLE

ID	LOCATION	YEAR 2025 NO-BUILD						YEAR 2025 BUILD											
		WEEKDAY AM		WEEKDAY PM		SATURDAY		WEEKDAY AM		WEEKDAY PM		SATURDAY							
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C						
4	RAPP ROAD & CROSSGATES MALL ROAD	<u>SIGNALIZED</u>																	
		W/ EB & SB RIGHT TURNERS UNDER SIGNAL CONTROL																	
		OPTIMIZED			OPTIMIZED			OPTIMIZED			OPTIMIZED								
	RAPP ROAD EB L-T	B	17.2	0.31	C	23.5	0.43	B	17.1	0.44	B	17.0	0.29	C	23.8	0.45	B	18.3	0.47
	RAPP ROAD EB R	B	19.4	0.45	B	18.9	0.22	B	14.4	0.28	B	18.9	0.42	B	18.1	0.21	B	14.4	0.28
	CROSSGATES MALL ROAD WB L-T	B	18.4	----	C	21.8	----	B	16.1	----	B	18.1	----	C	21.8	----	B	16.8	----
	CROSSGATES MALL ROAD WB T-R	B	14.8	0.07	C	25.5	0.43	C	23.3	0.40	B	19.9	0.13	C	34.0	0.57	C	31.4	0.53
	RAPP ROAD WB APPROACH	B	14.6	0.06	C	20.6	0.35	B	14.6	0.30	B	14.8	0.08	C	20.4	0.39	B	15.2	0.35
	RAPP ROAD SEB L-T	B	14.7	----	C	22.9	----	B	18.4	----	B	17.3	----	C	26.6	----	C	22.0	----
	RAPP ROAD SEB R	C	20.9	0.15	C	21.8	0.17	C	21.6	0.14	B	19.7	0.17	C	22.3	0.21	C	21.3	0.19
	CROSSGATES MALL ROAD NWB L	C	22.1	0.24	C	32.6	0.68	C	24.5	0.36	C	20.4	0.23	C	33.1	0.69	C	23.6	0.35
	CROSSGATES MALL ROAD NWB T-R	C	21.6	----	C	30.1	----	C	23.6	----	C	20.1	----	C	30.2	----	C	22.7	----
	CROSSGATES MALL ROAD NWB APPROACH	B	13.2	0.16	B	14.4	0.47	B	17.0	0.29	B	12.6	0.15	B	15.5	0.50	B	17.3	0.31
	OVERALL INTERSECTION	B	10.9	0.10	A	9.8	0.22	B	15.4	0.32	B	11.1	0.13	B	11.5	0.33	B	16.9	0.42
	B	12.2	----	B	12.6	----	B	16.1	----	B	11.8	----	B	13.5	----	B	17.0	----	
	B	17.6	----	C	21.1	----	B	17.8	----	B	17.2	----	C	22.0	----	B	19.1	----	
5	RAPP ROAD & GIPP ROAD	<u>UNSIGNALIZED</u>																	
	RAPP ROAD NEB L-T	A	7.5	0.006	A	8.5	0.052	A	7.8	0.020	A	7.5	0.006	A	8.6	0.053	A	7.9	0.021
	GIPP ROAD EB L-R	B	11.1	0.215	C	15.2	0.188	B	11.7	0.111	B	11.4	0.223	C	15.9	0.199	B	12.2	0.118
6	RAPP ROAD & PINE LANE	<u>UNSIGNALIZED</u>																	
	RAPP ROAD NEB L-T	A	8.9	0.301	A	9.1	0.256	A	8.7	0.265	A	9.0	0.320	A	9.5	0.289	A	9.0	0.293
	RAPP ROAD SWB T-R	A	7.9	0.126	B	12.5	0.574	A	8.7	0.271	A	8.1	0.147	A	13.2	0.606	A	8.9	0.302
	PINE LANE EB L-R	A	7.7	0.053	A	8.5	0.031	A	8.1	0.037	A	7.8	0.054	A	8.6	0.032	A	8.2	0.038
	OVERALL INTERSECTION	A	8.5	----	B	11.4	----	A	8.7	----	A	8.6	----	B	12.0	----	A	8.9	----
7	RAPP ROAD & SPRINGSTEEN ROAD	<u>UNSIGNALIZED</u>																	
	RAPP ROAD SB L-R	A	8.9	0.107	B	11.5	0.485	A	9.2	0.222	A	8.9	0.121	B	11.7	0.507	A	9.4	0.246
8	SPRINGSTEEN ROAD & S. FRONTAGE ROAD	<u>UNSIGNALIZED</u>																	
	SPRINGSTEEN ROAD EB L	A	9.8	0.253	A	10.0	0.217	A	9.8	0.266	B	10.1	0.275	B	10.4	0.255	B	10.2	0.298
	SPRINGSTEEN ROAD EB T-R	A	8.4	0.160	A	8.3	0.076	A	7.6	0.063	A	8.4	0.160	A	8.3	0.076	A	7.7	0.063
	SPRINGSTEEN ROAD WB L-R	A	8.5	0.234	A	9.1	0.304	A	7.6	0.148	A	8.6	0.235	A	9.2	0.307	A	7.6	0.150
	S. FRONTAGE ROAD NB T-R	A	8.1	0.051	A	8.3	0.091	A	7.5	0.035	A	8.1	0.051	A	8.4	0.092	A	7.6	0.035
	S. FRONTAGE ROAD SB L-T	A	8.6	0.036	A	9.3	0.166	A	8.2	0.040	A	8.6	0.036	A	9.4	0.168	A	8.3	0.041
	OVERALL INTERSECTION	A	8.8	----	A	9.2	----	A	8.6	----	A	9.0	----	A	9.4	----	A	8.8	----
9	WASHINGTON AVENUE EXTENSION & SPRINGSTEEN ROAD / CROSSGATES COMMONS	<u>SIGNALIZED</u>																	
	SPRINGSTEEN ROAD EB R	C	30.7	0.44	D	39.3	0.49	D	40.9	0.39	C	30.9	0.44	D	39.5	0.49	D	40.9	0.39
	CROSSGATES COMMONS WB L / L	C	30.7	----	D	39.3	----	D	40.9	----	C	30.9	----	D	39.5	----	D	40.9	----
	CROSSGATES COMMONS WB T-R	D	41.5	0.62	D	53.6	0.82	D	43.6	0.83	D	41.7	0.62	D	53.9	0.82	D	43.6	0.83
	WASHINGTON AVE. EXT. NB APPROACH	C	29.5	0.50	D	39.2	0.72	D	38.7	0.92	C	29.7	0.50	D	39.4	0.72	D	38.7	0.92
	WASHINGTON AVE. EXT. NB L	C	34.2	----	D	46.2	----	D	41.1	----	C	34.4	----	D	46.4	----	D	41.1	----
	WASHINGTON AVE. EXT. NB T / T / T	D	41.6	0.80	E	65.8	0.87	D	52.6	0.77	D	41.8	0.80	E	66.2	0.87	D	52.6	0.77
	WASHINGTON AVE. EXT. NB R	B	16.2	0.52	C	29.9	0.71	C	24.6	0.32	B	16.2	0.52	C	30.1	0.71	C	24.6	0.33
	WASHINGTON AVE. EXT. NB APPROACH	B	13.6	0.21	C	28.3	0.58	D	37.7	0.87	B	13.5	0.21	C	28.3	0.58	D	37.7	0.87
	WASHINGTON AVE. EXT. SB L	B	18.3	----	C	32.9	----	C	32.0	----	B	18.3	----	C	33.0	----	C	32.0	----
	WASHINGTON AVE. EXT. SB T / T	D	41.7	0.81	E	77.1	0.91	F	142.9	1.17	D	41.9	0.81	E	77.6	0.91	F	143.3	1.17
	WASHINGTON AVE. EXT. SB R	C	22.9	0.86	D	38.5	0.92	B	16.2	0.35	C	23.0	0.86	D	38.9	0.92	B	16.2	0.36
	OVERALL INTERSECTION	B	12.0	0.01	B	18.1	0.01	B	13.3	0.01	B	12.0	0.01	B	18.2	0.01	B	13.3	0.01
	C	24.5	----	D	44.1	----	E	66.8	----	C	24.6	----	D	44.5	----	E	66.5	----	
	C	22.9	----	D	39.2	----	D	46.3	----	C	23.0	----	D	39.5	----	D	46.3	----	
10	CROSSGATES MALL ROAD & I-87 ON/OFF RAMP	<u>SIGNALIZED</u>																	
	I-87 OFF RAMP WB L	A	7.7	0.31	C	34.1	0.86	D	37.0	0.88	A	8.1	0.39	D	38.8	0.89	D	48.0	0.95
	CROSSGATES MALL ROAD WB L-R	B	11.7	0.79	D	44.3	0.93	E	58.5	0.99	B	11.6	0.78	D	54.4	0.97	F	69.2	1.03
	CROSSGATES MALL ROAD WB APPROACH	B	10.5	----	D	39.2	----	D	48.0	----	B	10.4	----	D	46.6	----	E	58.6	----
	CROSSGATES MALL ROAD NB T	B	16.8	0.40	D	39.1	0.73	E	62.4	0.89	B	16.9	0.40	D	40.1	0.74	E	62.4	0.89
	CROSSGATES MALL ROAD NB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	CROSSGATES MALL ROAD NB APPROACH	B	16.8	----	D	39.1	----	E	62.4	----	B	16.9	----	D	40.1	----	E	62.4	----
	CROSSGATES MALL ROAD SB L	B	11.5	0.33	C	29.9	0.90	E	56.7	0.98	B	11.6	0.33	C	31.6	0.91	E	56.7	0.98
	CROSSGATES MALL ROAD SB T	A	8.9	0.10	B	11.0	0.27	B	16.5	0.33	A	9.0	0.10	B	11.4	0.27	B	16.5	0.33
	CROSSGATES MALL ROAD SB APPROACH	B	10.8	----	C	25.0	----	D	42.8	----	B	10.9	----	C	26.3	----	D	42.8	----
	OVERALL INTERSECTION	B	11.1	----	C	33.3	----	D	47.9	----	B	10.9	----	D	37.9	----	D	53.9	----

TABLE NO. 6

LEVEL OF SERVICE SUMMARY TABLE

ID	LOCATION	YEAR 2025 NO-BUILD									YEAR 2025 BUILD											
		WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY					
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C			
11	CROSSGATES MALL ROAD & MALL DRIVEWAY #1	<u>UNSIGNALIZED</u>																				
	CROSSGATES MALL ROAD SEB L-T	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----		
	MALL DRIVEWAY #1 SWB L-R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----		
	<u>W/ GABRIEL TERRACE CONNECTOR ROAD</u>																					
	CROSSGATES MALL ROAD SEB L	A	7.5	0.009	A	8.3	0.028	A	8.5	0.089	A	7.5	0.009	A	8.4	0.028	A	8.5	0.091	A	8.5	0.091
	CROSSGATES MALL ROAD NWB L	A	8.1	0.049	A	8.1	0.117	A	8.4	0.162	A	8.3	0.066	A	8.3	0.133	A	8.8	0.191	A	8.8	0.191
	GABRIEL TERRACE CONNECTOR ROAD NEB L-T-R	B	11.0	0.100	C	23.8	0.590	F	119.0	1.116	B	13.5	0.184	F	178.2	1.261	F	680.6	2.398	F	680.6	2.398
	MALL DRIVEWAY #1 SWB L-T-R	B	13.4	0.064	F	195.1	1.184	F	1263.9	3.536	B	12.9	0.063	F	426.5	1.705	F	2442.3	6.016	F	2442.3	6.016
	<u>W/ SIGNALIZATION</u>																					
	CROSSGATES MALL ROAD SEB L	A	6.3	0.020	A	9.9	0.080	B	12.3	0.280	A	6.3	0.020	B	11.9	0.100	B	14.3	0.300	B	14.3	0.300
	CROSSGATES MALL ROAD SEB T-R	A	8.7	0.570	B	11.9	0.440	B	16.3	0.610	A	9.4	0.640	B	15.3	0.600	C	21.4	0.800	C	21.4	0.800
	CROSSGATES MALL ROAD SEB APPROACH	A	8.6	----	B	11.7	----	B	15.3	----	A	9.3	----	B	14.9	----	B	19.9	----	B	19.9	----
	CROSSGATES MALL ROAD NWB L	A	6.1	0.110	A	8.7	0.280	B	11.2	0.420	A	6.2	0.150	B	10.7	0.350	B	13.6	0.540	B	13.6	0.540
	CROSSGATES MALL ROAD NWB T-R	A	6.4	0.210	B	12.7	0.730	B	16.7	0.770	A	6.2	0.210	B	15.4	0.790	B	19.7	0.800	B	19.7	0.800
	CROSSGATES MALL ROAD NWB APPROACH	A	6.3	----	B	11.7	----	B	14.9	----	A	6.2	----	B	14.2	----	B	17.7	----	B	17.7	----
GABRIEL TERRACE CONNECTOR ROAD NEB L-T-R	B	12.0	0.240	B	14.5	0.550	B	15.9	0.660	B	13.3	0.320	B	15.7	0.660	B	17.8	0.750	B	17.8	0.750	
GABRIEL TERRACE CONNECTOR ROAD SWB L	B	12.0	----	B	14.5	----	B	15.9	----	B	13.3	----	B	15.7	----	B	17.8	----	B	17.8	----	
MALL DRIVEWAY #1 SWB L-T-R	B	11.5	0.100	B	13.0	0.340	B	14.5	0.510	B	12.3	0.100	B	13.0	0.340	B	14.8	0.530	B	14.8	0.530	
MALL DRIVEWAY #1 SWB APPROACH	B	11.5	----	B	13.0	----	B	14.5	----	B	12.3	----	B	13.0	----	B	14.8	----	B	14.8	----	
OVERALL INTERSECTION	A	8.4	----	B	12.4	----	B	15.2	----	A	9.0	----	B	14.6	----	B	17.9	----	B	17.9	----	
12	CROSSGATES MALL ROAD & HOTEL CONNECTOR ROAD / MALL DRIVEWAY #2	<u>SIGNALIZED</u>																				
	CROSSGATES MALL ROAD SEB L-T	A	8.7	0.23	A	9.3	0.31	B	16.3	0.66	A	8.8	0.25	A	9.7	0.35	C	20.1	0.75	C	20.1	0.75
	CROSSGATES MALL ROAD SEB T-R	A	8.9	0.26	A	9.4	0.32	B	11.5	0.50	A	9.1	0.28	A	9.8	0.36	B	12.0	0.54	B	12.0	0.54
	CROSSGATES MALL ROAD SEB APPROACH	A	8.8	----	A	9.4	----	B	13.8	----	A	8.9	----	A	9.7	----	B	15.9	----	B	15.9	----
	CROSSGATES MALL ROAD NWB L-T	A	8.1	0.16	B	12.1	0.55	B	14.4	0.66	A	8.5	0.21	B	13.1	0.60	C	27.4	0.89	C	27.4	0.89
	CROSSGATES MALL ROAD NWB T-R	A	8.4	0.18	B	14.2	0.61	C	32.5	0.91	A	8.7	0.22	B	15.9	0.68	D	35.7	0.93	D	35.7	0.93
	CROSSGATES MALL ROAD NWB APPROACH	A	8.3	----	B	13.0	----	C	23.2	----	A	8.6	----	B	14.4	----	C	31.2	----	C	31.2	----
	HOTEL CONNECTOR ROAD NEB L-T-R	A	9.4	0.20	A	7.3	0.01	A	7.3	0.03	B	10.9	0.30	A	8.2	0.16	A	8.2	0.16	A	8.2	0.16
	HOTEL CONNECTOR ROAD NEB APPROACH	A	9.4	----	A	7.3	----	A	7.3	----	B	10.9	----	B	8.2	----	A	8.2	----	A	8.2	----
	MALL DRIVEWAY #2 SWB L	A	7.4	0.03	A	9.3	0.28	A	11.8	0.48	A	7.4	0.03	A	9.2	0.28	B	11.7	0.49	B	11.7	0.49
	MALL DRIVEWAY #2 SWB T-R	A	7.3	0.01	A	7.8	0.10	A	7.8	0.10	A	7.3	0.01	A	7.8	0.11	A	7.9	0.11	A	7.9	0.11
	MALL DRIVEWAY #2 SWB APPROACH	A	7.4	----	A	9.0	----	B	11.1	----	A	7.4	----	A	8.9	----	B	11.1	----	B	11.1	----
OVERALL INTERSECTION	A	8.6	----	B	11.2	----	B	17.9	----	A	9.0	----	B	11.8	----	C	22.0	----	C	22.0	----	
13/14	CROSSGATES MALL ROAD & CROSSGATES MALL MAIN DRIVEWAY	<u>SIGNALIZED</u>																				
	CROSSGATES MALL ROAD SEB T	B	12.7	0.24	A	9.1	0.30	C	21.0	0.58	B	13.0	0.27	A	9.7	0.36	C	22.5	0.66	C	22.5	0.66
	CROSSGATES MALL ROAD SEB T-R	B	12.7	0.24	A	9.1	0.30	C	21.1	0.58	B	13.0	0.27	A	9.7	0.36	C	22.6	0.66	C	22.6	0.66
	CROSSGATES MALL ROAD SEB APPROACH	B	12.7	----	A	9.1	----	C	21.1	----	B	13.0	----	A	9.7	----	C	22.5	----	C	22.5	----
	CROSSGATES MALL ROAD NWB L	A	9.1	0.09	A	5.7	0.32	B	16.0	0.73	A	9.1	0.09	A	6.1	0.35	B	19.4	0.80	B	19.4	0.80
	CROSSGATES MALL ROAD NWB T	A	8.5	0.20	A	6.2	0.51	B	12.0	0.62	A	8.9	0.25	A	6.7	0.56	B	13.2	0.70	B	13.2	0.70
	CROSSGATES MALL ROAD NWB APPROACH	A	8.6	----	A	6.1	----	B	13.2	----	A	9.0	----	A	6.5	----	B	14.9	----	B	14.9	----
	CROSSGATES MALL DRIVEWAY NEB L	C	26.5	0.06	D	39.7	0.52	D	36.2	0.69	C	26.5	0.06	D	39.7	0.52	D	36.2	0.69	D	36.2	0.69
CROSSGATES MALL DRIVEWAY NEB R	E	59.8	0.93	D	47.7	0.84	D	54.8	0.91	E	59.8	0.93	D	47.7	0.84	D	54.8	0.91	D	54.8	0.91	
CROSSGATES MALL DRIVEWAY NEB APPROACH	E	57.7	----	D	44.5	----	D	46.2	----	E	57.7	----	D	44.5	----	D	46.2	----	D	46.2	----	
OVERALL INTERSECTION	C	28.6	----	B	14.3	----	C	24.4	----	C	27.3	----	B	14.2	----	C	25.1	----	C	25.1	----	
15	S. FRONTAGE ROAD & RAPP ROAD	<u>UNSIGNALIZED</u>																				
	S. FRONTAGE ROAD NB L	A	7.5	0.03	A	8.8	0.19	A	7.6	0.06	A	7.5	0.03	A	8.9	0.19	A	7.7	0.06	A	7.7	0.06
16	WESTERN AVENUE (U.S. ROUTE 20) & WESTMERE TERRACE	<u>UNSIGNALIZED</u>																				
	WESTERN AVENUE (U.S. ROUTE 20) EB L	B	10.5	0.002	C	21.2	0.04	B	12.3	0.03	B	10.6	0.002	C	21.6	0.037	B	12.5	0.025	B	12.5	0.025
WESTMERE TERRACE SB L-R	F	65.5	0.10	F	354.0	0.75	F	53.9	0.24	F	66.5	0.101	F	407.0	0.825	F	57.4	0.252	F	57.4	0.252	
17/18	RAPP ROAD & SITE 1 DRIVEWAY	<u>UNSIGNALIZED</u>																				
	SITE 1 DRIVEWAY EB L-R	----	----	----	----	----	----	----	----	B	10.0	0.104	B	12.2	0.091	B	11.2	0.126	B	11.2	0.126	
RAPP ROAD NEB L-T	----	----	----	----	----	----	----	----	A	7.6	0.013	A	8.2	0.051	A	7.8	0.045	A	7.8	0.045		
19	RAPP ROAD & SITE 2 NORTHERLY DRIVEWAY	<u>UNSIGNALIZED</u>																				
	RAPP ROAD SB L-T	----	----	----	----	----	----	----	----	A	8.4	0.043	A	8.1	0.083	A	8.9	0.127	A	8.9	0.127	
PHASE 1 DRIVEWAY (NW) WB R	----	----	----	----	----	----	----	----	A	9.8	0.049	A	9.7	0.109	B	10.9	0.192	B	10.9	0.192		
20	RAPP ROAD & SITE 2 SOUTHERLY DRIVEWAY	<u>UNSIGNALIZED</u>																				
	PHASE 1 DRIVEWAY (SW) NB R	----	----	----	----	----	----	----	----	A	----	----	A	----	----	A	----	----	A	----	----	
21	GABRIEL TERRACE CONNECTOR ROAD & SITE 2 DRIVEWAY	<u>UNSIGNALIZED</u>																				
	GABRIEL TERRACE NB L-T	----	----	----	----	----	----	----	----	A	7.4	0.005	A	7.9	0.031	A	8.1	0.039	A	8.1	0.039	
PHASE 1 DRIVEWAY (E) EB L-R	----	----	----	----	----	----	----	----	A	9.3	0.094	C	16.1	0.557	D	31.2	0.828	D	31.2	0.828		

TABLE NO. 6

LEVEL OF SERVICE SUMMARY TABLE

	LOCATION	YEAR 2025 NO-BUILD									YEAR 2025 BUILD																	
		WEEKDAY AM			WEEKDAY PM			SATURDAY			WEEKDAY AM			WEEKDAY PM			SATURDAY											
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C									
22	GABRIEL TERRACE CONNECTOR ROAD & SITE 3 DRIVEWAY <u>UN SIGNALIZED</u> GABRIEL TERRACE SB L-T PHASE 2 DRIVEWAY (W) WB L-R	---	---	---	---	---	---	---	---	---	A	7.5	0.031	A	8.1	0.057	A	8.6	0.082	A	9.3	0.041	C	15.2	0.357	C	21.1	0.467
23	HOTEL CONNECTOR ROAD & SITE 3 DRIVEWAY <u>UN SIGNALIZED</u> PHASE 2 DRIVEWAY (E) EB L	---	---	---	---	---	---	---	---	---	A	8.8	0.037	A	9.6	0.131	A	9.5	0.118									

THE ABOVE REPRESENTS THE LEVELS OF SERVICE, VEHICLE DELAY IN SECONDS AND VOLUME-TO-CAPACITY (V/C) RATIO FOR THE ABOVE INTERSECTIONS.



Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

APPENDIX C

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

LOS A describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.

LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.



LOS E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.

LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 18-4 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 18-4

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

For approach-based and intersection wide assessments, LOS is defined solely by control delay.



LEVEL OF SERVICE CRITERIA
FOR TWO-WAY STOP-CONTROLLED (TWSC) UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 19-1 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 19-1

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The LOS criteria apply to each lane on a given approach and to each approach on the minor street.
 LOS is not calculated for major-street approaches or for the intersection as a whole.

As Exhibit 19-1 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.



LEVEL OF SERVICE CRITERIA
FOR ALL-WAY STOP-CONTROLLED (AWSC) UNSIGNALIZED INTERSECTIONS

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 20-2. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 20-2 from the *2010 Highway Capacity Manual* published by the Transportation Research Board.

Exhibit 20-2

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

For approaches and intersection wide assessment, LOS is defined solely by control delay.



Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

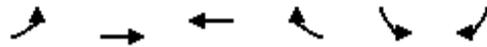
***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

APPENDIX D
SYNCHRO ANALYSIS

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour

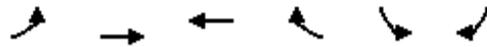
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1467	867	105	50	18
Future Volume (vph)	0	1467	867	105	50	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1837	3438	4541	0	3432	1583
Flt Permitted					0.950	
Satd. Flow (perm)	1837	3438	4541	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			54			20
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	0	1595	942	114	54	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1595	1056	0	54	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 10/23/2019

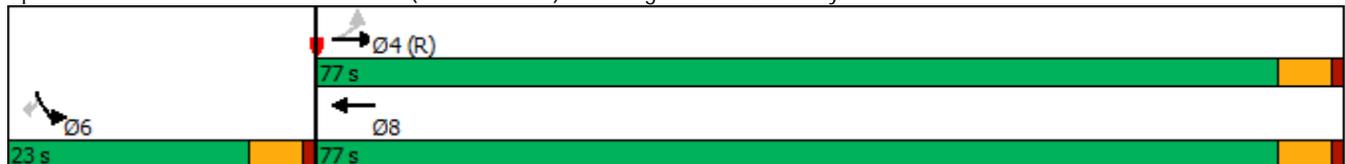


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.64	0.32		0.09	0.07
Control Delay		8.8	5.1		34.1	14.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		8.8	5.1		34.1	14.5
Queue Length 50th (ft)		240	72		14	1
Queue Length 95th (ft)		300	90		31	20
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2475	3284		617	301
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.64	0.32		0.09	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

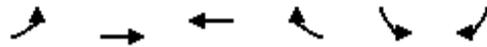
Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour

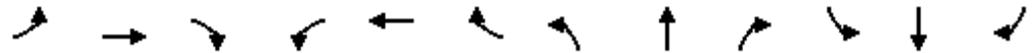
10/23/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑↑		↖↗	↖
Traffic Volume (veh/h)	0	1467	867	105	50	18
Future Volume (veh/h)	0	1467	867	105	50	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806
Adj Flow Rate, veh/h	0	1595	942	114	54	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	5	8	8	0	0
Cap, veh/h	72	2498	3124	377	601	275
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	543	3561	4498	524	3336	1530
Grp Volume(v), veh/h	0	1595	694	362	54	20
Grp Sat Flow(s),veh/h/ln	543	1735	1600	1664	1668	1530
Q Serve(g_s), s	0.0	23.8	7.8	7.8	1.3	1.1
Cycle Q Clear(g_c), s	0.0	23.8	7.8	7.8	1.3	1.1
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	72	2498	2304	1198	601	275
V/C Ratio(X)	0.00	0.64	0.30	0.30	0.09	0.07
Avail Cap(c_a), veh/h	72	2498	2304	1198	601	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.3	5.0	5.0	34.2	34.1
Incr Delay (d2), s/veh	0.0	1.3	0.1	0.1	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	2.0	2.1	0.6	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.5	5.1	5.2	34.5	34.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1595	1056		74	
Approach Delay, s/veh		8.5	5.1		34.5	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				25.8	3.3	9.8
Green Ext Time (p_c), s				17.8	0.1	8.5
Intersection Summary						
HCM 6th Ctrl Delay			7.9			
HCM 6th LOS			A			

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1706	5	6	876	0	1	0	22	0	0	0
Future Volume (vph)	2	1706	5	6	876	0	1	0	22	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.871				
Flt Protected	0.950			0.950				0.998				
Satd. Flow (prot)	1221	3406	0	1520	3183	0	0	1516	0	0	1909	0
Flt Permitted	0.950			0.950				0.998				
Satd. Flow (perm)	1221	3406	0	1520	3183	0	0	1516	0	0	1909	0
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1018			964			269			394	
Travel Time (s)		17.4			16.4			6.1			9.0	
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
Heavy Vehicles (%)	50%	4%	0%	17%	8%	0%	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	2	1796	5	6	922	0	1	0	23	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1801	0	6	922	0	0	24	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 10/23/2019

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	2	1706	5	6	876	0	1	0	22	0	0	0
Future Vol, veh/h	2	1706	5	6	876	0	1	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	4	0	17	8	0	0	0	5	0	0	0
Mvmt Flow	2	1796	5	6	922	0	1	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	922	0	0	1801	0	0	2276	2737	901	1836	2739	461
Stage 1	-	-	-	-	-	-	1803	1803	-	934	934	-
Stage 2	-	-	-	-	-	-	473	934	-	902	1805	-
Critical Hdwy	5.1	-	-	4.44	-	-	7.7	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.7	-	-	2.37	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	500	-	-	281	-	-	20	18	269	53	24	560
Stage 1	-	-	-	-	-	-	76	120	-	305	366	-
Stage 2	-	-	-	-	-	-	532	330	-	319	146	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	500	-	-	281	-	-	20	18	269	47	23	560
Mov Cap-2 Maneuver	-	-	-	-	-	-	20	18	-	47	23	-
Stage 1	-	-	-	-	-	-	76	120	-	304	358	-
Stage 2	-	-	-	-	-	-	521	323	-	290	145	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	28.8	0
HCM LOS			D	A

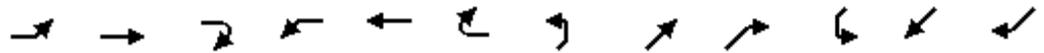
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	175	500	-	-	281	-	-	-
HCM Lane V/C Ratio	0.138	0.004	-	-	0.022	-	-	-
HCM Control Delay (s)	28.8	12.2	-	-	18.1	-	-	0
HCM Lane LOS	D	B	-	-	C	-	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	-

Year 2019 Existing Traffic Volumes

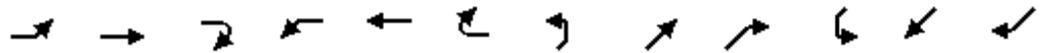
Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	235	1440	97	95	697	30	92	146	181	39	41	87
Future Volume (vph)	235	1440	97	95	697	30	92	146	181	39	41	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00	0.97	0.99		
Frt		0.991			0.994			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3452	0	1612	3342	0	1626	1720	1447	1440	1872	1623
Flt Permitted	0.177			0.088			0.726			0.615		
Satd. Flow (perm)	329	3452	0	149	3342	0	1243	1720	1405	922	1872	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			5	137			99
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	3%	10%	12%	7%	14%	11%	1%	6%	26%	2%	0%
Adj. Flow (vph)	267	1636	110	108	792	34	105	166	206	44	47	99
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	267	1746	0	108	826	0	105	199	173	44	47	99
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.38	0.87		0.60	0.74		0.32	0.73	0.39	0.39	0.43	0.14
Control Delay	24.6	31.7		52.5	47.2		50.7	73.8	14.0	58.4	82.6	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	31.7		52.5	47.2		50.7	73.8	14.0	58.4	82.6	6.0
Queue Length 50th (ft)	78	677		52	386		86	195	28	35	45	0
Queue Length 95th (ft)	155	960		117	466		142	296	91	71	94	38
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	722	2359		236	1942		340	403	473	210	434	728
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	0.37	0.74		0.46	0.43		0.31	0.49	0.37	0.21	0.11	0.14

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 137.3

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

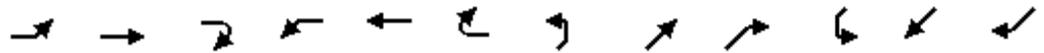
Ø2	Ø1	Ø4	Ø3
35 s	20 s	95 s	20 s
Ø6	Ø5	Ø8	Ø7
35 s	20 s	80 s	35 s

Year 2019 Existing Traffic Volumes

Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	235	1440	97	95	697	30	92	146	181	39	41	87
Future Volume (veh/h)	235	1440	97	95	697	30	92	146	181	39	41	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.98	0.99		0.97
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	1856	1856	1722	1796	1796	1737	1885	1811	1549	1909	1939
Adj Flow Rate, veh/h	267	1636	110	108	792	34	105	196	186	44	47	99
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	3	3	12	7	7	11	1	6	26	2	0
Cap, veh/h	716	2000	134	133	983	42	277	296	304	111	192	728
Arrive On Green	0.35	0.60	0.60	0.04	0.29	0.29	0.09	0.16	0.16	0.03	0.10	0.10
Sat Flow, veh/h	1781	3353	224	1640	3333	143	1654	1885	1505	1475	1909	1594
Grp Volume(v), veh/h	267	854	892	108	405	421	105	196	186	44	47	99
Grp Sat Flow(s),veh/h/ln	1781	1763	1814	1640	1706	1770	1654	1885	1505	1475	1909	1594
Q Serve(g_s), s	5.8	44.6	45.9	3.2	25.8	25.9	0.0	11.5	8.0	0.0	2.7	0.0
Cycle Q Clear(g_c), s	5.8	44.6	45.9	3.2	25.8	25.9	0.0	11.5	8.0	0.0	2.7	0.0
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	716	1052	1082	133	503	522	277	296	304	111	192	728
V/C Ratio(X)	0.37	0.81	0.82	0.81	0.81	0.81	0.38	0.66	0.61	0.40	0.25	0.14
Avail Cap(c_a), veh/h	716	1348	1388	270	1088	1128	340	481	451	251	487	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	18.6	18.8	54.4	38.4	38.4	46.5	46.7	42.8	55.1	48.8	19.2
Incr Delay (d2), s/veh	0.1	4.3	4.5	4.4	6.4	6.2	0.3	1.0	0.7	0.9	0.2	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	5.1	17.6	18.6	3.2	11.4	11.8	2.8	5.5	2.7	1.3	1.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	22.9	23.4	58.8	44.7	44.5	46.8	47.6	43.5	55.9	49.1	19.2
LnGrp LOS	C	C	C	E	D	D	D	D	D	E	D	B
Approach Vol, veh/h		2013			934			487				190
Approach Delay, s/veh		23.4			46.3			45.9				35.1
Approach LOS		C			D			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	23.5	10.2	75.2	15.5	16.8	45.7	39.7				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	13.5	5.2	47.9	2.0	4.7	7.8	27.9				
Green Ext Time (p_c), s	0.0	0.8	0.1	22.3	0.1	0.3	0.5	6.8				

Intersection Summary

HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

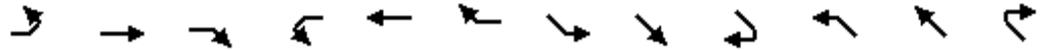
Weekday Peak AM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↕	↗
Traffic Volume (vph)	73	68	234	7	12	3	0	42	64	79	36	14
Future Volume (vph)	73	68	234	7	12	3	0	42	64	79	36	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850		0.957	
Flt Protected		0.975			0.985					0.950		
Satd. Flow (prot)	0	1825	1599	0	3482	0	0	1863	1669	1610	1434	0
Flt Permitted		0.838			0.896					0.604		
Satd. Flow (perm)	0	1569	1599	0	3167	0	0	1863	1669	1024	1434	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			279		4				160		17	
Link Speed (mph)		30			30			30		30		30
Link Distance (ft)		467			504			921		780		
Travel Time (s)		10.6			11.5			20.9		17.7		
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	2%	14%	0%	0%	0%	2%	0%	11%	6%	75%
Adj. Flow (vph)	87	81	279	8	14	4	0	50	76	94	43	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	168	279	0	26	0	0	50	76	94	60	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12		12		
Link Offset(ft)		0			0			0		0		
Crosswalk Width(ft)		16			16			16		16		
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		NA	Free	pm+pt	NA		
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
10/23/2019

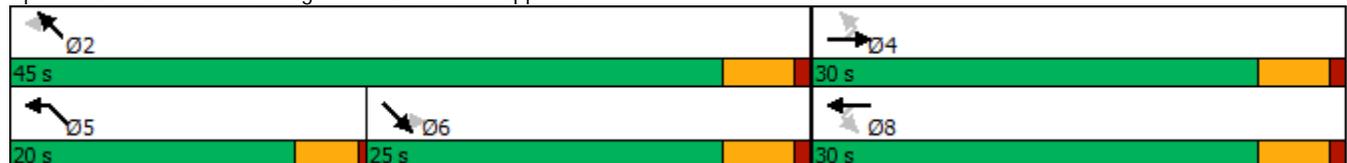


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.32	0.17		0.02			0.10	0.05	0.14	0.08	
Control Delay		20.8	0.2		15.1			21.5	0.0	8.8	7.0	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		20.8	0.2		15.1			21.5	0.0	8.8	7.0	
Queue Length 50th (ft)		58	0		3			18	0	19	9	
Queue Length 95th (ft)		97	0		11			40	0	37	23	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		523	1599		1058			496	1669	684	772	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.32	0.17		0.02			0.10	0.05	0.14	0.08	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↕		↕↕			↕	↕	↕	↕	
Traffic Volume (veh/h)	73	68	234	7	12	3	0	42	64	79	36	14
Future Volume (veh/h)	73	68	234	7	12	3	0	42	64	79	36	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1878	1878	1878	1870	1870	1976	1713	1788	1788
Adj Flow Rate, veh/h	87	81	0	8	14	4	0	50	0	94	43	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	0	0	0	2	2	0	11	6	6
Cap, veh/h	337	295		356	606	179	0	499		750	650	257
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.00	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	794	884	1651	840	1818	538	0	1870	1675	1632	1219	482
Grp Volume(v), veh/h	168	0	0	14	0	12	0	50	0	94	0	60
Grp Sat Flow(s),veh/h/ln	1678	0	1651	1584	0	1612	0	1870	1675	1632	0	1701
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.4	0.0	1.5	0.0	2.3	0.0	1.3
Cycle Q Clear(g_c), s	5.3	0.0	0.0	0.4	0.0	0.4	0.0	1.5	0.0	2.3	0.0	1.3
Prop In Lane	0.52		1.00	0.57		0.33	0.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	632	0		603	0	537	0	499		750	0	907
V/C Ratio(X)	0.27	0.00		0.02	0.00	0.02	0.00	0.10		0.13	0.00	0.07
Avail Cap(c_a), veh/h	632	0		603	0	537	0	499		750	0	907
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	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	0.0	16.8	0.0	16.8	0.0	20.7	0.0	9.8	0.0	8.5
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.1	0.0	0.4	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.2	0.0	0.1	0.0	0.7	0.0	0.8	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	0.0	16.9	0.0	16.9	0.0	21.1	0.0	10.1	0.0	8.6
LnGrp LOS	B	A		B	A	B	A	C		B	A	A
Approach Vol, veh/h		168	A		26			50	A		154	
Approach Delay, s/veh		19.4			16.9			21.1			9.5	
Approach LOS		B			B			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		3.3		7.3	4.3	3.5		2.4				
Green Ext Time (p_c), s		0.1		0.3	0.1	0.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

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

Year 2019 Existing Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	95	40	7	105	66	20
Future Volume (vph)	95	40	7	105	66	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.960				0.969	
Flt Protected	0.966			0.997		
Satd. Flow (prot)	1722	0	0	1875	1722	0
Flt Permitted	0.966			0.997		
Satd. Flow (perm)	1722	0	0	1875	1722	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	3%	0%	0%	2%	10%
Adj. Flow (vph)	110	47	8	122	77	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	0	0	130	100	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
10/23/2019

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	95	40	7	105	66	20
Future Vol, veh/h	95	40	7	105	66	20
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	3	0	0	2	10
Mvmt Flow	110	47	8	122	77	23

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	229	91	101	0	0
Stage 1	90	-	-	-	-
Stage 2	139	-	-	-	-
Critical Hdwy	6.42	6.23	4.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.2	-	-
Pot Cap-1 Maneuver	759	964	1504	-	-
Stage 1	934	-	-	-	-
Stage 2	888	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	753	962	1503	-	-
Mov Cap-2 Maneuver	753	-	-	-	-
Stage 1	927	-	-	-	-
Stage 2	887	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10.6	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1503	-	805	-	-
HCM Lane V/C Ratio	0.005	-	0.195	-	-
HCM Control Delay (s)	7.4	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Year 2019 Existing Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak AM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	17	19	3	197	67	4
Future Volume (vph)	17	19	3	197	67	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.992	
Flt Protected	0.977			0.999		
Satd. Flow (prot)	1640	0	0	1781	1810	0
Flt Permitted	0.977			0.999		
Satd. Flow (perm)	1640	0	0	1781	1810	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Adj. Flow (vph)	19	22	3	224	76	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	227	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

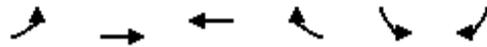
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	17	19	3	197	67	4
Future Vol, veh/h	17	19	3	197	67	4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	19	22	3	224	76	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	8.5	7.7
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	1%	47%	0%
Vol Thru, %	98%	0%	94%
Vol Right, %	0%	53%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	200	36	71
LT Vol	3	17	0
Through Vol	197	0	67
RT Vol	0	19	4
Lane Flow Rate	227	41	81
Geometry Grp	1	1	1
Degree of Util (X)	0.255	0.049	0.094
Departure Headway (Hd)	4.035	4.342	4.194
Convergence, Y/N	Yes	Yes	Yes
Cap	886	830	845
Service Time	2.08	2.342	2.266
HCM Lane V/C Ratio	0.256	0.049	0.096
HCM Control Delay	8.5	7.6	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.2	0.3

Year 2019 Existing Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	214	0	0	6	71
Future Volume (vph)	0	214	0	0	6	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected					0.996	
Satd. Flow (prot)	0	1791	1900	0	1803	0
Flt Permitted					0.996	
Satd. Flow (perm)	0	1791	1900	0	1803	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	0%	0%	0%	4%
Adj. Flow (vph)	0	240	0	0	7	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	240	0	0	87	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
10/23/2019

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	214	0	0	6	71
Future Vol, veh/h	0	214	0	0	6	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	0	0	0	4
Mvmt Flow	0	240	0	0	7	80

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	241
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	240
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	742
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	794
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	742
Mov Cap-2 Maneuver	-	-	-	-	742
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	794

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1041
HCM Lane V/C Ratio	-	-	-	-	0.083
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	95	7	43	0	125	0	12	20	18	2	0
Future Volume (vph)	118	95	7	43	0	125	0	12	20	18	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Frt		0.990			0.899			0.916				
Flt Protected	0.950				0.987						0.956	
Satd. Flow (prot)	1770	1864	0	0	1845	0	0	1585	0	0	1687	0
Flt Permitted	0.950				0.987						0.956	
Satd. Flow (perm)	1770	1864	0	0	1845	0	0	1585	0	0	1687	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	1%	0%	9%	0%	1%	0%	8%	10%	6%	50%	0%
Adj. Flow (vph)	136	109	8	49	0	144	0	14	23	21	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	117	0	0	193	0	0	37	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour

10/23/2019

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

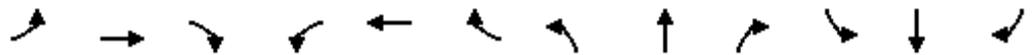
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↔			↖			↗	
Traffic Vol, veh/h	118	95	7	43	0	125	0	12	20	18	2	0
Future Vol, veh/h	118	95	7	43	0	125	0	12	20	18	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	1	0	9	0	1	0	8	10	6	50	0
Mvmt Flow	136	109	8	49	0	144	0	14	23	21	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.8	8.4	7.9	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	26%	90%
Vol Thru, %	38%	0%	93%	0%	10%
Vol Right, %	62%	0%	7%	74%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	118	102	168	20
LT Vol	0	118	0	43	18
Through Vol	12	0	95	0	2
RT Vol	20	0	7	125	0
Lane Flow Rate	37	136	117	193	23
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.048	0.197	0.152	0.224	0.033
Departure Headway (Hd)	4.688	5.239	4.672	4.181	5.228
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	766	678	757	863	687
Service Time	2.702	3.028	2.461	2.189	3.244
HCM Lane V/C Ratio	0.048	0.201	0.155	0.224	0.033
HCM Control Delay	7.9	9.3	8.3	8.4	8.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	0.7	0.5	0.9	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	133	104	34	126	126	1117	131	125	1293	8
Future Volume (vph)	0	0	133	104	34	126	126	1117	131	125	1293	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Fr _t			0.850		0.882				0.850			0.850
Fl _t Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1742	3240	1525	0	1761	4963	1435	1703	3505	1615
Fl _t Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1717	3222	1525	0	1760	4963	1435	1703	3505	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170		135				123			94
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		124			869			1287			1236	
Travel Time (s)		2.8			19.8			19.5			18.7	
Confl. Peds. (#/hr)	3		2	2		3	1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	2%	7%	6%	8%	2%	4%	12%	6%	3%	0%
Adj. Flow (vph)	0	0	143	112	37	135	135	1201	141	134	1390	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	143	112	172	0	135	1201	141	134	1390	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.39	0.38	0.66		0.61	0.40	0.15	0.62	0.66	0.01
Control Delay			7.1	44.7	24.9		52.1	11.1	3.1	52.4	15.1	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			7.1	44.7	24.9		52.1	11.1	3.1	52.4	15.1	0.0
Queue Length 50th (ft)			0	31	20		74	124	4	74	258	0
Queue Length 95th (ft)			37	63	90		146	202	33	146	430	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			502	1026	1104		372	3146	954	359	2222	1036
Starvation Cap Reductn			0	0	0		0	0	0	0	0	0
Spillback Cap Reductn			0	0	0		0	0	0	0	0	0
Storage Cap Reductn			0	0	0		0	0	0	0	0	0
Reduced v/c Ratio			0.28	0.11	0.16		0.36	0.38	0.15	0.37	0.63	0.01

Intersection Summary

Area Type: Other

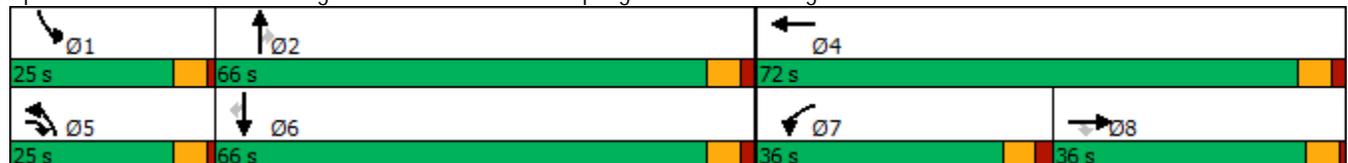
Cycle Length: 163

Actuated Cycle Length: 95

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons



Year 2019 Existing Traffic Volumes

Weekday Peak AM Hour

9: Washington Avenue Extension & Springsteen Road/Crossgates Commons

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	133	104	34	126	126	1117	131	125	1293	8
Future Volume (veh/h)	0	0	133	104	34	126	126	1117	131	125	1293	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1945	1773	1788	1788	1864	1835	1716	1811	1856	1900
Adj Flow Rate, veh/h	0	0	143	112	37	135	135	1201	141	134	1390	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	7	6	6	2	4	12	6	3	0
Cap, veh/h	0	206	329	183	78	285	170	2325	674	168	1642	749
Arrive On Green	0.00	0.00	0.10	0.06	0.23	0.23	0.10	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	0	1976	1639	3275	336	1225	1776	5009	1453	1725	3526	1608
Grp Volume(v), veh/h	0	0	143	112	0	172	135	1201	141	134	1390	9
Grp Sat Flow(s),veh/h/ln	0	1976	1639	1638	0	1561	1776	1670	1453	1725	1763	1608
Q Serve(g_s), s	0.0	0.0	6.3	2.8	0.0	7.8	6.1	14.0	4.8	6.3	28.7	0.2
Cycle Q Clear(g_c), s	0.0	0.0	6.3	2.8	0.0	7.8	6.1	14.0	4.8	6.3	28.7	0.2
Prop In Lane	0.00		1.00	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	206	329	183	0	363	170	2325	674	168	1642	749
V/C Ratio(X)	0.00	0.00	0.44	0.61	0.00	0.47	0.79	0.52	0.21	0.80	0.85	0.01
Avail Cap(c_a), veh/h	0	742	773	1189	0	1247	430	3638	1055	418	2561	1168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	29.0	38.1	0.0	27.3	36.5	15.6	13.1	36.5	19.5	11.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.2	0.0	0.4	3.1	0.3	0.2	3.3	2.2	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	0.0	0.0	0.0	1.1	0.0	2.9	2.7	4.6	0.0	2.6	10.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	29.3	39.4	0.0	27.7	39.7	15.8	13.3	39.8	21.6	11.9
LnGrp LOS	A	A	C	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		143			284			1477			1533	
Approach Delay, s/veh		29.3			32.3			17.8			23.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	44.3		25.2	12.9	44.5	10.6	14.6				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	8.3	16.0		9.8	8.1	30.7	4.8	8.3				
Green Ext Time (p_c), s	0.1	7.1		0.4	0.2	7.7	0.2	0.3				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2019 Existing Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
10/23/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	140	496	71	0	576	135	49	0	0
Future Volume (vph)	140	496	71	0	576	135	49	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.850				
Flt Protected	0.989					0.950			
Satd. Flow (prot)	3151	0	1818	0	1644	1529	1541	0	0
Flt Permitted	0.989					0.459			
Satd. Flow (perm)	3151	0	1818	0	1644	739	1541	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	533				619				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	151	533	76	0	619	145	53	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	684	0	76	0	619	145	53	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2019 Existing Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 10/23/2019

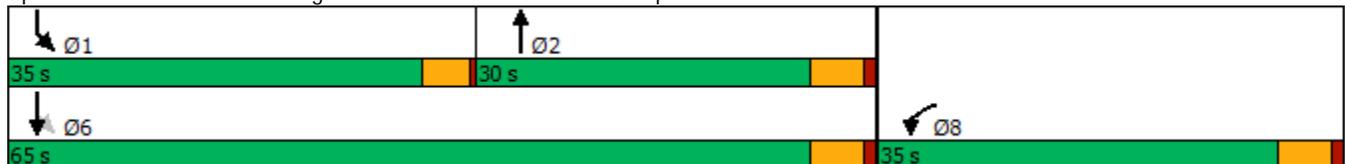


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.59		0.20		0.38	0.27	0.07		
Control Delay	5.8		15.7		0.7	6.5	5.7		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	5.8		15.7		0.7	6.5	5.7		
Queue Length 50th (ft)	12		13		0	12	4		
Queue Length 95th (ft)	48		44		0	39	18		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	2688		1308		1644	1290	1541		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.25		0.06		0.38	0.11	0.03		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 35.5
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2019 Existing Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour

10/23/2019

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (veh/h)	140	496	71	0	576	135	49	0	0
Future Volume (veh/h)	140	496	71	0	576	135	49	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1864	2017	1835	1954	1954	1684	1610		
Adj Flow Rate, veh/h	151	533	76	0	0	145	53		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	5	0	4	1	1	13	18		
Cap, veh/h	702	676	203			456	528		
Arrive On Green	0.40	0.40	0.11	0.00	0.00	0.11	0.33		
Sat Flow, veh/h	1776	1709	1835	1656	1656	1604	1610		
Grp Volume(v), veh/h	151	533	76	0	0	145	53		
Grp Sat Flow(s),veh/h/ln	1776	1709	1835	1656	1656	1604	1610		
Q Serve(g_s), s	2.0	9.9	1.4	0.0	0.0	2.6	0.8		
Cycle Q Clear(g_c), s	2.0	9.9	1.4	0.0	0.0	2.6	0.8		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	702	676	203			456	528		
V/C Ratio(X)	0.22	0.79	0.37			0.32	0.10		
Avail Cap(c_a), veh/h	1475	1420	1270			1662	2674		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	7.2	9.6	14.9	0.0	0.0	10.7	8.4		
Incr Delay (d2), s/veh	0.2	2.1	1.1	0.0	0.0	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	2.8	0.5	0.0	0.0	0.7	0.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	7.4	11.7	16.0	0.0	0.0	11.1	8.5		
LnGrp LOS	A	B	B			B	A		
Approach Vol, veh/h	684		76	A	A		198		
Approach Delay, s/veh	10.7		16.0				10.4		
Approach LOS	B		B				B		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	7.8	9.0				16.8	19.3		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	4.6	3.4				2.8	11.9		
Green Ext Time (p_c), s	0.4	0.3				0.3	2.4		

Intersection Summary

HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak AM Hour
 10/23/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	12	271	110	5	8	19
Future Volume (vph)	12	271	110	5	8	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.904	
Flt Protected		0.998			0.986	
Satd. Flow (prot)	0	3419	3519	0	1006	0
Flt Permitted		0.998			0.986	
Satd. Flow (perm)	0	3419	3519	0	1006	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	1%	0%	75%	84%
Adj. Flow (vph)	13	282	115	5	8	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	295	120	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak AM Hour
 10/23/2019

Intersection

Int Delay, s/veh 0.9

Movement SEL SET NWT NWR SWL SWR

Lane Configurations		↑↑	↑↑		↓	
Traffic Vol, veh/h	12	271	110	5	8	19
Future Vol, veh/h	12	271	110	5	8	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	3	1	0	75	84
Mvmt Flow	13	282	115	5	8	20

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	120	0	-	0	285	60
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	4.1	-	-	-	9.1	8.98
Critical Hdwy Stg 1	-	-	-	-	8.1	-
Critical Hdwy Stg 2	-	-	-	-	8.1	-
Follow-up Hdwy	2.2	-	-	-	4.25	4.14
Pot Cap-1 Maneuver	1480	-	-	-	485	775
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1480	-	-	-	480	775
Mov Cap-2 Maneuver	-	-	-	-	480	-
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	641	-

Approach SE NW SW

HCM Control Delay, s	0.3	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1480	-	656
HCM Lane V/C Ratio	-	-	0.008	-	0.043
HCM Control Delay (s)	-	-	7.5	0	10.7
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.1

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour

10/23/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	10	259	10	8	105	45	5	10	48	20	1	5
Future Volume (vph)	10	259	10	8	105	45	5	10	48	20	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.994			0.957			0.897			0.875	
Flt Protected		0.998			0.997			0.996		0.950		
Satd. Flow (prot)	0	3432	0	0	3086	0	0	1411	0	1641	1662	0
Flt Permitted		0.945			0.938			0.989		0.713		
Satd. Flow (perm)	0	3250	0	0	2903	0	0	1401	0	1222	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			48			51			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)									11	11		
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
Heavy Vehicles (%)	30%	2%	80%	25%	1%	30%	0%	80%	7%	10%	0%	0%
Adj. Flow (vph)	11	276	11	9	112	48	5	11	51	21	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	0	0	169	0	0	67	0	21	6	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.23			0.14			0.11		0.04	0.01	
Control Delay		8.2			6.1			4.3		7.7	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 10/23/2019

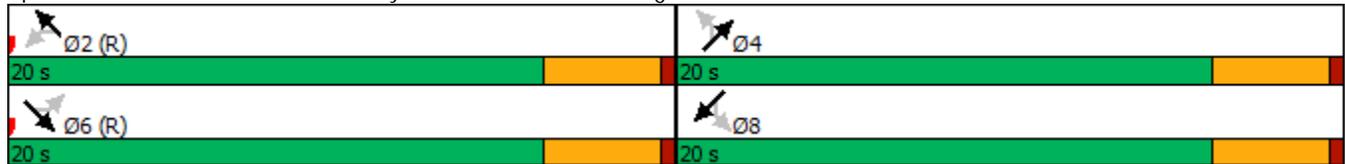


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.2			6.1			4.3		7.7	5.5	
Queue Length 50th (ft)		20			8			2		3	0	
Queue Length 95th (ft)		38			21			17		11	5	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1306			1190			591		488	667	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.14			0.11		0.04	0.01	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour

10/23/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	10	259	10	8	105	45	5	10	48	20	1	5
Future Volume (veh/h)	10	259	10	8	105	45	5	10	48	20	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	1988	1988	1988	1862	1862	1862	714	714	714	1752	1900	1900
Adj Flow Rate, veh/h	11	276	11	9	112	48	5	11	51	21	1	5
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	1	1	1	80	80	80	10	0	0
Cap, veh/h	113	1428	56	124	941	372	102	54	189	708	109	547
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	41	3571	139	62	2352	929	13	135	472	1247	273	1367
Grp Volume(v), veh/h	157	0	141	90	0	79	67	0	0	21	0	6
Grp Sat Flow(s),veh/h/ln	1967	0	1784	1817	0	1527	620	0	0	1247	0	1641
Q Serve(g_s), s	0.0	0.0	2.1	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	2.1	0.0	2.1	1.2	0.0	1.3	2.9	0.0	0.0	0.3	0.0	0.1
Prop In Lane	0.07		0.08	0.10		0.61	0.07		0.76	1.00		0.83
Lane Grp Cap(c), veh/h	883	0	714	826	0	611	345	0	0	708	0	656
V/C Ratio(X)	0.18	0.00	0.20	0.11	0.00	0.13	0.19	0.00	0.00	0.03	0.00	0.01
Avail Cap(c_a), veh/h	883	0	714	826	0	611	345	0	0	708	0	656
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	7.8	7.6	0.0	7.6	8.1	0.0	0.0	7.3	0.0	7.2
Incr Delay (d2), s/veh	0.4	0.0	0.6	0.3	0.0	0.4	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.7	0.4	0.0	0.4	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	0.0	8.4	7.8	0.0	8.0	9.3	0.0	0.0	7.4	0.0	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		298			169			67				27
Approach Delay, s/veh		8.3			7.9			9.3				7.3
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		3.3		4.9		4.1		2.3				
Green Ext Time (p_c), s		0.7		0.2		1.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.3								
HCM 6th LOS				A								

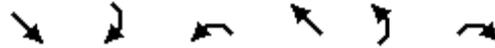
Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 10/23/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	 		 		 	 
Traffic Volume (vph)	318	9	7	153	5	272
Future Volume (vph)	318	9	7	153	5	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.996					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3509	0	1762	1671	1805	1615
Flt Permitted			0.500		0.950	
Satd. Flow (perm)	3509	0	928	1671	1805	1584
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3					306
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	11%	0%	0%
Adj. Flow (vph)	357	10	8	172	6	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	367	0	8	172	6	306
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 10/23/2019

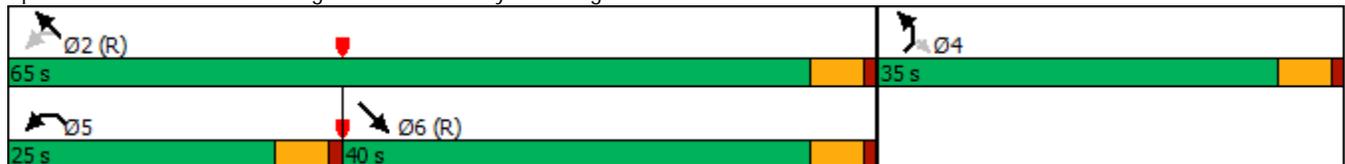


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.13		0.01	0.13	0.04	0.74
Control Delay	3.5		2.7	2.6	46.2	20.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	3.5		2.7	2.6	46.2	20.9
Queue Length 50th (ft)	14		1	13	4	21
Queue Length 95th (ft)	64		5	44	m13	72
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2784		922	1361	541	689
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.13		0.01	0.13	0.01	0.44

Intersection Summary

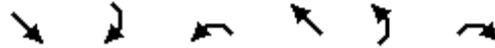
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 10/23/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↶	↗	↶	↗
Traffic Volume (veh/h)	318	9	7	153	5	272
Future Volume (veh/h)	318	9	7	153	5	272
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1864	1864	1979	1814	1900	1900
Adj Flow Rate, veh/h	357	10	8	172	6	306
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	11	0	0
Cap, veh/h	2216	62	718	1247	384	342
Arrive On Green	0.63	0.63	0.01	0.69	0.21	0.21
Sat Flow, veh/h	3613	98	1884	1814	1810	1610
Grp Volume(v), veh/h	179	188	8	172	6	306
Grp Sat Flow(s),veh/h/ln	1771	1847	1884	1814	1810	1610
Q Serve(g_s), s	4.2	4.2	0.1	3.3	0.3	18.5
Cycle Q Clear(g_c), s	4.2	4.2	0.1	3.3	0.3	18.5
Prop In Lane		0.05	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1115	1163	718	1247	384	342
V/C Ratio(X)	0.16	0.16	0.01	0.14	0.02	0.90
Avail Cap(c_a), veh/h	1115	1163	1080	1247	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	7.6	7.6	6.1	5.4	31.1	38.3
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.2	0.0	14.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.6	0.1	1.2	0.1	16.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.9	7.9	6.1	5.6	31.1	52.9
LnGrp LOS	A	A	A	A	C	D
Approach Vol, veh/h	367			180	312	
Approach Delay, s/veh	7.9			5.6	52.5	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.8		26.2	5.8	68.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		5.3		20.5	2.1	6.2
Green Ext Time (p_c), s		1.1		0.7	0.0	2.2
Intersection Summary						
HCM 6th Ctrl Delay			23.6			
HCM 6th LOS			C			

Year 2019 Existing Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
10/23/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	41	241	21	40	0	0
Future Volume (vph)	41	241	21	40	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.911			
Flt Protected		0.993				
Satd. Flow (prot)	0	1850	1731	0	0	1863
Flt Permitted		0.993				
Satd. Flow (perm)	0	1850	1731	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	254	22	42	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	297	64	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
10/23/2019

Intersection						
Int Delay, s/veh	0.9					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	41	241	21	40	0	0
Future Vol, veh/h	41	241	21	40	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	254	22	42	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	64	0	-	0	- 43
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.318
Pot Cap-1 Maneuver	1538	-	-	-	0 1027
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1538	-	-	-	- 1027
Mov Cap-2 Maneuver		-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1538	-	-	-
HCM Lane V/C Ratio	-	0.028	-	-	-
HCM Control Delay (s)	0	7.4	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	-

Year 2019 Existing Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1747	911	2	4	2
Future Volume (vph)	1	1747	911	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt					0.955	
Flt Protected	0.950				0.968	
Satd. Flow (prot)	1805	3471	3374	0	1756	0
Flt Permitted	0.950				0.968	
Satd. Flow (perm)	1805	3471	3374	0	1756	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	7%	0%	0%	0%
Adj. Flow (vph)	1	1920	1001	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1920	1003	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 10/23/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1747	911	2	4	2
Future Vol, veh/h	1	1747	911	2	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	7	0	0	0
Mvmt Flow	1	1920	1001	2	4	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1003	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	698	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	698	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	54
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	698	-	-	-	80
HCM Lane V/C Ratio	0.002	-	-	-	0.082
HCM Control Delay (s)	10.2	-	-	-	54
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

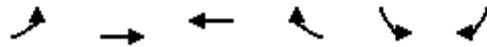
Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1096	1859	230	224	48
Future Volume (vph)	0	1096	1859	230	224	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.983			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4784	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4784	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			55			24
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1191	2021	250	243	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1191	2271	0	243	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 10/23/2019

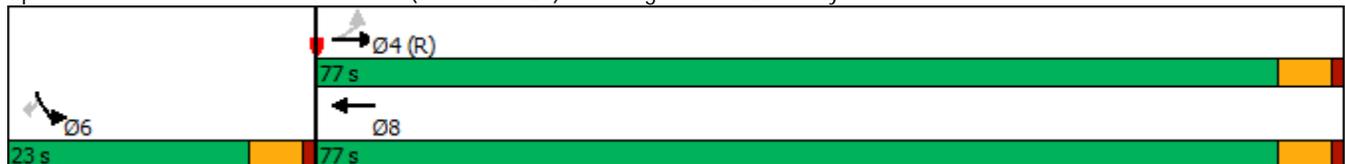


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.47	0.66		0.40	0.17
Control Delay		6.6	8.3		33.4	18.9
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.6	8.3		33.4	18.9
Queue Length 50th (ft)		144	234		71	15
Queue Length 95th (ft)		181	277		108	49
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3459		605	299
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.47	0.66		0.40	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

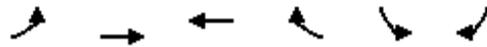
Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour

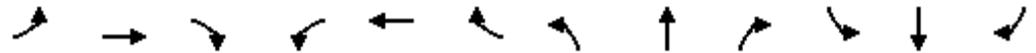
10/23/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑↑		↵↵	↵
Traffic Volume (veh/h)	0	1096	1859	230	224	48
Future Volume (veh/h)	0	1096	1859	230	224	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1191	2021	250	243	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	3277	400	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	165	3647	4718	556	3282	1505
Grp Volume(v), veh/h	0	1191	1486	785	243	52
Grp Sat Flow(s),veh/h/ln	165	1777	1681	1747	1641	1505
Q Serve(g_s), s	0.0	14.1	22.2	22.9	6.6	2.9
Cycle Q Clear(g_c), s	0.0	14.1	22.2	22.9	6.6	2.9
Prop In Lane	1.00			0.32	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1258	591	271
V/C Ratio(X)	0.00	0.47	0.61	0.62	0.41	0.19
Avail Cap(c_a), veh/h	72	2559	2420	1258	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.97	0.97
Uniform Delay (d), s/veh	0.0	5.9	7.0	7.1	36.3	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.5	1.0	2.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	6.1	6.6	2.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.5	7.5	8.1	38.4	36.3
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1191	2271		295	
Approach Delay, s/veh		6.5	7.7		38.0	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				16.1	8.6	24.9
Green Ext Time (p_c), s				11.2	0.7	27.8
Intersection Summary						
HCM 6th Ctrl Delay			9.7			
HCM 6th LOS			A			

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Volume (vph)	1	1173	10	23	1868	16	6	0	19	3	0	4
Future Volume (vph)	1	1173	10	23	1868	16	6	0	19	3	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.896				0.923
Flt Protected	0.950			0.950				0.989				0.979
Satd. Flow (prot)	1832	3464	0	1778	3367	0	0	1503	0	0	1725	0
Flt Permitted	0.950			0.950				0.989				0.979
Satd. Flow (perm)	1832	3464	0	1778	3367	0	0	1503	0	0	1725	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				394
Travel Time (s)		17.4			16.4			6.1				9.0
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
Heavy Vehicles (%)	0%	2%	20%	0%	2%	0%	17%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	1248	11	24	1987	17	6	0	20	3	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1259	0	24	2004	0	0	26	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 10/23/2019

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	1	1173	10	23	1868	16	6	0	19	3	0	4
Future Vol, veh/h	1	1173	10	23	1868	16	6	0	19	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	20	0	2	0	17	0	5	0	0	0
Mvmt Flow	1	1248	11	24	1987	17	6	0	20	3	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2004	0	0	1259	0	0	2298	3308	630	2670	3305	1002
Stage 1	-	-	-	-	-	-	1256	1256	-	2044	2044	-
Stage 2	-	-	-	-	-	-	1042	2052	-	626	1261	-
Critical Hdwy	4.1	-	-	4.1	-	-	8.04	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.67	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	290	-	-	559	-	-	15	7	410	13	10	251
Stage 1	-	-	-	-	-	-	149	229	-	66	112	-
Stage 2	-	-	-	-	-	-	208	89	-	459	261	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	290	-	-	559	-	-	14	7	410	12	10	251
Mov Cap-2 Maneuver	-	-	-	-	-	-	14	7	-	12	10	-
Stage 1	-	-	-	-	-	-	149	228	-	66	107	-
Stage 2	-	-	-	-	-	-	196	85	-	435	260	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			127.9			191.8		
HCM LOS							F			F		

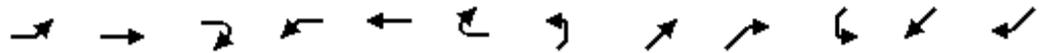
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	
Capacity (veh/h)		53	290	-	-	559	-	-	26
HCM Lane V/C Ratio		0.502	0.004	-	-	0.044	-	-	0.286
HCM Control Delay (s)		127.9	17.5	-	-	11.7	-	-	191.8
HCM Lane LOS		F	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)		1.9	0	-	-	0.1	-	-	0.9

Year 2019 Existing Traffic Volumes

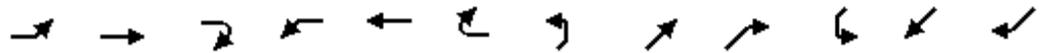
Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	142	948	98	126	1431	28	129	75	94	95	203	323
Future Volume (vph)	142	948	98	126	1431	28	129	75	94	95	203	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.986			0.997			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3517	0	1805	3519	0	1770	1751	1534	1634	1909	1607
Flt Permitted	0.067			0.097			0.240			0.588		
Satd. Flow (perm)	125	3517	0	184	3519	0	447	1751	1489	997	1909	1607
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1			5	85			54
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	1%	0%	0%	2%	14%	2%	0%	0%	11%	0%	1%
Adj. Flow (vph)	153	1019	105	135	1539	30	139	81	101	102	218	347
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	153	1124	0	135	1569	0	139	97	85	102	218	347
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

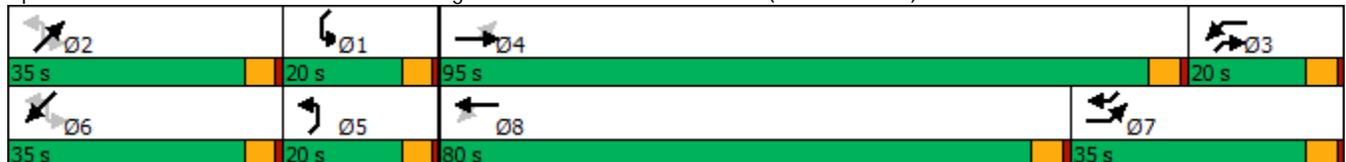


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.45	0.81		0.24	0.90		0.81	0.49	0.14	0.36	0.83	0.60
Control Delay	44.3	45.3		29.2	44.6		96.6	68.6	6.7	53.3	89.5	39.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	45.3		29.2	44.6		96.6	68.6	6.7	53.3	89.5	39.3
Queue Length 50th (ft)	86	538		43	773		117	97	0	84	220	247
Queue Length 95th (ft)	157	586		107	#1092		184	161	43	142	325	358
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	401	2103		558	1751		225	352	625	309	379	571
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	0.38	0.53		0.24	0.90		0.62	0.28	0.14	0.33	0.58	0.61

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 152
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

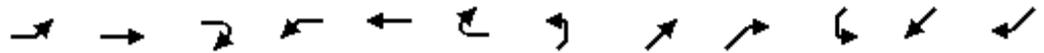


Year 2019 Existing Traffic Volumes

Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	142	948	98	126	1431	28	129	75	94	95	203	323
Future Volume (veh/h)	142	948	98	126	1431	28	129	75	94	95	203	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.98		0.98
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	1885	1885	1900	1870	1870	1870	1900	1900	1774	1939	1924
Adj Flow Rate, veh/h	153	1019	105	135	1539	30	139	96	91	102	218	347
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	1	0	2	2	2	0	0	11	0	1
Cap, veh/h	184	1274	131	464	1854	36	169	225	500	333	370	411
Arrive On Green	0.06	0.39	0.39	0.20	0.52	0.52	0.05	0.12	0.12	0.12	0.19	0.19
Sat Flow, veh/h	1781	3276	337	1810	3565	69	1781	1900	1569	1690	1939	1605
Grp Volume(v), veh/h	153	557	567	135	766	803	139	96	91	102	218	347
Grp Sat Flow(s),veh/h/ln	1781	1791	1822	1810	1777	1858	1781	1900	1569	1690	1939	1605
Q Serve(g_s), s	5.2	31.9	31.9	0.0	42.1	42.2	3.9	5.4	0.0	0.0	11.8	16.2
Cycle Q Clear(g_c), s	5.2	31.9	31.9	0.0	42.1	42.2	3.9	5.4	0.0	0.0	11.8	16.2
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	697	709	464	924	966	169	225	500	333	370	411
V/C Ratio(X)	0.83	0.80	0.80	0.29	0.83	0.83	0.82	0.43	0.18	0.31	0.59	0.84
Avail Cap(c_a), veh/h	532	1394	1418	464	1152	1205	307	493	721	342	503	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	31.3	31.3	35.5	23.4	23.5	52.6	47.3	28.9	42.5	42.6	40.9
Incr Delay (d2), s/veh	3.7	4.5	4.5	0.1	5.6	5.5	3.8	0.5	0.1	0.2	0.6	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	14.0	14.3	3.1	17.7	18.5	4.1	2.6	1.8	2.6	5.7	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	35.9	35.8	35.6	29.0	28.9	56.5	47.8	28.9	42.7	43.2	49.1
LnGrp LOS	E	D	D	D	C	C	E	D	C	D	D	D
Approach Vol, veh/h		1277			1704			326			667	
Approach Delay, s/veh		38.2			29.5			46.2			46.2	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	18.7	27.6	50.0	11.0	27.1	12.4	65.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	7.4	2.0	33.9	5.9	18.2	7.2	44.2				
Green Ext Time (p_c), s	0.1	0.4	0.2	11.1	0.2	1.2	0.3	15.9				

Intersection Summary

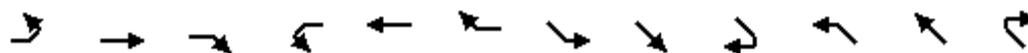
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

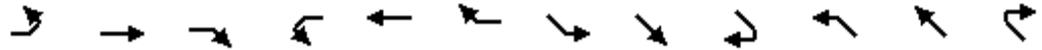
Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (vph)	39	55	105	35	178	19	10	55	223	266	76	52
Future Volume (vph)	39	55	105	35	178	19	10	55	223	266	76	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%			2%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987				0.850		0.939	
Flt Protected		0.980			0.992			0.993		0.950		
Satd. Flow (prot)	0	1881	1631	0	3667	0	0	1887	1669	1702	1745	0
Flt Permitted		0.806			0.901			0.956		0.591		
Satd. Flow (perm)	0	1547	1631	0	3330	0	0	1816	1669	1059	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160		14				253		59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		467			504			921			780	
Travel Time (s)		10.6			11.5			20.9			17.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	5%	0%	3%
Adj. Flow (vph)	44	63	119	40	202	22	11	63	253	302	86	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	119	0	264	0	0	74	253	302	145	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Free	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.21	0.07		0.24			0.15	0.15	0.42	0.15	
Control Delay		19.3	0.1		17.8			22.1	0.2	11.5	5.9	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		19.3	0.1		17.8			22.1	0.2	11.5	5.9	
Queue Length 50th (ft)		35	0		43			26	0	71	18	
Queue Length 95th (ft)		69	0		68			56	0	116	43	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		515	1631		1119			484	1669	716	958	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.21	0.07		0.24			0.15	0.15	0.42	0.15	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

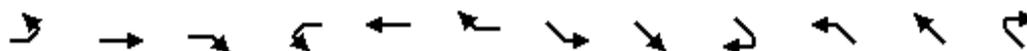
Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↖	↗	
Traffic Volume (veh/h)	39	55	105	35	178	19	10	55	223	266	76	52
Future Volume (veh/h)	39	55	105	35	178	19	10	55	223	266	76	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	44	62	0	40	202	22	11	62	0	302	86	59
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	5	0	0
Cap, veh/h	250	331		192	892	96	94	448		856	553	379
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.27	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	546	992	1677	389	2675	288	145	1681	1675	1717	1037	711
Grp Volume(v), veh/h	106	0	0	138	0	126	73	0	0	302	0	145
Grp Sat Flow(s),veh/h/ln	1537	0	1677	1709	0	1643	1827	0	1675	1717	0	1748
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	7.9	0.0	3.2
Cycle Q Clear(g_c), s	4.3	0.0	0.0	4.0	0.0	4.1	2.2	0.0	0.0	7.9	0.0	3.2
Prop In Lane	0.42		1.00	0.29		0.18	0.15		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	580	0		631	0	548	542	0		856	0	932
V/C Ratio(X)	0.18	0.00		0.22	0.00	0.23	0.13	0.00		0.35	0.00	0.16
Avail Cap(c_a), veh/h	580	0		631	0	548	542	0		856	0	932
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	18.0	0.0	18.0	21.0	0.0	0.0	11.1	0.0	8.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.8	0.0	1.0	0.5	0.0	0.0	1.1	0.0	0.4
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	1.3	0.0	0.0	1.8	0.0	1.6	1.0	0.0	0.0	3.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	0.0	18.8	0.0	19.0	21.5	0.0	0.0	12.2	0.0	9.3
LnGrp LOS	B	A		B	A	B	C	A		B	A	A
Approach Vol, veh/h		106	A		264			73	A		447	
Approach Delay, s/veh		18.3			18.9			21.5			11.3	
Approach LOS		B			B			C			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		5.2		6.3	9.9	4.2		6.1				
Green Ext Time (p_c), s		0.4		0.2	0.4	0.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

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

Year 2019 Existing Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	48	21	48	86	267	110
Future Volume (vph)	48	21	48	86	267	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.959				0.961	
Flt Protected	0.966			0.982		
Satd. Flow (prot)	1690	0	0	1847	1769	0
Flt Permitted	0.966			0.982		
Satd. Flow (perm)	1690	0	0	1847	1769	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	0%	0%	0%	0%	1%
Adj. Flow (vph)	55	24	55	99	307	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	0	0	154	433	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	48	21	48	86	267	110
Future Vol, veh/h	48	21	48	86	267	110
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	0	0	0	0	1
Mvmt Flow	55	24	55	99	307	126

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	581	372	434	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Critical Hdwy	6.46	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	469	678	1136	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	444	677	1135	-	-	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	13.6	3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1135	-	496	-	-
HCM Lane V/C Ratio	0.049	-	0.16	-	-
HCM Control Delay (s)	8.3	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Year 2019 Existing Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	6	12	17	117	365	13
Future Volume (vph)	6	12	17	117	365	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.995	
Flt Protected	0.984			0.994		
Satd. Flow (prot)	1533	0	0	1794	1901	0
Flt Permitted	0.984			0.994		
Satd. Flow (perm)	1533	0	0	1794	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	17%	0%	6%	0%	0%	0%
Adj. Flow (vph)	7	14	20	136	424	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	156	439	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

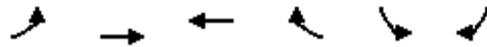
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	12	17	117	365	13
Future Vol, veh/h	6	12	17	117	365	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	17	0	6	0	0	0
Mvmt Flow	7	14	20	136	424	15
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	8.6	11
HCM LOS	A	A	B

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	13%	33%	0%
Vol Thru, %	87%	0%	97%
Vol Right, %	0%	67%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	134	18	378
LT Vol	17	6	0
Through Vol	117	0	365
RT Vol	0	12	13
Lane Flow Rate	156	21	440
Geometry Grp	1	1	1
Degree of Util (X)	0.195	0.03	0.493
Departure Headway (Hd)	4.499	5.125	4.034
Convergence, Y/N	Yes	Yes	Yes
Cap	801	702	883
Service Time	2.504	3.133	2.103
HCM Lane V/C Ratio	0.195	0.03	0.498
HCM Control Delay	8.6	8.3	11
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.7	0.1	2.8

Year 2019 Existing Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	123	0	0	12	378
Future Volume (vph)	0	123	0	0	12	378
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.869	
Fl _t Protected					0.998	
Satd. Flow (prot)	0	1791	1900	0	1840	0
Fl _t Permitted					0.998	
Satd. Flow (perm)	0	1791	1900	0	1840	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%
Adj. Flow (vph)	0	145	0	0	14	445
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	145	0	0	459	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	123	0	0	12	378
Future Vol, veh/h	0	123	0	0	12	378
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	1	0	0	0	1
Mvmt Flow	0	145	0	0	14	445

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	146
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	145
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	844
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	880
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	844
Mov Cap-2 Maneuver	-	-	-	-	844
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	880

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1077
HCM Lane V/C Ratio	-	-	-	-	0.426
HCM Control Delay (s)	0	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.2

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	45	3	29	0	202	0	25	36	100	2	0
Future Volume (vph)	87	45	3	29	0	202	0	25	36	100	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Frt		0.991			0.882			0.920				
Flt Protected	0.950				0.994						0.953	
Satd. Flow (prot)	1805	1883	0	0	1878	0	0	1739	0	0	1847	0
Flt Permitted	0.950				0.994						0.953	
Satd. Flow (perm)	1805	1883	0	0	1878	0	0	1739	0	0	1847	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	95	49	3	32	0	220	0	27	39	109	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	52	0	0	252	0	0	66	0	0	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour

10/23/2019

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷			↷			↶	
Traffic Vol, veh/h	87	45	3	29	0	202	0	25	36	100	2	0
Future Vol, veh/h	87	45	3	29	0	202	0	25	36	100	2	0
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	95	49	3	32	0	220	0	27	39	109	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9	8.8	8.1	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	13%	98%
Vol Thru, %	41%	0%	94%	0%	2%
Vol Right, %	59%	0%	6%	87%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	87	48	231	102
LT Vol	0	87	0	29	100
Through Vol	25	0	45	0	2
RT Vol	36	0	3	202	0
Lane Flow Rate	66	95	52	251	111
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.085	0.148	0.074	0.288	0.156
Departure Headway (Hd)	4.593	5.636	5.088	4.128	5.072
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	776	635	703	869	705
Service Time	2.644	3.376	2.828	2.163	3.119
HCM Lane V/C Ratio	0.085	0.15	0.074	0.289	0.157
HCM Control Delay	8.1	9.4	8.2	8.8	9.1
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.2	1.2	0.6

Year 2019 Existing Traffic Volumes

Weekday Peak PM Hour

9: Washington Avenue Extension & Springsteen Road/Crossgates Commons

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	181	286	53	251	173	1355	343	234	1337	5
Future Volume (vph)	0	0	181	286	53	251	173	1355	343	234	1337	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.876				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1759	3333	1615	0	1796	5110	1560	1787	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1734	3315	1615	0	1795	5110	1560	1787	3574	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		177				266			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					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
Heavy Vehicles (%)	0%	0%	1%	4%	0%	1%	0%	1%	3%	1%	1%	0%
Adj. Flow (vph)	0	0	193	304	56	267	184	1441	365	249	1422	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	193	304	323	0	184	1441	365	249	1422	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.62	0.61	0.82		0.69	0.55	0.39	0.77	0.73	0.01
Control Delay			40.0	49.3	38.0		59.8	19.7	6.1	60.9	23.0	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.0	49.3	38.0		59.8	19.7	6.1	60.9	23.0	0.0
Queue Length 50th (ft)			87	105	102		123	238	34	168	377	0
Queue Length 95th (ft)			178	153	213		218	336	107	#339	588	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			369	911	1042		327	2795	973	325	1955	907
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			0.52	0.33	0.31		0.56	0.52	0.38	0.77	0.73	0.01

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 110.3

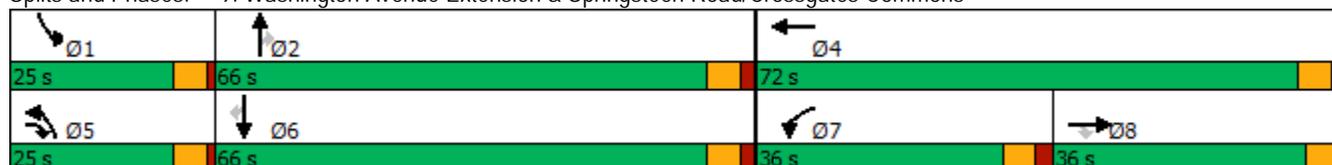
Natural Cycle: 80

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘↗	↘		↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	0	0	181	286	53	251	173	1355	343	234	1337	5
Future Volume (veh/h)	0	0	181	286	53	251	173	1355	343	234	1337	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1976	1961	1817	1876	1876	1894	1879	1850	1885	1885	1900
Adj Flow Rate, veh/h	0	0	193	304	56	267	184	1441	365	249	1422	5
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	1	4	0	0	0	1	3	1	1	0
Cap, veh/h	0	240	399	377	81	387	215	2088	637	278	1587	712
Arrive On Green	0.00	0.00	0.12	0.11	0.29	0.29	0.12	0.41	0.41	0.15	0.44	0.44
Sat Flow, veh/h	0	1976	1653	3357	282	1347	1804	5130	1566	1795	3582	1608
Grp Volume(v), veh/h	0	0	193	304	0	323	184	1441	365	249	1422	5
Grp Sat Flow(s),veh/h/ln	0	1976	1653	1679	0	1629	1804	1710	1566	1795	1791	1608
Q Serve(g_s), s	0.0	0.0	11.3	9.9	0.0	19.8	11.3	26.1	20.3	15.3	41.3	0.2
Cycle Q Clear(g_c), s	0.0	0.0	11.3	9.9	0.0	19.8	11.3	26.1	20.3	15.3	41.3	0.2
Prop In Lane	0.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	240	399	377	0	468	215	2088	637	278	1587	712
V/C Ratio(X)	0.00	0.00	0.48	0.81	0.00	0.69	0.86	0.69	0.57	0.90	0.90	0.01
Avail Cap(c_a), veh/h	0	544	653	895	0	955	320	2734	834	319	1909	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	36.8	48.8	0.0	35.7	48.7	27.5	25.8	46.7	29.0	17.5
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.6	0.0	0.7	9.5	0.7	1.2	22.4	5.7	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	0.0	0.0	10.7	4.2	0.0	7.9	5.5	10.1	18.4	8.3	17.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	37.1	50.3	0.0	36.4	58.2	28.2	27.0	69.1	34.6	17.5
LnGrp LOS	A	A	D	D	A	D	E	C	C	E	C	B
Approach Vol, veh/h		193			627			1990			1676	
Approach Delay, s/veh		37.1			43.1			30.7			39.7	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.4	51.8		38.3	18.4	55.9	18.6	19.7				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	17.3	28.1		21.8	13.3	43.3	11.9	13.3				
Green Ext Time (p_c), s	0.1	10.1		0.8	0.2	6.6	0.7	0.4				

Intersection Summary

HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2019 Existing Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour

10/23/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	415	505	148	0	384	632	225	0	0
Future Volume (vph)	415	505	148	0	384	632	225	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.918				0.850				
Flt Protected	0.978					0.950			
Satd. Flow (prot)	3308	0	1890	0	1660	1727	1699	0	0
Flt Permitted	0.978					0.458			
Satd. Flow (perm)	3308	0	1890	0	1660	833	1699	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	314				404				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	437	532	156	0	404	665	237	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	969	0	156	0	404	665	237	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2019 Existing Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 10/23/2019

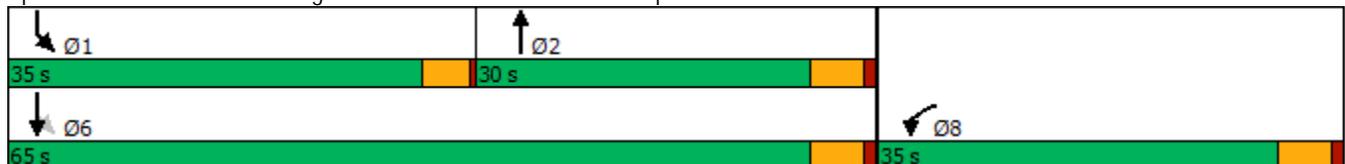


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.80		0.52		0.24	0.84	0.25		
Control Delay	22.4		38.2		0.3	23.9	9.8		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	22.4		38.2		0.3	23.9	9.8		
Queue Length 50th (ft)	153		71		0	197	52		
Queue Length 95th (ft)	252		142		0	#420	106		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1567		659		1660	873	1366		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.62		0.24		0.24	0.76	0.17		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 75
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2019 Existing Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour

10/23/2019

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (veh/h)	415	505	148	0	384	632	225	0	0
Future Volume (veh/h)	415	505	148	0	384	632	225	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1970	1970	1876	1773		
Adj Flow Rate, veh/h	437	532	156	0	0	665	237		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0	7		
Cap, veh/h	644	596	219			763	917		
Arrive On Green	0.35	0.35	0.12	0.00	0.00	0.35	0.52		
Sat Flow, veh/h	1847	1709	1894	1669	1669	1787	1773		
Grp Volume(v), veh/h	437	532	156	0	0	665	237		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1669	1669	1787	1773		
Q Serve(g_s), s	15.1	21.9	5.9	0.0	0.0	22.5	5.6		
Cycle Q Clear(g_c), s	15.1	21.9	5.9	0.0	0.0	22.5	5.6		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	644	596	219			763	917		
V/C Ratio(X)	0.68	0.89	0.71			0.87	0.26		
Avail Cap(c_a), veh/h	743	688	635			884	1427		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	20.7	23.0	31.8	0.0	0.0	16.1	10.0		
Incr Delay (d2), s/veh	2.1	12.8	4.3	0.0	0.0	8.5	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.4	10.3	2.9	0.0	0.0	9.9	2.0		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	22.8	35.8	36.0	0.0	0.0	24.6	10.2		
LnGrp LOS	C	D	D			C	B		
Approach Vol, veh/h	969		156	A	A		902		
Approach Delay, s/veh	29.9		36.0				20.8		
Approach LOS	C		D				C		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.0	13.6				43.6	31.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	24.5	7.9				7.6	23.9		
Green Ext Time (p_c), s	1.4	0.7				1.5	2.0		
Intersection Summary									
HCM 6th Ctrl Delay			26.3						
HCM 6th LOS			C						
Notes									
User approved volume balancing among the lanes for turning movement.									
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.									

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak PM Hour
 10/23/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	27	168	333	63	76	61
Future Volume (vph)	27	168	333	63	76	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.976		0.940	
Flt Protected		0.993			0.973	
Satd. Flow (prot)	0	3383	3488	0	1658	0
Flt Permitted		0.993			0.973	
Satd. Flow (perm)	0	3383	3488	0	1658	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	0%	0%	1%	28%
Adj. Flow (vph)	30	185	366	69	84	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	215	435	0	151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak PM Hour
 10/23/2019

Intersection

Int Delay, s/veh 3.2

Movement SEL SET NWT NWR SWL SWR

Lane Configurations		↑↑	↑↑		↓	
Traffic Vol, veh/h	27	168	333	63	76	61
Future Vol, veh/h	27	168	333	63	76	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	1	28
Mvmt Flow	30	185	366	69	84	67

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	435	0	-	0	554	218
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	4.1	-	-	-	7.62	7.86
Critical Hdwy Stg 1	-	-	-	-	6.62	-
Critical Hdwy Stg 2	-	-	-	-	6.62	-
Follow-up Hdwy	2.2	-	-	-	3.51	3.58
Pot Cap-1 Maneuver	1135	-	-	-	411	695
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	833	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1135	-	-	-	399	695
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	833	-

Approach SE NW SW

HCM Control Delay, s	1.2	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1135	-	492
HCM Lane V/C Ratio	-	-	0.026	-	0.306
HCM Control Delay (s)	-	-	8.3	0.1	15.5
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.1	-	1.3

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour

10/23/2019

													
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	34	207	3	7	349	287	1	0	7	196	2	46	
Future Volume (vph)	34	207	3	7	349	287	1	0	7	196	2	46	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Grade (%)		-3%			2%			0%				0%	
Storage Length (ft)	0		0	0		0	0		0	55		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor								0.98		0.99			
Frt		0.998			0.933			0.882				0.856	
Flt Protected		0.993			0.999			0.994		0.950			
Satd. Flow (prot)	0	3513	0	0	3244	0	0	1636	0	1787	1626	0	
Flt Permitted		0.849			0.952			0.984		0.752			
Satd. Flow (perm)	0	3003	0	0	3092	0	0	1620	0	1403	1626	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		3			293			27				47	
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		786			547			189				414	
Travel Time (s)		17.9			12.4			4.3				9.4	
Confl. Peds. (#/hr)									11	11			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	18%	1%	0%	0%	0%	6%	0%	0%	0%	1%	0%	0%	
Adj. Flow (vph)	35	211	3	7	356	293	1	0	7	200	2	47	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	249	0	0	656	0	0	8	0	200	49	0	
Enter Blocked Intersection	No	No	No	No	No	No							
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		0			0			12				12	
Link Offset(ft)		0			0			0				0	
Crosswalk Width(ft)		16			16			16				16	
Two way Left Turn Lane													
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		6			2			4				8	
Permitted Phases	6			2			4			8			
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0		
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0		
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5		
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0		
Lead/Lag													
Lead-Lag Optimize?													
v/c Ratio		0.21			0.46			0.01		0.36	0.07		
Control Delay		8.3			5.9			1.5		10.7	3.6		
Queue Delay		0.0			0.0			0.0		0.0	0.0		

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019

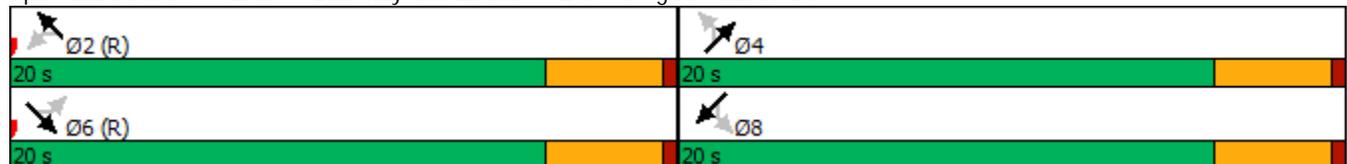


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.3			5.9			1.5		10.7	3.6	
Queue Length 50th (ft)		17			27			0		29	0	
Queue Length 95th (ft)		34			54			3		65	13	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1203			1412			664		561	678	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.21			0.46			0.01		0.36	0.07	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	34	207	3	7	349	287	1	0	7	196	2	46
Future Volume (veh/h)	34	207	3	7	349	287	1	0	7	196	2	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	35	211	3	7	356	293	1	0	7	200	2	47
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	216	1199	17	95	745	579	135	47	561	744	26	617
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40
Sat Flow, veh/h	252	2999	43	9	1862	1447	83	117	1401	1408	66	1542
Grp Volume(v), veh/h	124	0	125	363	0	293	8	0	0	200	0	49
Grp Sat Flow(s),veh/h/ln	1479	0	1815	1871	0	1447	1602	0	0	1408	0	1607
Q Serve(g_s), s	0.1	0.0	1.8	0.0	0.0	6.1	0.0	0.0	0.0	3.8	0.0	0.8
Cycle Q Clear(g_c), s	6.2	0.0	1.8	5.8	0.0	6.1	0.1	0.0	0.0	3.9	0.0	0.8
Prop In Lane	0.28		0.02	0.02		1.00	0.12		0.87	1.00		0.96
Lane Grp Cap(c), veh/h	707	0	726	840	0	579	742	0	0	744	0	643
V/C Ratio(X)	0.17	0.00	0.17	0.43	0.00	0.51	0.01	0.00	0.00	0.27	0.00	0.08
Avail Cap(c_a), veh/h	707	0	726	840	0	579	742	0	0	744	0	643
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	7.7	8.9	0.0	9.0	7.2	0.0	0.0	8.4	0.0	7.4
Incr Delay (d2), s/veh	0.5	0.0	0.5	1.6	0.0	3.1	0.0	0.0	0.0	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.6	2.1	0.0	1.9	0.0	0.0	0.0	1.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	0.0	8.3	10.5	0.0	12.2	7.3	0.0	0.0	9.3	0.0	7.7
LnGrp LOS	A	A	A	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		249			656			8				249
Approach Delay, s/veh		8.2			11.3			7.3				8.9
Approach LOS		A			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		8.1		2.1		8.2		5.9				
Green Ext Time (p_c), s		2.6		0.0		0.8		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				10.1								
HCM 6th LOS				B								

Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

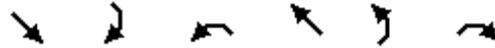
Weekday Peak PM Hour
 10/23/2019



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	314	96	176	509	134	195
Future Volume (vph)	314	96	176	509	134	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.965					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3432	0	1762	1801	1787	1599
Flt Permitted			0.454		0.950	
Satd. Flow (perm)	3432	0	842	1801	1787	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	44					212
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%
Adj. Flow (vph)	341	104	191	553	146	212
Shared Lane Traffic (%)						
Lane Group Flow (vph)	445	0	191	553	146	212
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019

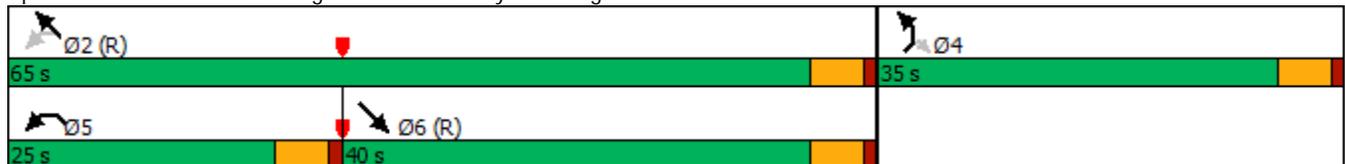


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.20		0.26	0.40	0.61	0.54
Control Delay	8.1		4.5	5.5	61.1	18.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	8.1		4.5	5.5	61.1	18.6
Queue Length 50th (ft)	51		26	97	94	25
Queue Length 95th (ft)	92		56	184	m135	82
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2176		828	1377	536	618
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.20		0.23	0.40	0.27	0.34

Intersection Summary

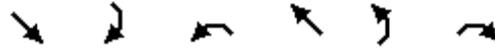
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		←	↑	↑	→
Traffic Volume (veh/h)	314	96	176	509	134	195
Future Volume (veh/h)	314	96	176	509	134	195
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1879	1879	1979	1934	1885	1885
Adj Flow Rate, veh/h	341	104	191	553	146	212
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	0	3	1	1
Cap, veh/h	1717	516	759	1433	285	254
Arrive On Green	0.63	0.63	0.06	0.74	0.16	0.16
Sat Flow, veh/h	2800	813	1884	1934	1795	1598
Grp Volume(v), veh/h	223	222	191	553	146	212
Grp Sat Flow(s),veh/h/ln	1785	1733	1884	1934	1795	1598
Q Serve(g_s), s	5.2	5.4	3.3	10.4	7.4	12.9
Cycle Q Clear(g_c), s	5.2	5.4	3.3	10.4	7.4	12.9
Prop In Lane		0.47	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1133	1100	759	1433	285	254
V/C Ratio(X)	0.20	0.20	0.25	0.39	0.51	0.84
Avail Cap(c_a), veh/h	1133	1100	1030	1433	539	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.66	0.66	1.00	1.00
Uniform Delay (d), s/veh	7.6	7.7	5.0	4.7	38.5	40.8
Incr Delay (d2), s/veh	0.4	0.4	0.1	0.5	1.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.0	1.1	3.5	3.4	11.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.0	8.1	5.1	5.2	39.9	47.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	445			744	358	
Approach Delay, s/veh	8.0			5.2	44.7	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		79.1		20.9	10.7	68.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		12.4		14.9	5.3	7.4
Green Ext Time (p_c), s		4.2		1.0	0.4	2.8
Intersection Summary						
HCM 6th Ctrl Delay			15.1			
HCM 6th LOS			B			

Year 2019 Existing Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak PM Hour
10/23/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	198	103	90	213	0	0
Future Volume (vph)	198	103	90	213	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.905			
Flt Protected		0.968				
Satd. Flow (prot)	0	1803	1720	0	0	1863
Flt Permitted		0.968				
Satd. Flow (perm)	0	1803	1720	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	215	112	98	232	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	327	330	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↔			↗
Traffic Vol, veh/h	198	103	90	213	0	0
Future Vol, veh/h	198	103	90	213	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	112	98	232	0	0

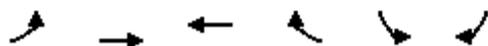
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	330	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1229	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1229	-	826
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	5.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1229	-	-	-
HCM Lane V/C Ratio	-	0.175	-	-	-
HCM Control Delay (s)	0	8.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-	-

Year 2019 Existing Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	971	2052	17	10	6
Future Volume (vph)	8	971	2052	17	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999		0.949	
Flt Protected	0.950				0.970	
Satd. Flow (prot)	1805	3539	3536	0	1749	0
Flt Permitted	0.950				0.970	
Satd. Flow (perm)	1805	3539	3536	0	1749	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	8	1001	2115	18	10	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	1001	2133	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	8	971	2052	17	10	6
Future Vol, veh/h	8	971	2052	17	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	1001	2115	18	10	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	2133	0	0 2641 1067
Stage 1	-	-	- 2124 -
Stage 2	-	-	- 517 -
Critical Hdwy	4.1	-	- 6.8 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.8 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	258	-	- 19 221
Stage 1	-	-	- 79 -
Stage 2	-	-	- 569 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	258	-	- 18 221
Mov Cap-2 Maneuver	-	-	- 18 -
Stage 1	-	-	- 77 -
Stage 2	-	-	- 569 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	261.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	258	-	-	-	27
HCM Lane V/C Ratio	0.032	-	-	-	0.611
HCM Control Delay (s)	19.4	-	-	-	261.3
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	1.9

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

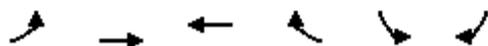
Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1040	1122	512	369	48
Future Volume (vph)	0	1040	1122	512	369	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.953			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4638	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4638	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			294			52
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1130	1220	557	401	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1130	1777	0	401	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 10/23/2019

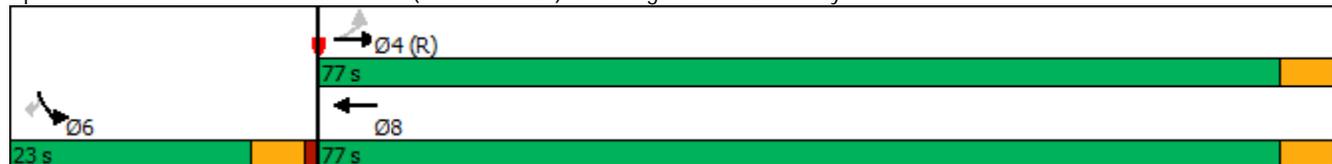


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.44	0.52		0.66	0.16
Control Delay		6.4	5.6		33.5	8.1
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.4	5.6		33.5	8.1
Queue Length 50th (ft)		133	127		124	10
Queue Length 95th (ft)		168	156		150	m23
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3421		605	322
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.44	0.52		0.66	0.16

Intersection Summary

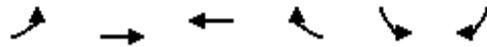
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2019 Existing Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 10/23/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗↖		↘↖	↘
Traffic Volume (veh/h)	0	1040	1122	512	369	48
Future Volume (veh/h)	0	1040	1122	512	369	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1130	1220	557	401	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	2443	1107	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	268	3647	3559	1538	3282	1505
Grp Volume(v), veh/h	0	1130	1209	568	401	52
Grp Sat Flow(s),veh/h/ln	268	1777	1681	1570	1641	1505
Q Serve(g_s), s	0.0	13.1	15.7	15.9	11.4	2.9
Cycle Q Clear(g_c), s	0.0	13.1	15.7	15.9	11.4	2.9
Prop In Lane	1.00			0.98	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1130	591	271
V/C Ratio(X)	0.00	0.44	0.50	0.50	0.68	0.19
Avail Cap(c_a), veh/h	72	2559	2420	1130	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.79	0.79
Uniform Delay (d), s/veh	0.0	5.7	6.1	6.1	38.3	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.4	4.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	4.2	4.1	4.9	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.3	6.3	6.5	43.2	36.1
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1130	1777		453	
Approach Delay, s/veh		6.3	6.4		42.4	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				15.1	13.4	17.9
Green Ext Time (p_c), s				10.3	0.7	20.1
Intersection Summary						
HCM 6th Ctrl Delay			11.2			
HCM 6th LOS			B			

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1149	3	8	1159	3	7	0	8	5	0	2
Future Volume (vph)	2	1149	3	8	1159	3	7	0	8	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.928				0.961
Flt Protected	0.950			0.950				0.977				0.966
Satd. Flow (prot)	1832	3507	0	1778	3403	0	0	1657	0	0	1773	0
Flt Permitted	0.950			0.950				0.977				0.966
Satd. Flow (perm)	1832	3507	0	1778	3403	0	0	1657	0	0	1773	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				394
Travel Time (s)		17.4			16.4			6.1				9.0
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
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	1209	3	8	1220	3	7	0	8	5	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1212	0	8	1223	0	0	15	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 10/23/2019

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	2	1149	3	8	1159	3	7	0	8	5	0	2
Future Vol, veh/h	2	1149	3	8	1159	3	7	0	8	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	1209	3	8	1220	3	7	0	8	5	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1223	0	0	1212	0	0	1841	2454	606	1847	2454	612
Stage 1	-	-	-	-	-	-	1215	1215	-	1238	1238	-
Stage 2	-	-	-	-	-	-	626	1239	-	609	1216	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.7	7	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	577	-	-	583	-	-	43	27	438	52	36	449
Stage 1	-	-	-	-	-	-	183	240	-	203	268	-
Stage 2	-	-	-	-	-	-	428	233	-	469	274	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	577	-	-	583	-	-	42	27	438	50	35	449
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	27	-	50	35	-
Stage 1	-	-	-	-	-	-	182	239	-	202	264	-
Stage 2	-	-	-	-	-	-	420	230	-	458	273	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			59.9			65.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	577	-	-	583	-	-	67
HCM Lane V/C Ratio	0.195	0.004	-	-	0.014	-	-	0.11
HCM Control Delay (s)	59.9	11.3	-	-	11.3	-	-	65.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.4

Year 2019 Existing Traffic Volumes

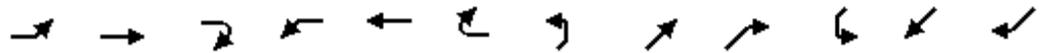
Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	176	944	92	72	897	86	132	100	76	80	85	169
Future Volume (vph)	176	944	92	72	897	86	132	100	76	80	85	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					0.99
Frt		0.987			0.987			0.989	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3531	0	1805	3513	0	1787	1785	1534	1680	1909	1607
Flt Permitted	0.168			0.148			0.699			0.681		
Satd. Flow (perm)	316	3531	0	281	3513	0	1313	1785	1534	1204	1909	1585
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			8			2	77			134
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	0%	0%	1%	6%	1%	0%	0%	8%	0%	1%
Adj. Flow (vph)	183	983	96	75	934	90	138	104	79	83	89	176
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	183	1079	0	75	1024	0	138	112	71	83	89	176
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

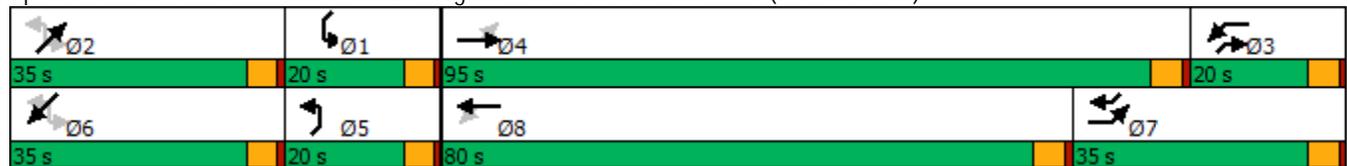


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.52	0.65		0.30	0.68		0.38	0.35	0.13	0.34	0.42	0.38
Control Delay	25.5	19.5		16.3	22.9		30.8	37.5	6.3	31.9	46.2	11.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	19.5		16.3	22.9		30.8	37.5	6.3	31.9	46.2	11.4
Queue Length 50th (ft)	34	193		13	198		52	51	0	31	40	14
Queue Length 95th (ft)	99	396		46	407		130	129	30	85	120	83
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	820	3333		459	3099		542	673	532	450	718	697
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	0.22	0.32		0.16	0.33		0.25	0.17	0.13	0.18	0.12	0.25

Intersection Summary

Area Type:	Other
Cycle Length:	170
Actuated Cycle Length:	84.3
Natural Cycle:	70
Control Type:	Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2019 Existing Traffic Volumes

Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	176	944	92	72	897	86	132	100	76	80	85	169
Future Volume (veh/h)	176	944	92	72	897	86	132	100	76	80	85	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1885	1885	1885	1900	1900	1819	1939	1924
Adj Flow Rate, veh/h	183	983	96	75	934	90	138	104	79	83	89	176
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	1	1	1	0	0	8	0	1
Cap, veh/h	373	1460	143	323	1384	133	308	186	252	287	180	286
Arrive On Green	0.08	0.44	0.44	0.06	0.42	0.42	0.07	0.10	0.10	0.07	0.09	0.09
Sat Flow, veh/h	1795	3296	322	1810	3301	318	1795	1900	1605	1733	1939	1626
Grp Volume(v), veh/h	183	534	545	75	507	517	138	104	79	83	89	176
Grp Sat Flow(s),veh/h/ln	1795	1791	1827	1810	1791	1828	1795	1900	1605	1733	1939	1626
Q Serve(g_s), s	0.0	14.3	14.3	0.0	13.9	13.9	0.0	3.2	0.0	0.0	2.6	1.0
Cycle Q Clear(g_c), s	0.0	14.3	14.3	0.0	13.9	13.9	0.0	3.2	0.0	0.0	2.6	1.0
Prop In Lane	1.00		0.18	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	793	809	323	751	767	308	186	252	287	180	286
V/C Ratio(X)	0.49	0.67	0.67	0.23	0.67	0.67	0.45	0.56	0.31	0.29	0.49	0.61
Avail Cap(c_a), veh/h	1114	2662	2716	664	2218	2264	619	941	891	596	961	940
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	13.4	13.4	20.3	14.2	14.2	25.3	26.1	22.6	25.5	26.1	23.1
Incr Delay (d2), s/veh	0.4	2.1	2.1	0.1	2.3	2.2	0.4	1.0	0.3	0.2	0.8	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	2.2	5.1	5.1	0.8	5.0	5.1	1.8	1.4	0.9	1.1	1.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	15.5	15.5	20.4	16.5	16.5	25.7	27.0	22.9	25.7	26.9	23.9
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1262			1099			321				348
Approach Delay, s/veh		16.5			16.7			25.4				25.1
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	10.9	8.6	31.8	9.5	10.6	10.0	30.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	5.2	2.0	16.3	2.0	4.6	2.0	15.9				
Green Ext Time (p_c), s	0.1	0.4	0.1	10.5	0.2	0.6	0.3	9.5				

Intersection Summary

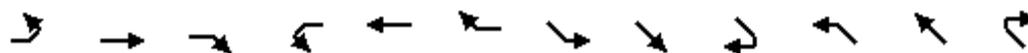
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

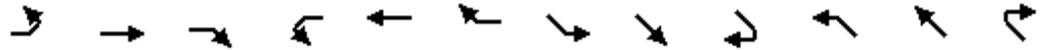
Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↖	↖
Traffic Volume (vph)	50	115	189	72	145	30	15	32	96	139	65	88
Future Volume (vph)	50	115	189	72	145	30	15	32	96	139	65	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%			2%	
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.982				0.850		0.913	
Flt Protected		0.985			0.986			0.984		0.950		
Satd. Flow (prot)	0	1867	1584	0	3601	0	0	1870	1669	1702	1632	0
Flt Permitted		0.838			0.820			0.899		0.604		
Satd. Flow (perm)	0	1589	1584	0	2995	0	0	1708	1669	1082	1632	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199		22				160		93	
Link Speed (mph)		30			30			30		30		
Link Distance (ft)		467			504			921		780		
Travel Time (s)		10.6			11.5			20.9		17.7		
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
Heavy Vehicles (%)	4%	0%	3%	3%	1%	0%	0%	0%	0%	5%	0%	9%
Adj. Flow (vph)	53	121	199	76	153	32	16	34	101	146	68	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	199	0	261	0	0	50	101	146	161	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12		12		
Link Offset(ft)		0			0			0		0		
Crosswalk Width(ft)		16			16			16		16		
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Free	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
10/23/2019

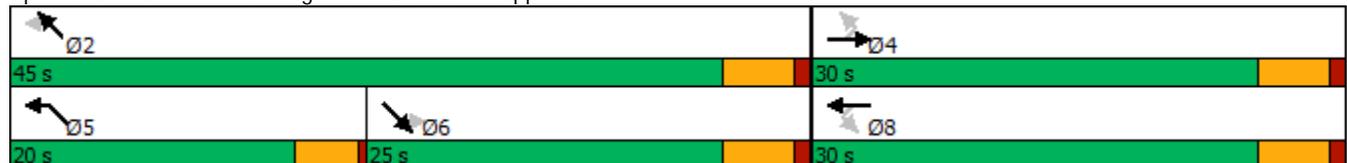


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.33	0.13		0.26			0.11	0.06	0.20	0.18	
Control Delay		20.9	0.2		17.5			21.6	0.1	9.3	4.7	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		20.9	0.2		17.5			21.6	0.1	9.3	4.7	
Queue Length 50th (ft)		60	0		41			18	0	31	14	
Queue Length 95th (ft)		109	0		70			43	0	59	41	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		529	1584		1013			455	1669	723	913	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.33	0.13		0.26			0.11	0.06	0.20	0.18	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2019 Existing Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↖	↗	
Traffic Volume (veh/h)	50	115	189	72	145	30	15	32	96	139	65	88
Future Volume (veh/h)	50	115	189	72	145	30	15	32	96	139	65	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1934	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	53	121	0	76	153	32	16	34	0	146	68	93
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	3	1	1	1	0	0	0	5	0	0
Cap, veh/h	203	440		339	651	139	173	339		869	383	524
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.27	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	422	1321	1639	793	1954	417	412	1271	1675	1717	718	982
Grp Volume(v), veh/h	174	0	0	137	0	124	50	0	0	146	0	161
Grp Sat Flow(s),veh/h/ln	1742	0	1639	1544	0	1620	1683	0	1675	1717	0	1700
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	3.4	0.0	3.7
Cycle Q Clear(g_c), s	4.9	0.0	0.0	4.0	0.0	4.2	1.5	0.0	0.0	3.4	0.0	3.7
Prop In Lane	0.30		1.00	0.56		0.26	0.32		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	643	0		589	0	540	512	0		869	0	907
V/C Ratio(X)	0.27	0.00		0.23	0.00	0.23	0.10	0.00		0.17	0.00	0.18
Avail Cap(c_a), veh/h	643	0		589	0	540	512	0		869	0	907
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	0.0	18.0	0.0	18.1	20.7	0.0	0.0	10.0	0.0	9.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.9	0.0	1.0	0.4	0.0	0.0	0.4	0.0	0.4
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	2.3	0.0	0.0	1.8	0.0	1.6	0.7	0.0	0.0	1.3	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	0.0	0.0	18.9	0.0	19.0	21.1	0.0	0.0	10.4	0.0	9.4
LnGrp LOS	B	A		B	A	B	C	A		B	A	A
Approach Vol, veh/h		174	A		261			50	A		307	
Approach Delay, s/veh		19.3			19.0			21.1			9.9	
Approach LOS		B			B			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		5.7		6.9	5.4	3.5		6.2				
Green Ext Time (p_c), s		0.4		0.4	0.2	0.1		0.6				

Intersection Summary

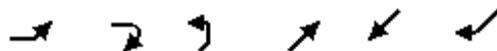
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

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

Year 2019 Existing Traffic Volumes
5: Rapp Road & Gipp Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	35	21	22	123	122	46
Future Volume (vph)	35	21	22	123	122	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949				0.963	
Flt Protected	0.970			0.993		
Satd. Flow (prot)	1749	0	0	1868	1778	0
Flt Permitted	0.970			0.993		
Satd. Flow (perm)	1749	0	0	1868	1778	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	3	2	2			3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	40	24	25	141	140	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	166	193	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	35	21	22	123	122	46
Future Vol, veh/h	35	21	22	123	122	46
Conflicting Peds, #/hr	3	2	2	0	0	3
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	40	24	25	141	140	53

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	364	172	196	0	0
Stage 1	170	-	-	-	-
Stage 2	194	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	639	877	1389	-	-
Stage 1	865	-	-	-	-
Stage 2	844	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	624	873	1386	-	-
Mov Cap-2 Maneuver	624	-	-	-	-
Stage 1	846	-	-	-	-
Stage 2	842	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10.7	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1386	-	699	-	-
HCM Lane V/C Ratio	0.018	-	0.092	-	-
HCM Control Delay (s)	7.6	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Year 2019 Existing Traffic Volumes
6: Rapp Road & Pine Lane

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	13	17	141	155	15
Future Volume (vph)	13	13	17	141	155	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.988	
Flt Protected	0.976			0.995		
Satd. Flow (prot)	1531	0	0	1793	1887	0
Flt Permitted	0.976			0.995		
Satd. Flow (perm)	1531	0	0	1793	1887	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	0%	0%	1%	0%	0%
Adj. Flow (vph)	14	14	18	147	161	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	165	177	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

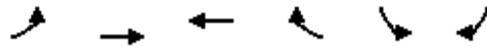
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	13	13	17	141	155	15
Future Vol, veh/h	13	13	17	141	155	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	15	0	0	1	0	0
Mvmt Flow	14	14	18	147	161	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8.1	8.1
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	11%	50%	0%
Vol Thru, %	89%	0%	91%
Vol Right, %	0%	50%	9%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	158	26	170
LT Vol	17	13	0
Through Vol	141	0	155
RT Vol	0	13	15
Lane Flow Rate	165	27	177
Geometry Grp	1	1	1
Degree of Util (X)	0.187	0.035	0.198
Departure Headway (Hd)	4.101	4.682	4.017
Convergence, Y/N	Yes	Yes	Yes
Cap	869	769	887
Service Time	2.158	2.682	2.074
HCM Lane V/C Ratio	0.19	0.035	0.2
HCM Control Delay	8.1	7.9	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.7

Year 2019 Existing Traffic Volumes
7: Rapp Road & Springsteen Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Volume (vph)	0	154	0	0	0	170
Future Volume (vph)	0	154	0	0	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected						
Satd. Flow (prot)	0	1791	1900	0	1853	0
Fl _t Permitted						
Satd. Flow (perm)	0	1791	1900	0	1853	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	164	0	0	0	181
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	0	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	154	0	0	0	170
Future Vol, veh/h	0	154	0	0	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	164	0	0	0	181

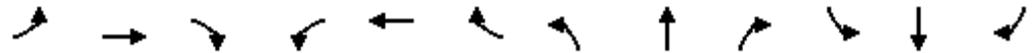
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	165
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	164
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	823
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	862
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	823
Mov Cap-2 Maneuver	-	-	-	-	823
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	862

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	-	-	-	-	0.166
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	38	6	15	0	108	0	6	20	24	2	0
Future Volume (vph)	110	38	6	15	0	108	0	6	20	24	2	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.881			0.898				
Flt Protected	0.950				0.994						0.956	
Satd. Flow (prot)	1787	1829	0	0	1876	0	0	1698	0	0	1853	0
Flt Permitted	0.950				0.994						0.956	
Satd. Flow (perm)	1787	1829	0	0	1876	0	0	1698	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			746	
Travel Time (s)		11.1			2.8			9.8			17.0	
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
Heavy Vehicles (%)	1%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	120	41	7	16	0	117	0	7	22	26	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	48	0	0	133	0	0	29	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
10/23/2019

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	110	38	6	15	0	108	0	6	20	24	2	0
Future Vol, veh/h	110	38	6	15	0	108	0	6	20	24	2	0
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
Heavy Vehicles, %	1	0	11	0	0	0	0	0	0	0	0	0
Mvmt Flow	120	41	7	16	0	117	0	7	22	26	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.6	7.5	7.3	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	92%
Vol Thru, %	23%	0%	86%	0%	8%
Vol Right, %	77%	0%	14%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	110	44	123	26
LT Vol	0	110	0	15	24
Through Vol	6	0	38	0	2
RT Vol	20	0	6	108	0
Lane Flow Rate	28	120	48	134	28
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.033	0.172	0.061	0.142	0.038
Departure Headway (Hd)	4.151	5.184	4.571	3.817	4.795
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	866	689	779	943	750
Service Time	2.16	2.941	2.327	1.825	2.805
HCM Lane V/C Ratio	0.032	0.174	0.062	0.142	0.037
HCM Control Delay	7.3	9	7.6	7.5	8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.2	0.5	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	82	403	51	356	70	522	455	389	563	5
Future Volume (vph)	0	0	82	403	51	356	70	522	455	389	563	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99								
Frt			0.850		0.869				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1777	3432	1620	0	1796	5060	1591	1805	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1752	3414	1620	0	1796	5060	1591	1805	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		257				469			94
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		124			869			1287			1236	
Travel Time (s)		2.8			19.8			19.5			18.7	
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	0	0	85	415	53	367	72	538	469	401	580	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	85	415	420	0	72	538	469	401	580	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.32	0.65	0.82		0.42	0.29	0.53	0.92	0.32	0.01
Control Delay			8.1	35.9	26.4		43.5	19.8	4.7	59.9	13.4	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			8.1	35.9	26.4		43.5	19.8	4.7	59.9	13.4	0.0
Queue Length 50th (ft)			0	103	79		35	68	0	197	83	0
Queue Length 95th (ft)			28	147	188		80	111	65	#415	154	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			514	1249	1348		436	3686	1286	438	2603	1202
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			0.17	0.33	0.31		0.17	0.15	0.36	0.92	0.22	0.00

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 82.6

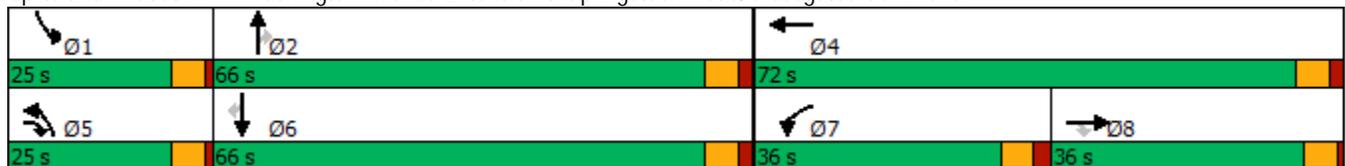
Natural Cycle: 90

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘↗	↘		↖	↑↑↑	↖	↘	↑↑	↖
Traffic Volume (veh/h)	0	0	82	403	51	356	70	522	455	389	563	5
Future Volume (veh/h)	0	0	82	403	51	356	70	522	455	389	563	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1976	1862	1876	1876	1894	1864	1879	1900	1885	1900
Adj Flow Rate, veh/h	0	0	85	415	53	367	72	538	469	401	580	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	0	0	0	2	1	0	1	0
Cap, veh/h	0	146	210	506	58	399	94	1732	542	369	1763	793
Arrive On Green	0.00	0.00	0.07	0.15	0.28	0.28	0.05	0.34	0.34	0.20	0.49	0.49
Sat Flow, veh/h	0	1976	1661	3440	204	1414	1804	5090	1593	1810	3582	1610
Grp Volume(v), veh/h	0	0	85	415	0	420	72	538	469	401	580	5
Grp Sat Flow(s),veh/h/ln	0	1976	1661	1720	0	1618	1804	1697	1593	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	4.6	11.5	0.0	24.7	3.9	7.6	27.0	20.0	9.6	0.2
Cycle Q Clear(g_c), s	0.0	0.0	4.6	11.5	0.0	24.7	3.9	7.6	27.0	20.0	9.6	0.2
Prop In Lane	0.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	146	210	506	0	457	94	1732	542	369	1763	793
V/C Ratio(X)	0.00	0.00	0.40	0.82	0.00	0.92	0.77	0.31	0.87	1.09	0.33	0.01
Avail Cap(c_a), veh/h	0	625	612	1052	0	1089	368	3114	974	369	2191	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	39.5	40.6	0.0	34.1	45.9	23.9	30.2	39.0	15.1	12.7
Incr Delay (d2), s/veh	0.0	0.0	0.5	1.3	0.0	3.3	4.9	0.1	6.0	72.1	0.2	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	0.0	0.0	4.4	4.9	0.0	9.9	1.8	2.9	22.1	15.8	3.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	39.9	41.8	0.0	37.4	50.8	24.0	36.2	111.2	15.2	12.7
LnGrp LOS	A	A	D	D	A	D	D	C	D	F	B	B
Approach Vol, veh/h		85			835			1079			986	
Approach Delay, s/veh		39.9			39.6			31.1			54.2	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	39.4		33.7	10.1	54.3	20.4	13.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	22.0	29.0		26.7	5.9	11.6	13.5	6.6				
Green Ext Time (p_c), s	0.0	4.4		1.0	0.1	2.6	1.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2019 Existing Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 10/23/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	476	669	267	0	506	518	273	0	0
Future Volume (vph)	476	669	267	0	506	518	273	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912				0.850				
Flt Protected	0.980					0.950			
Satd. Flow (prot)	3292	0	1890	0	1644	1727	1783	0	0
Flt Permitted	0.980					0.249			
Satd. Flow (perm)	3292	0	1890	0	1644	453	1783	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	437				527				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	496	697	278	0	527	540	284	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1193	0	278	0	527	540	284	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2019 Existing Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 10/23/2019

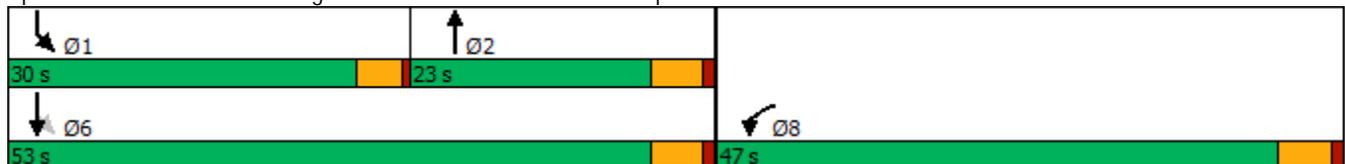


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	47.0		23.0			30.0	53.0		
Total Split (%)	47.0%		23.0%			30.0%	53.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.85		0.78		0.32	0.84	0.29		
Control Delay	22.6		51.3		0.5	31.8	13.4		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	22.6		51.3		0.5	31.8	13.4		
Queue Length 50th (ft)	206		143		0	196	78		
Queue Length 95th (ft)	286		#305		0	#486	168		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1850		400		1644	641	1008		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.64		0.69		0.32	0.84	0.28		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 86.1
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2019 Existing Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
10/23/2019

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 								
Traffic Volume (veh/h)	476	669	267	0	506	518	273	0	0
Future Volume (veh/h)	476	669	267	0	506	518	273	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1954	1954	1876	1847		
Adj Flow Rate, veh/h	496	697	278	0	0	540	284		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	1	1	0	2		
Cap, veh/h	787	728	317			569	869		
Arrive On Green	0.43	0.43	0.17	0.00	0.00	0.26	0.47		
Sat Flow, veh/h	1847	1709	1894	1656	1656	1787	1847		
Grp Volume(v), veh/h	496	697	278	0	0	540	284		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1656	1656	1787	1847		
Q Serve(g_s), s	20.3	38.2	13.8	0.0	0.0	23.0	9.3		
Cycle Q Clear(g_c), s	20.3	38.2	13.8	0.0	0.0	23.0	9.3		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	787	728	317			569	869		
V/C Ratio(X)	0.63	0.96	0.88			0.95	0.33		
Avail Cap(c_a), veh/h	803	743	353			582	918		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	21.7	26.9	39.2	0.0	0.0	22.7	16.0		
Incr Delay (d2), s/veh	1.5	22.8	19.9	0.0	0.0	25.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.8	19.3	8.1	0.0	0.0	13.2	3.9		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	23.3	49.7	59.1	0.0	0.0	47.7	16.2		
LnGrp LOS	C	D	E			D	B		
Approach Vol, veh/h	1193		278	A	A		824		
Approach Delay, s/veh	38.7		59.1				36.9		
Approach LOS	D		E				D		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	29.3	21.2				50.4	46.1		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	26.0	18.0				48.0	42.0		
Max Q Clear Time (g_c+I1), s	25.0	15.8				11.3	40.2		
Green Ext Time (p_c), s	0.2	0.3				1.8	1.0		

Intersection Summary

HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Saturday Peak Hour
 10/23/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	91	202	197	166	115	95
Future Volume (vph)	91	202	197	166	115	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.931		0.939	
Flt Protected		0.985			0.973	
Satd. Flow (prot)	0	3368	3312	0	1753	0
Flt Permitted		0.985			0.973	
Satd. Flow (perm)	0	3368	3312	0	1753	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	4%	0%	1%	0%	15%
Adj. Flow (vph)	99	220	214	180	125	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	319	394	0	228	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2019 Existing Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Saturday Peak Hour
 10/23/2019

Intersection

Int Delay, s/veh 6

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	91	202	197	166	115	95
Future Vol, veh/h	91	202	197	166	115	95
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	4	0	1	0	15
Mvmt Flow	99	220	214	180	125	103

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	395	0	0	614	198
Stage 1	-	-	-	305	-
Stage 2	-	-	-	309	-
Critical Hdwy	4.12	-	-	7.6	7.6
Critical Hdwy Stg 1	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	6.6	-
Follow-up Hdwy	2.21	-	-	3.5	3.45
Pot Cap-1 Maneuver	1167	-	-	374	754
Stage 1	-	-	-	680	-
Stage 2	-	-	-	676	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1166	-	-	337	753
Mov Cap-2 Maneuver	-	-	-	337	-
Stage 1	-	-	-	613	-
Stage 2	-	-	-	675	-

Approach

	SE	NW	SW
HCM Control Delay, s	2.7	0	21
HCM LOS			C

Minor Lane/Major Mvmt

	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1166	449
HCM Lane V/C Ratio	-	-	0.085	0.508
HCM Control Delay (s)	-	-	8.4	21
HCM Lane LOS	-	-	A	C
HCM 95th %tile Q(veh)	-	-	0.3	2.8

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	43	274	0	8	320	479	2	3	13	322	6	41
Future Volume (vph)	43	274	0	8	320	479	2	3	13	322	6	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.99		0.99	0.99	
Frt					0.911			0.901			0.868	
Flt Protected		0.993			0.999			0.995		0.950		
Satd. Flow (prot)	0	3550	0	0	3233	0	0	1681	0	1787	1631	0
Flt Permitted		0.812			0.951			0.985		0.745		
Satd. Flow (perm)	0	2903	0	0	3078	0	0	1664	0	1393	1631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					510			14			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)			3	3			1		8	8		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
Heavy Vehicles (%)	12%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	46	291	0	9	340	510	2	3	14	343	6	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	0	0	859	0	0	19	0	343	50	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.29			0.56			0.03		0.62	0.07	
Control Delay		9.0			5.2			5.1		15.7	3.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019

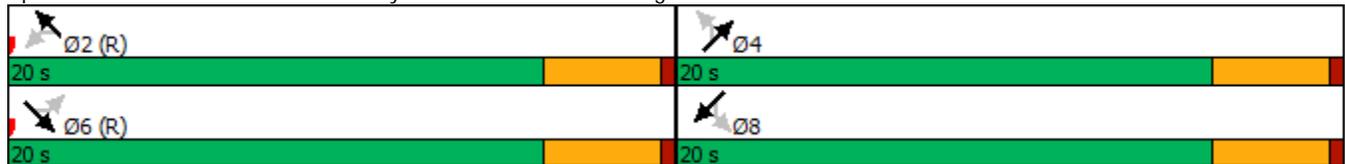


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		9.0			5.2			5.1		15.7	3.9	
Queue Length 50th (ft)		25			25			1		57	1	
Queue Length 95th (ft)		45			56			8		#125	13	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1161			1537			674		557	678	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.29			0.56			0.03		0.62	0.07	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	43	274	0	8	320	479	2	3	13	322	6	41
Future Volume (veh/h)	43	274	0	8	320	479	2	3	13	322	6	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	46	291	0	9	340	510	2	3	14	343	6	44
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, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	146	967	0	98	741	577	125	148	486	742	78	574
Arrive On Green	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	70	2509	0	13	1853	1442	63	370	1214	1399	196	1436
Grp Volume(v), veh/h	149	188	0	349	0	510	19	0	0	343	0	50
Grp Sat Flow(s),veh/h/ln	757	1732	0	1867	0	1442	1648	0	0	1399	0	1631
Q Serve(g_s), s	1.2	2.9	0.0	0.0	0.0	13.1	0.0	0.0	0.0	7.4	0.0	0.8
Cycle Q Clear(g_c), s	14.3	2.9	0.0	5.5	0.0	13.1	0.3	0.0	0.0	7.7	0.0	0.8
Prop In Lane	0.31		0.00	0.03		1.00	0.11		0.74	1.00		0.88
Lane Grp Cap(c), veh/h	420	693	0	839	0	577	759	0	0	742	0	653
V/C Ratio(X)	0.35	0.27	0.00	0.42	0.00	0.88	0.03	0.00	0.00	0.46	0.00	0.08
Avail Cap(c_a), veh/h	420	693	0	839	0	577	759	0	0	742	0	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	8.1	0.0	8.8	0.0	11.1	7.3	0.0	0.0	9.5	0.0	7.4
Incr Delay (d2), s/veh	2.3	1.0	0.0	1.5	0.0	17.8	0.1	0.0	0.0	2.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.0	0.0	2.0	0.0	5.8	0.1	0.0	0.0	2.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	9.0	0.0	10.4	0.0	28.9	7.3	0.0	0.0	11.5	0.0	7.7
LnGrp LOS	B	A	A	B	A	C	A	A	A	B	A	A
Approach Vol, veh/h		337			859			19			393	
Approach Delay, s/veh		10.0			21.4			7.3			11.1	
Approach LOS		B			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		15.1		2.3		16.3		9.7				
Green Ext Time (p_c), s		0.5		0.0		0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				16.3								
HCM 6th LOS				B								

Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	480	129	288	515	292	342
Future Volume (vph)	480	129	288	515	292	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.99
Frt	0.968					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3470	0	1762	1837	1805	1615
Flt Permitted			0.309		0.950	
Satd. Flow (perm)	3470	0	573	1837	1805	1593
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	37					372
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%
Adj. Flow (vph)	522	140	313	560	317	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	662	0	313	560	317	372
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019

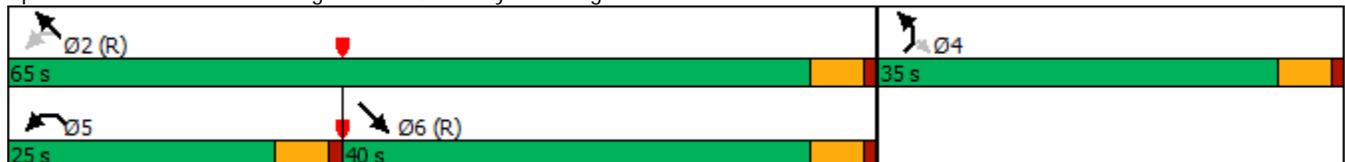


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.39		0.58	0.45	0.77	0.57
Control Delay	17.7		12.1	10.2	46.8	6.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	17.7		12.1	10.2	46.8	6.7
Queue Length 50th (ft)	124		71	150	157	9
Queue Length 95th (ft)	218		138	277	191	51
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	1719		622	1232	541	738
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.50	0.45	0.59	0.50

Intersection Summary

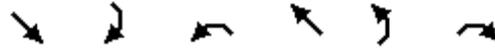
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2019 Existing Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	480	129	288	515	292	342
Future Volume (veh/h)	480	129	288	515	292	342
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1979	1964	1900	1900
Adj Flow Rate, veh/h	522	140	313	560	317	372
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	0
Cap, veh/h	1375	367	572	1263	464	413
Arrive On Green	0.49	0.49	0.10	0.64	0.26	0.26
Sat Flow, veh/h	2903	750	1884	1964	1810	1610
Grp Volume(v), veh/h	334	328	313	560	317	372
Grp Sat Flow(s),veh/h/ln	1799	1759	1884	1964	1810	1610
Q Serve(g_s), s	11.6	11.7	7.7	14.2	15.8	22.3
Cycle Q Clear(g_c), s	11.6	11.7	7.7	14.2	15.8	22.3
Prop In Lane		0.43	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	881	861	572	1263	464	413
V/C Ratio(X)	0.38	0.38	0.55	0.44	0.68	0.90
Avail Cap(c_a), veh/h	881	861	753	1263	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.59	0.59	1.00	1.00
Uniform Delay (d), s/veh	16.0	16.0	10.5	8.9	33.5	35.9
Incr Delay (d2), s/veh	1.1	1.1	0.5	0.7	2.8	18.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.8	3.0	5.7	7.2	20.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.1	17.2	11.0	9.6	36.3	53.9
LnGrp LOS	B	B	B	A	D	D
Approach Vol, veh/h	662			873	689	
Approach Delay, s/veh	17.1			10.1	45.8	
Approach LOS	B			B	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.3		30.7	15.4	54.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		16.2		24.3	9.7	13.7
Green Ext Time (p_c), s		4.3		1.3	0.7	4.2
Intersection Summary						
HCM 6th Ctrl Delay			23.3			
HCM 6th LOS			C			

Year 2019 Existing Traffic Volumes
15: Rapp Road & S. Frontage Road

Saturday Peak Hour
10/23/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↔			↗
Traffic Volume (vph)	77	107	12	62	0	0
Future Volume (vph)	77	107	12	62	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.887			
Flt Protected		0.979				
Satd. Flow (prot)	0	1824	1685	0	0	1900
Flt Permitted		0.979				
Satd. Flow (perm)	0	1824	1685	0	0	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		746	389		508	
Travel Time (s)		17.0	8.8		11.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Adj. Flow (vph)	83	115	13	67	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	198	80	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement NBL NBT SBT SBR NEL NER

Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	77	107	12	62	0	0
Future Vol, veh/h	77	107	12	62	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	83	115	13	67	0	0

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	80	0	-	0	-	47
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	-	3.3
Pot Cap-1 Maneuver	1518	-	-	-	0	1028
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1518	-	-	-	-	1028
Mov Cap-2 Maneuver		-	-	-	-	
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach NB SB NE

HCM Control Delay, s	3.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt NELn1 NBL NBT SBT SBR

Capacity (veh/h)		-	1518	-	-	-
HCM Lane V/C Ratio		-	0.055	-	-	-
HCM Control Delay (s)		0	7.5	0	-	-
HCM Lane LOS		A	A	A	-	-
HCM 95th %tile Q(veh)		-	0.2	-	-	-

Year 2019 Existing Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	1203	1194	4	9	13
Future Volume (vph)	12	1203	1194	4	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.918	
Fl _t Protected	0.950				0.981	
Satd. Flow (prot)	1805	3574	3574	0	1711	0
Fl _t Permitted	0.950				0.981	
Satd. Flow (perm)	1805	3574	3574	0	1711	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1069	
Travel Time (s)		15.5	6.5		24.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	13	1253	1244	4	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1253	1248	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1203	1194	4	9	13
Future Vol, veh/h	12	1203	1194	4	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1253	1244	4	9	14

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1248	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	565	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	565	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

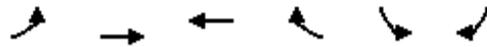
Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	40.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	565	-	-	-	124
HCM Lane V/C Ratio	0.022	-	-	-	0.185
HCM Control Delay (s)	11.5	-	-	-	40.5
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour

10/24/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1535	895	107	51	18
Future Volume (vph)	0	1535	895	107	51	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1837	3438	4541	0	3432	1583
Flt Permitted					0.950	
Satd. Flow (perm)	1837	3438	4541	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			53			20
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	0	1668	973	116	55	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1668	1089	0	55	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 10/24/2019

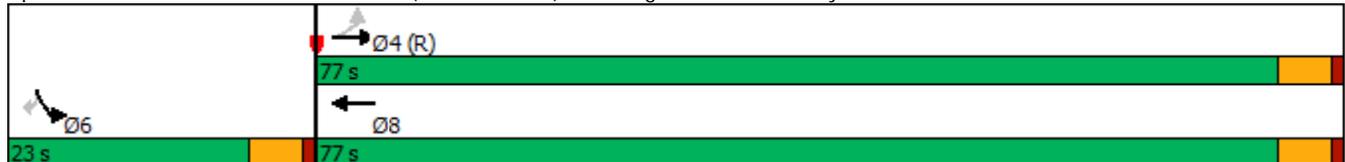


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.67	0.33		0.09	0.07
Control Delay		9.3	5.2		30.7	13.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.3	5.2		30.7	13.2
Queue Length 50th (ft)		260	75		14	3
Queue Length 95th (ft)		327	93		32	20
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2475	3284		617	301
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.67	0.33		0.09	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

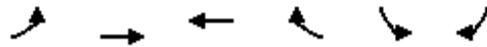
Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour

10/24/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑↑	↑↑↑		↔	↔
Traffic Volume (veh/h)	0	1535	895	107	51	18
Future Volume (veh/h)	0	1535	895	107	51	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806
Adj Flow Rate, veh/h	0	1668	973	116	55	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	5	8	8	0	0
Cap, veh/h	72	2498	3130	372	601	275
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	526	3561	4505	517	3336	1530
Grp Volume(v), veh/h	0	1668	715	374	55	20
Grp Sat Flow(s),veh/h/ln	526	1735	1600	1665	1668	1530
Q Serve(g_s), s	0.0	25.9	8.1	8.1	1.4	1.1
Cycle Q Clear(g_c), s	0.0	25.9	8.1	8.1	1.4	1.1
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	72	2498	2304	1199	601	275
V/C Ratio(X)	0.00	0.67	0.31	0.31	0.09	0.07
Avail Cap(c_a), veh/h	72	2498	2304	1199	601	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.6	5.0	5.1	34.2	34.1
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.1	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	2.1	2.2	0.6	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.0	5.1	5.2	34.5	34.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1668	1089		75	
Approach Delay, s/veh		9.0	5.2		34.5	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				27.9	3.4	10.1
Green Ext Time (p_c), s				18.9	0.1	8.9
Intersection Summary						
HCM 6th Ctrl Delay			8.2			
HCM 6th LOS			A			

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 10/24/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1732	11	21	889	0	21	0	68	0	0	0
Future Volume (vph)	2	1732	11	21	889	0	21	0	68	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%			-1%	
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999						0.897				
Flt Protected	0.950			0.950				0.988				
Satd. Flow (prot)	1221	3403	0	1520	3183	0	0	1560	0	0	1909	0
Flt Permitted	0.950			0.950				0.988				
Satd. Flow (perm)	1221	3403	0	1520	3183	0	0	1560	0	0	1909	0
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1018			964			269			394	
Travel Time (s)		17.4			16.4			6.1			9.0	
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
Heavy Vehicles (%)	50%	4%	0%	17%	8%	0%	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	2	1823	12	22	936	0	22	0	72	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1835	0	22	936	0	0	94	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 10/24/2019

Intersection												
Int Delay, s/veh	15.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	2	1732	11	21	889	0	21	0	68	0	0	0
Future Vol, veh/h	2	1732	11	21	889	0	21	0	68	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	4	0	17	8	0	0	0	5	0	0	0
Mvmt Flow	2	1823	12	22	936	0	22	0	72	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	936	0	0	1835	0	0	2345	2813	918	1896	2819	468
Stage 1	-	-	-	-	-	-	1833	1833	-	980	980	-
Stage 2	-	-	-	-	-	-	512	980	-	916	1839	-
Critical Hdwy	5.1	-	-	4.44	-	-	7.7	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.7	-	-	2.37	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	493	-	-	272	-	-	~ 17	16	261	48	21	554
Stage 1	-	-	-	-	-	-	73	116	-	287	349	-
Stage 2	-	-	-	-	-	-	504	313	-	313	141	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	493	-	-	272	-	-	~ 16	15	261	33	19	554
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 16	15	-	33	19	-
Stage 1	-	-	-	-	-	-	73	116	-	286	321	-
Stage 2	-	-	-	-	-	-	463	288	-	226	140	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 473.1	0
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	57	493	-	-	272	-	-	-
HCM Lane V/C Ratio	1.644	0.004	-	-	0.081	-	-	-
HCM Control Delay (s)	\$ 473.1	12.3	-	-	19.4	-	-	0
HCM Lane LOS	F	B	-	-	C	-	-	A
HCM 95th %tile Q(veh)	8.6	0	-	-	0.3	-	-	-

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

Year 2022 No-Build Traffic Volumes

Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/24/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	239	1468	98	96	728	30	93	148	184	40	42	88
Future Volume (vph)	239	1468	98	96	728	30	93	148	184	40	42	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00	0.97	0.99		
Frt		0.991			0.994			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3452	0	1612	3342	0	1626	1720	1447	1440	1872	1623
Flt Permitted	0.163			0.084			0.726			0.606		
Satd. Flow (perm)	303	3452	0	143	3342	0	1243	1720	1405	909	1872	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			5	135			100
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	3%	10%	12%	7%	14%	11%	1%	6%	26%	2%	0%
Adj. Flow (vph)	272	1668	111	109	827	34	106	168	209	45	48	100
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	272	1779	0	109	861	0	106	201	176	45	48	100
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.39	0.87		0.62	0.76		0.33	0.75	0.41	0.40	0.44	0.14
Control Delay	26.3	32.1		55.0	48.0		51.3	75.9	15.0	59.7	83.9	6.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	32.1		55.0	48.0		51.3	75.9	15.0	59.7	83.9	6.1
Queue Length 50th (ft)	81	708		53	403		87	197	32	36	46	0
Queue Length 95th (ft)	175	1002		119	486		143	300	97	72	95	39
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	702	2331		229	1880		334	390	465	205	420	719
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	0.39	0.76		0.48	0.46		0.32	0.52	0.38	0.22	0.11	0.14

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 140.1

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

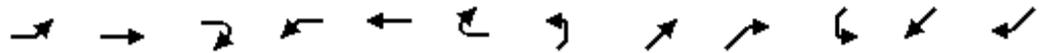
Ø2	Ø1	Ø4	Ø3
35 s	20 s	95 s	20 s
Ø6	Ø5	Ø8	Ø7
35 s	20 s	80 s	35 s

Year 2022 No-Build Traffic Volumes

Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/24/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	239	1468	98	96	728	30	93	148	184	40	42	88
Future Volume (veh/h)	239	1468	98	96	728	30	93	148	184	40	42	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.98	0.99		0.97
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	1856	1856	1722	1796	1796	1737	1885	1811	1549	1909	1939
Adj Flow Rate, veh/h	272	1668	111	109	827	34	106	199	188	45	48	100
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	3	3	12	7	7	11	1	6	26	2	0
Cap, veh/h	706	2016	133	134	1018	42	274	295	305	107	190	720
Arrive On Green	0.34	0.60	0.60	0.05	0.30	0.30	0.09	0.16	0.16	0.03	0.10	0.10
Sat Flow, veh/h	1781	3356	222	1640	3340	137	1654	1885	1505	1475	1909	1594
Grp Volume(v), veh/h	272	870	909	109	422	439	106	199	188	45	48	100
Grp Sat Flow(s),veh/h/ln	1781	1763	1815	1640	1706	1771	1654	1885	1505	1475	1909	1594
Q Serve(g_s), s	6.5	47.1	48.6	3.5	27.7	27.7	0.0	12.1	8.2	0.0	2.8	0.0
Cycle Q Clear(g_c), s	6.5	47.1	48.6	3.5	27.7	27.7	0.0	12.1	8.2	0.0	2.8	0.0
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	706	1059	1090	134	520	540	274	295	305	107	190	720
V/C Ratio(X)	0.39	0.82	0.83	0.81	0.81	0.81	0.39	0.67	0.62	0.42	0.25	0.14
Avail Cap(c_a), veh/h	706	1310	1348	263	1056	1096	331	467	442	242	473	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	19.1	19.3	55.9	38.9	38.9	48.0	48.2	44.0	56.7	50.4	20.2
Incr Delay (d2), s/veh	0.1	4.7	5.0	4.5	6.4	6.2	0.3	1.0	0.8	1.0	0.3	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	5.5	18.7	19.9	3.4	12.2	12.6	3.0	5.8	2.8	1.4	1.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	23.8	24.4	60.4	45.3	45.1	48.3	49.2	44.8	57.7	50.6	20.2
LnGrp LOS	C	C	C	E	D	D	D	D	D	E	D	C
Approach Vol, veh/h		2051			970			493				193
Approach Delay, s/veh		24.5			46.9			47.3				36.5
Approach LOS		C			D			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	24.0	10.5	77.8	15.8	17.1	46.3	41.9				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	14.1	5.5	50.6	2.0	4.8	8.5	29.7				
Green Ext Time (p_c), s	0.0	0.8	0.1	22.2	0.1	0.3	0.5	7.2				

Intersection Summary

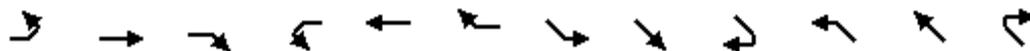
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

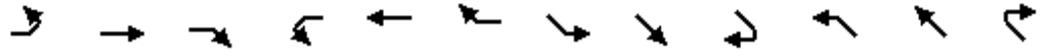
Weekday Peak AM Hour
10/24/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (vph)	74	69	238	7	12	3	0	43	65	80	37	14
Future Volume (vph)	74	69	238	7	12	3	0	43	65	80	37	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850		0.958	
Flt Protected		0.975			0.985					0.950		
Satd. Flow (prot)	0	1825	1599	0	3482	0	0	1863	1669	1610	1439	0
Flt Permitted		0.838			0.896					0.603		
Satd. Flow (perm)	0	1569	1599	0	3167	0	0	1863	1669	1022	1439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			283		4				160		17	
Link Speed (mph)		30			30			30		30		30
Link Distance (ft)		467			504			921		780		
Travel Time (s)		10.6			11.5			20.9		17.7		
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	2%	14%	0%	0%	0%	2%	0%	11%	6%	75%
Adj. Flow (vph)	88	82	283	8	14	4	0	51	77	95	44	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	170	283	0	26	0	0	51	77	95	61	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12		12		
Link Offset(ft)		0			0			0		0		
Crosswalk Width(ft)		16			16			16		16		
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		NA	Free	pm+pt	NA		
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2022 No-Build Traffic Volumes
 4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
 10/24/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.33	0.18		0.02			0.10	0.05	0.14	0.08	
Control Delay		20.9	0.2		15.1			21.5	0.0	8.8	7.0	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		20.9	0.2		15.1			21.5	0.0	8.8	7.0	
Queue Length 50th (ft)		58	0		3			18	0	20	9	
Queue Length 95th (ft)		99	0		11			40	0	38	24	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		523	1599		1058			496	1669	684	775	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.33	0.18		0.02			0.10	0.05	0.14	0.08	

Intersection Summary

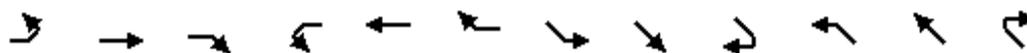
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
10/24/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↕		↕↕			↕	↕	↕	↕	
Traffic Volume (veh/h)	74	69	238	7	12	3	0	43	65	80	37	14
Future Volume (veh/h)	74	69	238	7	12	3	0	43	65	80	37	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1878	1878	1878	1870	1870	1976	1713	1788	1788
Adj Flow Rate, veh/h	88	82	0	8	14	4	0	51	0	95	44	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	0	0	0	2	2	0	11	6	6
Cap, veh/h	337	295		356	606	179	0	499		749	655	253
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.00	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	793	885	1651	840	1818	538	0	1870	1675	1632	1228	474
Grp Volume(v), veh/h	170	0	0	14	0	12	0	51	0	95	0	61
Grp Sat Flow(s),veh/h/ln	1678	0	1651	1584	0	1612	0	1870	1675	1632	0	1702
Q Serve(g_s), s	3.5	0.0	0.0	0.0	0.0	0.4	0.0	1.5	0.0	2.3	0.0	1.3
Cycle Q Clear(g_c), s	5.4	0.0	0.0	0.4	0.0	0.4	0.0	1.5	0.0	2.3	0.0	1.3
Prop In Lane	0.52		1.00	0.57		0.33	0.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	632	0		603	0	537	0	499		749	0	908
V/C Ratio(X)	0.27	0.00		0.02	0.00	0.02	0.00	0.10		0.13	0.00	0.07
Avail Cap(c_a), veh/h	632	0		603	0	537	0	499		749	0	908
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	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	0.0	16.8	0.0	16.8	0.0	20.7	0.0	9.8	0.0	8.5
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.1	0.0	0.4	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.2	0.0	0.1	0.0	0.7	0.0	0.8	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	0.0	16.9	0.0	16.9	0.0	21.1	0.0	10.1	0.0	8.6
LnGrp LOS	B	A		B	A	B	A	C		B	A	A
Approach Vol, veh/h		170	A		26			51	A		156	
Approach Delay, s/veh		19.4			16.9			21.1			9.5	
Approach LOS		B			B			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		3.3		7.4	4.3	3.5		2.4				
Green Ext Time (p_c), s		0.1		0.3	0.1	0.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

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

Year 2022 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
10/24/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	96	41	7	107	67	20
Future Volume (vph)	96	41	7	107	67	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.959				0.969	
Flt Protected	0.966			0.997		
Satd. Flow (prot)	1721	0	0	1875	1723	0
Flt Permitted	0.966			0.997		
Satd. Flow (perm)	1721	0	0	1875	1723	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	3%	0%	0%	2%	10%
Adj. Flow (vph)	112	48	8	124	78	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	132	101	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	96	41	7	107	67	20
Future Vol, veh/h	96	41	7	107	67	20
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	3	0	0	2	10
Mvmt Flow	112	48	8	124	78	23

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	232	92	102	0	0
Stage 1	91	-	-	-	-
Stage 2	141	-	-	-	-
Critical Hdwy	6.42	6.23	4.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.2	-	-
Pot Cap-1 Maneuver	756	963	1503	-	-
Stage 1	933	-	-	-	-
Stage 2	886	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	750	961	1502	-	-
Mov Cap-2 Maneuver	750	-	-	-	-
Stage 1	926	-	-	-	-
Stage 2	885	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10.6	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1502	-	803	-	-
HCM Lane V/C Ratio	0.005	-	0.198	-	-
HCM Control Delay (s)	7.4	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Year 2022 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak AM Hour
10/24/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	17	19	3	200	68	4
Future Volume (vph)	17	19	3	200	68	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.992	
Flt Protected	0.977			0.999		
Satd. Flow (prot)	1640	0	0	1781	1810	0
Flt Permitted	0.977			0.999		
Satd. Flow (perm)	1640	0	0	1781	1810	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Adj. Flow (vph)	19	22	3	227	77	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	230	82	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

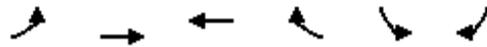
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	17	19	3	200	68	4
Future Vol, veh/h	17	19	3	200	68	4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	19	22	3	227	77	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	8.5	7.7
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	1%	47%	0%
Vol Thru, %	99%	0%	94%
Vol Right, %	0%	53%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	203	36	72
LT Vol	3	17	0
Through Vol	200	0	68
RT Vol	0	19	4
Lane Flow Rate	231	41	82
Geometry Grp	1	1	1
Degree of Util (X)	0.259	0.049	0.095
Departure Headway (Hd)	4.036	4.351	4.197
Convergence, Y/N	Yes	Yes	Yes
Cap	886	828	844
Service Time	2.081	2.351	2.269
HCM Lane V/C Ratio	0.261	0.05	0.097
HCM Control Delay	8.5	7.6	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.2	0.3

Year 2022 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
10/24/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	217	0	0	6	72
Future Volume (vph)	0	217	0	0	6	72
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected					0.996	
Satd. Flow (prot)	0	1791	1900	0	1803	0
Flt Permitted					0.996	
Satd. Flow (perm)	0	1791	1900	0	1803	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	0%	0%	0%	4%
Adj. Flow (vph)	0	244	0	0	7	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	244	0	0	88	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	217	0	0	6	72
Future Vol, veh/h	0	217	0	0	6	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	0	0	0	4
Mvmt Flow	0	244	0	0	7	81

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	245
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	244
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	738
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	790
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	738
Mov Cap-2 Maneuver	-	-	-	-	738
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	790

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1041
HCM Lane V/C Ratio	-	-	-	-	0.084
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2022 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour
10/24/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	96	7	44	0	127	0	12	20	18	2	0
Future Volume (vph)	120	96	7	44	0	127	0	12	20	18	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Frt		0.990			0.900			0.916				
Flt Protected	0.950				0.987						0.956	
Satd. Flow (prot)	1770	1864	0	0	1847	0	0	1585	0	0	1687	0
Flt Permitted	0.950				0.987						0.956	
Satd. Flow (perm)	1770	1864	0	0	1847	0	0	1585	0	0	1687	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	1%	0%	9%	0%	1%	0%	8%	10%	6%	50%	0%
Adj. Flow (vph)	138	110	8	51	0	146	0	14	23	21	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	118	0	0	197	0	0	37	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour

10/24/2019

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

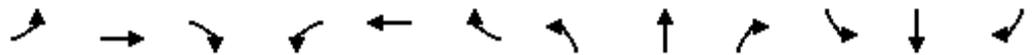
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↕			↷			↶	
Traffic Vol, veh/h	120	96	7	44	0	127	0	12	20	18	2	0
Future Vol, veh/h	120	96	7	44	0	127	0	12	20	18	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	1	0	9	0	1	0	8	10	6	50	0
Mvmt Flow	138	110	8	51	0	146	0	14	23	21	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.9	8.4	8	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	26%	90%
Vol Thru, %	38%	0%	93%	0%	10%
Vol Right, %	62%	0%	7%	74%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	120	103	171	20
LT Vol	0	120	0	44	18
Through Vol	12	0	96	0	2
RT Vol	20	0	7	127	0
Lane Flow Rate	37	138	118	197	23
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.048	0.201	0.154	0.229	0.033
Departure Headway (Hd)	4.704	5.24	4.674	4.186	5.245
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	763	677	758	861	685
Service Time	2.72	3.031	2.465	2.195	3.262
HCM Lane V/C Ratio	0.048	0.204	0.156	0.229	0.034
HCM Control Delay	8	9.4	8.3	8.4	8.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	0.7	0.5	0.9	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↖	↖	↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	0	0	135	106	35	128	128	1134	133	127	1312	8
Future Volume (vph)	0	0	135	106	35	128	128	1134	133	127	1312	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.882				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1742	3240	1525	0	1761	4963	1435	1703	3505	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1717	3222	1525	0	1760	4963	1435	1703	3505	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167		135				123			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	2%	7%	6%	8%	2%	4%	12%	6%	3%	0%
Adj. Flow (vph)	0	0	145	114	38	138	138	1219	143	137	1411	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	145	114	176	0	138	1219	143	137	1411	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.40	0.39	0.67		0.63	0.41	0.16	0.64	0.66	0.01
Control Delay			7.8	45.6	26.2		53.9	11.2	3.1	54.3	15.3	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			7.8	45.6	26.2		53.9	11.2	3.1	54.3	15.3	0.0
Queue Length 50th (ft)			0	34	23		79	128	4	78	267	0
Queue Length 95th (ft)			40	64	95		152	209	34	151	446	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			493	1006	1085		364	3083	937	352	2177	1017
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			0.29	0.11	0.16		0.38	0.40	0.15	0.39	0.65	0.01

Intersection Summary

Area Type: Other

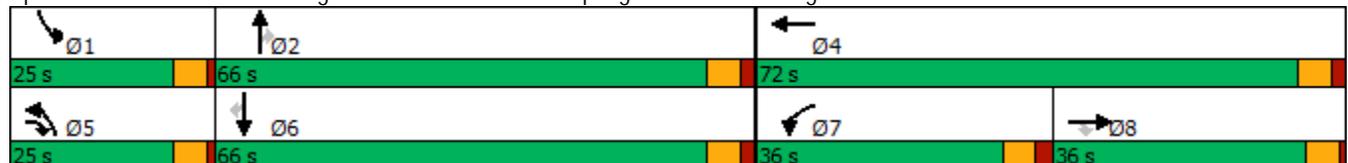
Cycle Length: 163

Actuated Cycle Length: 96.9

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	135	106	35	128	128	1134	133	127	1312	8
Future Volume (veh/h)	0	0	135	106	35	128	128	1134	133	127	1312	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1945	1773	1788	1788	1864	1835	1716	1811	1856	1900
Adj Flow Rate, veh/h	0	0	145	114	38	138	138	1219	143	137	1411	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	7	6	6	2	4	12	6	3	0
Cap, veh/h	0	206	332	185	78	284	173	2346	681	171	1657	756
Arrive On Green	0.00	0.00	0.10	0.06	0.23	0.23	0.10	0.47	0.47	0.10	0.47	0.47
Sat Flow, veh/h	0	1976	1639	3275	337	1224	1776	5009	1453	1725	3526	1608
Grp Volume(v), veh/h	0	0	145	114	0	176	138	1219	143	137	1411	9
Grp Sat Flow(s),veh/h/ln	0	1976	1639	1638	0	1562	1776	1670	1453	1725	1763	1608
Q Serve(g_s), s	0.0	0.0	6.6	2.9	0.0	8.3	6.4	14.5	4.9	6.6	29.9	0.3
Cycle Q Clear(g_c), s	0.0	0.0	6.6	2.9	0.0	8.3	6.4	14.5	4.9	6.6	29.9	0.3
Prop In Lane	0.00		1.00	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	206	332	185	0	362	173	2346	681	171	1657	756
V/C Ratio(X)	0.00	0.00	0.44	0.62	0.00	0.49	0.80	0.52	0.21	0.80	0.85	0.01
Avail Cap(c_a), veh/h	0	724	761	1161	0	1218	420	3551	1030	408	2499	1140
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	29.6	39.0	0.0	28.2	37.4	15.8	13.3	37.3	19.8	12.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.3	0.0	0.4	3.2	0.3	0.2	3.3	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	0.0	0.0	0.0	1.2	0.0	3.0	2.8	4.8	0.0	2.8	11.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	29.9	40.3	0.0	28.5	40.5	16.1	13.5	40.6	22.2	12.0
LnGrp LOS	A	A	C	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		145			290			1500			1557	
Approach Delay, s/veh		29.9			33.2			18.1			23.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	45.6		25.6	13.3	45.8	10.8	14.8				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	8.6	16.5		10.3	8.4	31.9	4.9	8.6				
Green Ext Time (p_c), s	0.2	7.2		0.4	0.2	7.8	0.2	0.3				

Intersection Summary

HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour

10/24/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	142	503	72	0	585	137	50	0	0
Future Volume (vph)	142	503	72	0	585	137	50	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.850				
Flt Protected	0.989					0.950			
Satd. Flow (prot)	3151	0	1818	0	1644	1529	1541	0	0
Flt Permitted	0.989					0.461			
Satd. Flow (perm)	3151	0	1818	0	1644	742	1541	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	541				629				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	153	541	77	0	629	147	54	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	694	0	77	0	629	147	54	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 10/24/2019

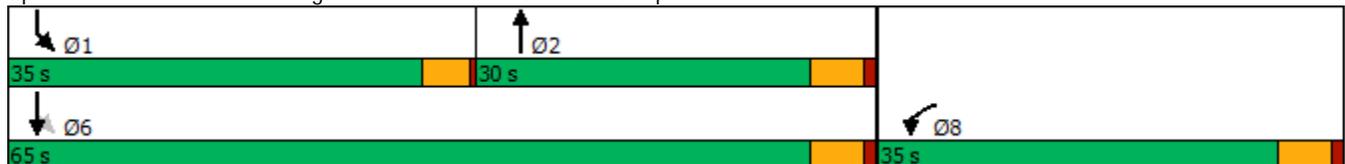


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.60		0.20		0.38	0.27	0.08		
Control Delay	5.9		15.7		0.7	6.5	5.7		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	5.9		15.7		0.7	6.5	5.7		
Queue Length 50th (ft)	12		13		0	12	5		
Queue Length 95th (ft)	49		45		0	40	19		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	2684		1304		1644	1287	1541		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.26		0.06		0.38	0.11	0.04		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 35.7
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour

10/24/2019

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	142	503	72	0	585	137	50	0	0
Future Volume (veh/h)	142	503	72	0	585	137	50	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1864	2017	1835	1954	1954	1684	1610		
Adj Flow Rate, veh/h	153	541	77	0	0	147	54		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	5	0	4	1	1	13	18		
Cap, veh/h	709	683	201			454	526		
Arrive On Green	0.40	0.40	0.11	0.00	0.00	0.11	0.33		
Sat Flow, veh/h	1776	1709	1835	1656	1656	1604	1610		
Grp Volume(v), veh/h	153	541	77	0	0	147	54		
Grp Sat Flow(s),veh/h/ln	1776	1709	1835	1656	1656	1604	1610		
Q Serve(g_s), s	2.1	10.2	1.4	0.0	0.0	2.7	0.9		
Cycle Q Clear(g_c), s	2.1	10.2	1.4	0.0	0.0	2.7	0.9		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	709	683	201			454	526		
V/C Ratio(X)	0.22	0.79	0.38			0.32	0.10		
Avail Cap(c_a), veh/h	1458	1404	1256			1642	2644		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	7.2	9.6	15.1	0.0	0.0	10.8	8.6		
Incr Delay (d2), s/veh	0.2	2.1	1.2	0.0	0.0	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	2.9	0.6	0.0	0.0	0.8	0.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	7.4	11.8	16.3	0.0	0.0	11.2	8.6		
LnGrp LOS	A	B	B			B	A		
Approach Vol, veh/h	694		77	A	A		201		
Approach Delay, s/veh	10.8		16.3				10.5		
Approach LOS	B		B				B		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	7.9	9.0				16.9	19.6		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	4.7	3.4				2.9	12.2		
Green Ext Time (p_c), s	0.4	0.3				0.3	2.4		

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 No-Build Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak AM Hour
 10/24/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	12	275	112	5	8	19
Future Volume (vph)	12	275	112	5	8	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.994		0.904	
Flt Protected		0.998			0.986	
Satd. Flow (prot)	0	3419	3519	0	1006	0
Flt Permitted		0.998			0.986	
Satd. Flow (perm)	0	3419	3519	0	1006	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	1%	0%	75%	84%
Adj. Flow (vph)	13	286	117	5	8	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	299	122	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2022 No-Build Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak AM Hour
 10/24/2019

Intersection

Int Delay, s/veh 0.9

Movement SEL SET NWT NWR SWL SWR

Lane Configurations		↑↑	↑↑		↓	
Traffic Vol, veh/h	12	275	112	5	8	19
Future Vol, veh/h	12	275	112	5	8	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	3	1	0	75	84
Mvmt Flow	13	286	117	5	8	20

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	122	0	-	0	289	61
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	4.1	-	-	-	9.1	8.98
Critical Hdwy Stg 1	-	-	-	-	8.1	-
Critical Hdwy Stg 2	-	-	-	-	8.1	-
Follow-up Hdwy	2.2	-	-	-	4.25	4.14
Pot Cap-1 Maneuver	1478	-	-	-	482	773
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	639	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1478	-	-	-	477	773
Mov Cap-2 Maneuver	-	-	-	-	477	-
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	639	-

Approach SE NW SW

HCM Control Delay, s	0.3	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1478	-	653
HCM Lane V/C Ratio	-	-	0.008	-	0.043
HCM Control Delay (s)	-	-	7.5	0	10.8
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.1

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour

10/24/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	10	263	10	8	107	46	5	10	49	20	1	5
Future Volume (vph)	10	263	10	8	107	46	5	10	49	20	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.995			0.957			0.897			0.875	
Flt Protected		0.998			0.997			0.996		0.950		
Satd. Flow (prot)	0	3437	0	0	3085	0	0	1413	0	1641	1662	0
Flt Permitted		0.946			0.938			0.990		0.713		
Satd. Flow (perm)	0	3258	0	0	2903	0	0	1404	0	1222	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			49			52			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)									11	11		
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
Heavy Vehicles (%)	30%	2%	80%	25%	1%	30%	0%	80%	7%	10%	0%	0%
Adj. Flow (vph)	11	280	11	9	114	49	5	11	52	21	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	302	0	0	172	0	0	68	0	21	6	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.23			0.14			0.11		0.04	0.01	
Control Delay		8.2			6.1			4.3		7.7	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 10/24/2019

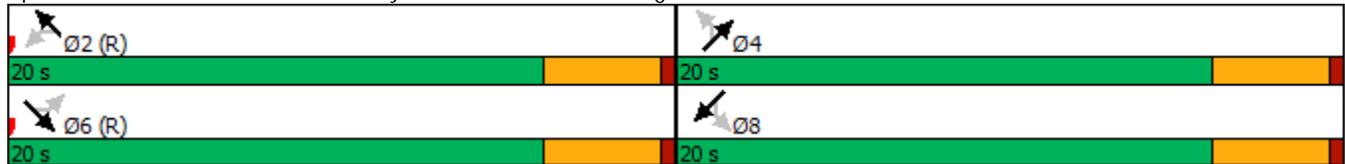


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.2			6.1			4.3		7.7	5.5	
Queue Length 50th (ft)		21			8			2		3	0	
Queue Length 95th (ft)		39			21			17		11	5	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1309			1190			592		488	667	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.14			0.11		0.04	0.01	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour

10/24/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (veh/h)	10	263	10	8	107	46	5	10	49	20	1	5
Future Volume (veh/h)	10	263	10	8	107	46	5	10	49	20	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	1988	1988	1988	1862	1862	1862	714	714	714	1752	1900	1900
Adj Flow Rate, veh/h	11	280	11	9	114	49	5	11	52	21	1	5
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	1	1	1	80	80	80	10	0	0
Cap, veh/h	112	1430	55	123	941	373	102	53	190	708	109	547
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	40	3574	137	60	2352	932	13	133	474	1246	273	1367
Grp Volume(v), veh/h	159	0	143	92	0	80	68	0	0	21	0	6
Grp Sat Flow(s),veh/h/ln	1967	0	1784	1818	0	1526	620	0	0	1246	0	1641
Q Serve(g_s), s	0.0	0.0	2.1	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	2.1	0.0	2.1	1.2	0.0	1.3	2.9	0.0	0.0	0.3	0.0	0.1
Prop In Lane	0.07		0.08	0.10		0.61	0.07		0.76	1.00		0.83
Lane Grp Cap(c), veh/h	883	0	714	826	0	611	345	0	0	708	0	656
V/C Ratio(X)	0.18	0.00	0.20	0.11	0.00	0.13	0.20	0.00	0.00	0.03	0.00	0.01
Avail Cap(c_a), veh/h	883	0	714	826	0	611	345	0	0	708	0	656
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	7.8	7.6	0.0	7.6	8.1	0.0	0.0	7.3	0.0	7.2
Incr Delay (d2), s/veh	0.4	0.0	0.6	0.3	0.0	0.4	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.7	0.4	0.0	0.4	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	0.0	8.5	7.8	0.0	8.0	9.4	0.0	0.0	7.4	0.0	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		302			172			68			27	
Approach Delay, s/veh		8.4			7.9			9.4			7.3	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		3.3		4.9		4.1		2.3				
Green Ext Time (p_c), s		0.7		0.2		1.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.3								
HCM 6th LOS				A								

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

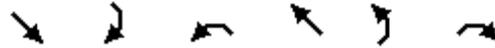
Weekday Peak AM Hour

10/24/2019

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	309	23	46	135	25	367
Future Volume (vph)	309	23	46	135	25	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.990					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3491	0	1762	1671	1805	1615
Flt Permitted			0.495		0.950	
Satd. Flow (perm)	3491	0	918	1671	1805	1584
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	8					412
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	11%	0%	0%
Adj. Flow (vph)	347	26	52	152	28	412
Shared Lane Traffic (%)						
Lane Group Flow (vph)	373	0	52	152	28	412
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 10/24/2019

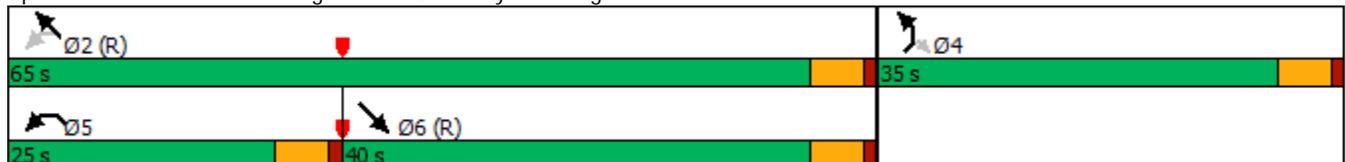


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.15		0.07	0.11	0.16	0.79
Control Delay	5.8		3.0	3.0	44.5	18.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	5.8		3.0	3.0	44.5	18.5
Queue Length 50th (ft)	32		4	13	18	20
Queue Length 95th (ft)	73		18	45	38	69
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2492		906	1343	541	763
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.15		0.06	0.11	0.05	0.54

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

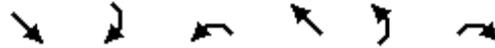
Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour

10/24/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	309	23	46	135	25	367
Future Volume (veh/h)	309	23	46	135	25	367
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1864	1864	1979	1814	1900	1900
Adj Flow Rate, veh/h	347	26	52	152	28	412
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	11	0	0
Cap, veh/h	1820	136	655	1134	497	442
Arrive On Green	0.54	0.54	0.03	0.63	0.27	0.27
Sat Flow, veh/h	3435	249	1884	1814	1810	1610
Grp Volume(v), veh/h	183	190	52	152	28	412
Grp Sat Flow(s),veh/h/ln	1771	1820	1884	1814	1810	1610
Q Serve(g_s), s	5.2	5.3	1.1	3.4	1.1	24.9
Cycle Q Clear(g_c), s	5.2	5.3	1.1	3.4	1.1	24.9
Prop In Lane		0.14	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	965	991	655	1134	497	442
V/C Ratio(X)	0.19	0.19	0.08	0.13	0.06	0.93
Avail Cap(c_a), veh/h	965	991	974	1134	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	11.6	11.6	8.7	7.7	26.7	35.4
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.2	0.0	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.2	0.5	1.3	0.5	22.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.0	12.0	8.7	7.9	26.8	59.3
LnGrp LOS	B	B	A	A	C	E
Approach Vol, veh/h	373			204	440	
Approach Delay, s/veh	12.0			8.1	57.3	
Approach LOS	B			A	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.5		32.5	8.1	59.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		5.4		26.9	3.1	7.3
Green Ext Time (p_c), s		0.9		0.5	0.1	2.3
Intersection Summary						
HCM 6th Ctrl Delay			30.8			
HCM 6th LOS			C			

Year 2022 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
10/24/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	42	245	21	41	0	0
Future Volume (vph)	42	245	21	41	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.911			
Flt Protected		0.993				
Satd. Flow (prot)	0	1850	1731	0	0	1863
Flt Permitted		0.993				
Satd. Flow (perm)	0	1850	1731	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	258	22	43	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	302	65	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.9					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷			↶
Traffic Vol, veh/h	42	245	21	41	0	0
Future Vol, veh/h	42	245	21	41	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	258	22	43	0	0

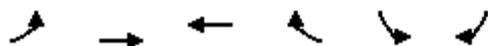
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	65	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1537	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1537	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1537	-	-	-
HCM Lane V/C Ratio	-	0.029	-	-	-
HCM Control Delay (s)	0	7.4	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	-

Year 2022 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 10/24/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1779	945	2	4	2
Future Volume (vph)	1	1779	945	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.955	
Fl _t Protected	0.950				0.968	
Satd. Flow (prot)	1805	3471	3374	0	1756	0
Fl _t Permitted	0.950				0.968	
Satd. Flow (perm)	1805	3471	3374	0	1756	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	7%	0%	0%	0%
Adj. Flow (vph)	1	1955	1038	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1955	1040	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1779	945	2	4	2
Future Vol, veh/h	1	1779	945	2	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	7	0	0	0
Mvmt Flow	1	1955	1038	2	4	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1040	0	0 2019 520
Stage 1	-	-	- 1039 -
Stage 2	-	-	- 980 -
Critical Hdwy	4.1	-	- 6.8 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.8 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	676	-	- 52 506
Stage 1	-	-	- 306 -
Stage 2	-	-	- 329 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	676	-	- 52 506
Mov Cap-2 Maneuver	-	-	- 52 -
Stage 1	-	-	- 306 -
Stage 2	-	-	- 329 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	58.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	676	-	-	-	74
HCM Lane V/C Ratio	0.002	-	-	-	0.089
HCM Control Delay (s)	10.3	-	-	-	58.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1141	1934	233	227	49
Future Volume (vph)	0	1141	1934	233	227	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4789	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4789	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			53			21
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1240	2102	253	247	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1240	2355	0	247	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 10/23/2019

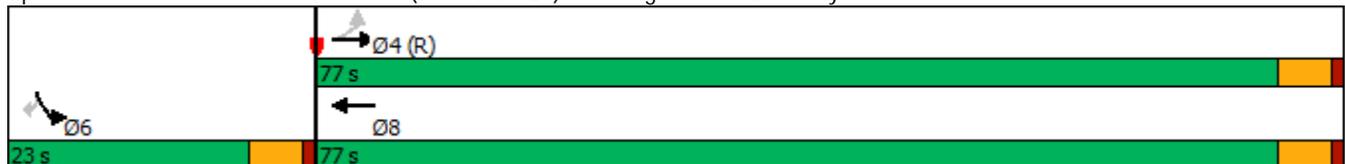


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.49	0.68		0.41	0.18
Control Delay		6.8	8.7		33.5	20.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.8	8.7		33.5	20.2
Queue Length 50th (ft)		153	251		72	18
Queue Length 95th (ft)		193	297		110	52
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3462		605	296
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.49	0.68		0.41	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

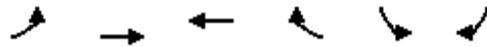
Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour

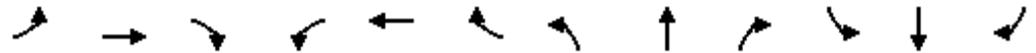
10/23/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑↑		↵↵	↵
Traffic Volume (veh/h)	0	1141	1934	233	227	49
Future Volume (veh/h)	0	1141	1934	233	227	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1240	2102	253	247	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	3289	390	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	152	3647	4735	542	3282	1505
Grp Volume(v), veh/h	0	1240	1538	817	247	53
Grp Sat Flow(s),veh/h/ln	152	1777	1681	1749	1641	1505
Q Serve(g_s), s	0.0	15.0	23.6	24.5	6.7	3.0
Cycle Q Clear(g_c), s	0.0	15.0	23.6	24.5	6.7	3.0
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1259	591	271
V/C Ratio(X)	0.00	0.48	0.64	0.65	0.42	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1259	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.97	0.97
Uniform Delay (d), s/veh	0.0	6.0	7.2	7.4	36.4	34.8
Incr Delay (d2), s/veh	0.0	0.7	0.6	1.2	2.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	6.5	7.2	2.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.7	7.8	8.5	38.5	36.4
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1240	2355		300	
Approach Delay, s/veh		6.7	8.0		38.1	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				17.0	8.7	26.5
Green Ext Time (p_c), s				11.9	0.7	28.8
Intersection Summary						
HCM 6th Ctrl Delay			9.9			
HCM 6th LOS			A			

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1191	30	70	1896	16	18	0	47	3	0	4
Future Volume (vph)	1	1191	30	70	1896	16	18	0	47	3	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%			-1%	
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.999			0.902			0.923	
Flt Protected	0.950			0.950				0.986			0.979	
Satd. Flow (prot)	1832	3444	0	1778	3367	0	0	1501	0	0	1725	0
Flt Permitted	0.950			0.950				0.986			0.979	
Satd. Flow (perm)	1832	3444	0	1778	3367	0	0	1501	0	0	1725	0
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1018			964			269			394	
Travel Time (s)		17.4			16.4			6.1			9.0	
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
Heavy Vehicles (%)	0%	2%	20%	0%	2%	0%	17%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	1267	32	74	2017	17	19	0	50	3	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1299	0	74	2034	0	0	69	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 10/23/2019

Intersection												
Int Delay, s/veh	15.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	1	1191	30	70	1896	16	18	0	47	3	0	4
Future Vol, veh/h	1	1191	30	70	1896	16	18	0	47	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	20	0	2	0	17	0	5	0	0	0
Mvmt Flow	1	1267	32	74	2017	17	19	0	50	3	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2034	0	0	1299	0	0	2442	3467	650	2810	3475	1017
Stage 1	-	-	-	-	-	-	1285	1285	-	2174	2174	-
Stage 2	-	-	-	-	-	-	1157	2182	-	636	1301	-
Critical Hdwy	4.1	-	-	4.1	-	-	8.04	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.67	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	282	-	-	540	-	-	~ 11	6	397	10	8	246
Stage 1	-	-	-	-	-	-	143	221	-	55	97	-
Stage 2	-	-	-	-	-	-	174	76	-	453	251	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	282	-	-	540	-	-	~ 10	5	397	8	7	246
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 10	5	-	8	7	-
Stage 1	-	-	-	-	-	-	142	220	-	55	84	-
Stage 2	-	-	-	-	-	-	148	66	-	395	250	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 732.1	\$ 306.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	34	282	-	-	540	-	-	18
HCM Lane V/C Ratio	2.034	0.004	-	-	0.138	-	-	0.414
HCM Control Delay (s)	\$ 732.1	17.8	-	-	12.7	-	-	\$ 306.8
HCM Lane LOS	F	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	7.7	0	-	-	0.5	-	-	1.1

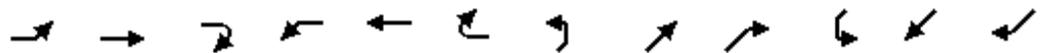
Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2022 No-Build Traffic Volumes

Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	144	982	99	128	1465	28	131	76	95	96	206	328
Future Volume (vph)	144	982	99	128	1465	28	131	76	95	96	206	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.986			0.997			0.976	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3517	0	1805	3520	0	1770	1753	1534	1634	1909	1607
Flt Permitted	0.064			0.092			0.238			0.583		
Satd. Flow (perm)	119	3517	0	175	3520	0	443	1753	1489	988	1909	1607
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			1			5	86			52
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	1%	0%	0%	2%	14%	2%	0%	0%	11%	0%	1%
Adj. Flow (vph)	155	1056	106	138	1575	30	141	82	102	103	222	353
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	155	1162	0	138	1605	0	141	98	86	103	222	353
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

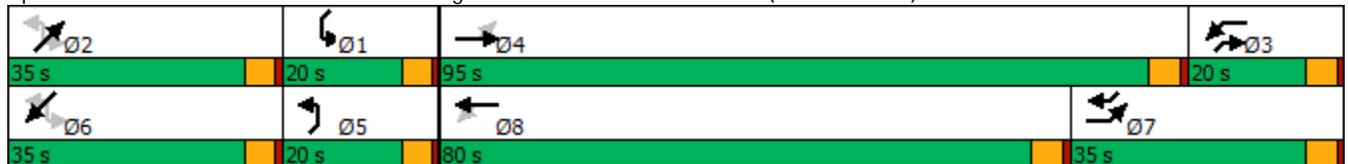


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.45	0.81		0.26	0.93		0.82	0.50	0.14	0.36	0.84	0.61
Control Delay	45.6	44.8		31.6	47.8		96.5	69.3	7.0	53.3	91.2	40.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	44.8		31.6	47.8		96.5	69.3	7.0	53.3	91.2	40.1
Queue Length 50th (ft)	89	560		45	825		120	100	0	86	227	256
Queue Length 95th (ft)	162	601		121	#1140		187	163	43	142	333	371
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	396	2080		532	1732		223	349	607	309	375	572
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	0.39	0.56		0.26	0.93		0.63	0.28	0.14	0.33	0.59	0.62

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 153.5
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

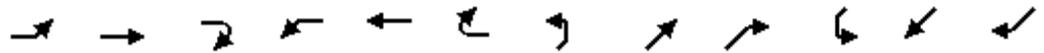


Year 2022 No-Build Traffic Volumes

Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	144	982	99	128	1465	28	131	76	95	96	206	328
Future Volume (veh/h)	144	982	99	128	1465	28	131	76	95	96	206	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.98		0.98
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	1885	1885	1900	1870	1870	1870	1900	1900	1774	1939	1924
Adj Flow Rate, veh/h	155	1056	106	138	1575	30	141	97	92	103	222	353
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	1	0	2	2	2	0	0	11	0	1
Cap, veh/h	185	1309	131	453	1864	35	170	223	492	334	367	412
Arrive On Green	0.07	0.40	0.40	0.19	0.52	0.52	0.06	0.12	0.12	0.13	0.19	0.19
Sat Flow, veh/h	1781	3285	330	1810	3567	68	1781	1900	1569	1690	1939	1605
Grp Volume(v), veh/h	155	575	587	138	783	822	141	97	92	103	222	353
Grp Sat Flow(s),veh/h/ln	1781	1791	1824	1810	1777	1858	1781	1900	1569	1690	1939	1605
Q Serve(g_s), s	5.8	34.3	34.4	0.3	45.4	45.6	4.6	5.7	0.0	0.0	12.6	17.1
Cycle Q Clear(g_c), s	5.8	34.3	34.4	0.3	45.4	45.6	4.6	5.7	0.0	0.0	12.6	17.1
Prop In Lane	1.00		0.18	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	713	726	453	929	971	170	223	492	334	367	412
V/C Ratio(X)	0.84	0.81	0.81	0.30	0.84	0.85	0.83	0.43	0.19	0.31	0.61	0.86
Avail Cap(c_a), veh/h	509	1337	1362	453	1105	1156	292	473	698	334	483	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	32.1	32.2	37.5	24.6	24.6	54.7	49.5	30.6	44.0	44.8	42.7
Incr Delay (d2), s/veh	3.8	4.6	4.6	0.1	6.6	6.4	4.0	0.5	0.1	0.2	0.6	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	15.2	15.5	3.3	19.4	20.4	4.4	2.8	1.9	2.7	6.1	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	36.8	36.7	37.6	31.1	31.1	58.7	50.0	30.6	44.2	45.4	52.6
LnGrp LOS	E	D	D	D	C	C	E	D	C	D	D	D
Approach Vol, veh/h		1317			1743			330			678	
Approach Delay, s/veh		39.2			31.6			48.3			49.0	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	19.1	28.0	53.0	11.7	27.8	13.0	68.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	7.7	2.3	36.4	6.6	19.1	7.8	47.6				
Green Ext Time (p_c), s	0.1	0.4	0.2	11.6	0.2	1.2	0.3	15.4				

Intersection Summary

HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

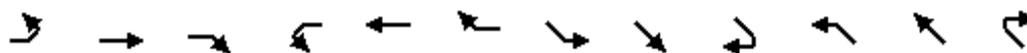
Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↔			↕	↗	↗	↗	↗
Traffic Volume (vph)	40	56	107	36	181	19	10	56	226	270	77	53
Future Volume (vph)	40	56	107	36	181	19	10	56	226	270	77	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.988				0.850		0.939	
Flt Protected		0.980			0.992			0.993		0.950		
Satd. Flow (prot)	0	1881	1631	0	3670	0	0	1887	1669	1702	1745	0
Flt Permitted		0.802			0.900			0.956		0.590		
Satd. Flow (perm)	0	1539	1631	0	3330	0	0	1816	1669	1057	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160		13				257		60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		467			504			921			780	
Travel Time (s)		10.6			11.5			20.9			17.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	5%	0%	3%
Adj. Flow (vph)	45	64	122	41	206	22	11	64	257	307	88	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	122	0	269	0	0	75	257	307	148	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Free	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.21	0.07		0.24			0.15	0.15	0.43	0.15	
Control Delay		19.4	0.1		17.9			22.2	0.2	11.6	5.9	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		19.4	0.1		17.9			22.2	0.2	11.6	5.9	
Queue Length 50th (ft)		36	0		44			27	0	73	19	
Queue Length 95th (ft)		71	0		70			57	0	118	44	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		513	1631		1118			484	1669	715	958	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.21	0.07		0.24			0.15	0.15	0.43	0.15	

Intersection Summary

Area Type: Other

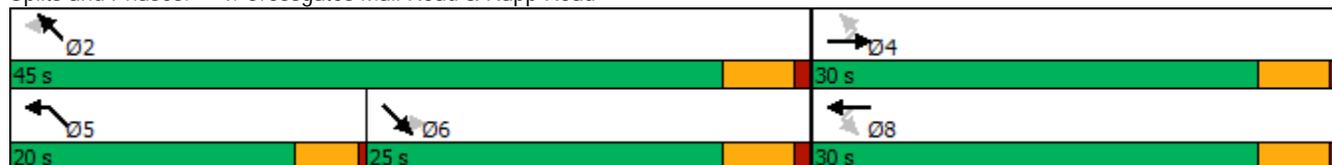
Cycle Length: 75

Actuated Cycle Length: 75

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↖	↗		↔			↖	↗	↖	↗	
Traffic Volume (veh/h)	40	56	107	36	181	19	10	56	226	270	77	53
Future Volume (veh/h)	40	56	107	36	181	19	10	56	226	270	77	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	45	64	0	41	206	22	11	64	0	307	88	60
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	5	0	0
Cap, veh/h	248	331		193	892	94	92	451		855	555	378
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.27	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	540	993	1677	392	2676	282	139	1690	1675	1717	1040	709
Grp Volume(v), veh/h	109	0	0	141	0	128	75	0	0	307	0	148
Grp Sat Flow(s),veh/h/ln	1533	0	1677	1706	0	1644	1829	0	1675	1717	0	1749
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	8.1	0.0	3.2
Cycle Q Clear(g_c), s	4.4	0.0	0.0	4.1	0.0	4.2	2.3	0.0	0.0	8.1	0.0	3.2
Prop In Lane	0.41		1.00	0.29		0.17	0.15		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	579	0		631	0	548	543	0		855	0	933
V/C Ratio(X)	0.19	0.00		0.22	0.00	0.23	0.14	0.00		0.36	0.00	0.16
Avail Cap(c_a), veh/h	579	0		631	0	548	543	0		855	0	933
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	18.0	0.0	18.1	21.0	0.0	0.0	11.1	0.0	8.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.8	0.0	1.0	0.5	0.0	0.0	1.2	0.0	0.4
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	1.4	0.0	0.0	1.8	0.0	1.7	1.0	0.0	0.0	3.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	0.0	18.9	0.0	19.1	21.5	0.0	0.0	12.3	0.0	9.3
LnGrp LOS	B	A		B	A	B	C	A		B	A	A
Approach Vol, veh/h		109	A		269			75	A		455	
Approach Delay, s/veh		18.4			19.0			21.5			11.3	
Approach LOS		B			B			C			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		5.2		6.4	10.1	4.3		6.2				
Green Ext Time (p_c), s		0.4		0.2	0.4	0.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

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

Year 2022 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	49	21	49	87	271	112
Future Volume (vph)	49	21	49	87	271	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.959				0.960	
Flt Protected	0.966			0.982		
Satd. Flow (prot)	1689	0	0	1847	1767	0
Flt Permitted	0.966			0.982		
Satd. Flow (perm)	1689	0	0	1847	1767	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	0%	0%	0%	0%	1%
Adj. Flow (vph)	56	24	56	100	311	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	156	440	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	49	21	49	87	271	112
Future Vol, veh/h	49	21	49	87	271	112
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	0	0	0	0	1
Mvmt Flow	56	24	56	100	311	129

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	590	378	441	0	-	0
Stage 1	377	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.46	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	464	673	1130	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	438	672	1129	-	-	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	13.8	3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1129	-	489	-	-
HCM Lane V/C Ratio	0.05	-	0.165	-	-
HCM Control Delay (s)	8.4	0	13.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Year 2022 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	6	12	17	119	371	13
Future Volume (vph)	6	12	17	119	371	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.995	
Flt Protected	0.984			0.994		
Satd. Flow (prot)	1533	0	0	1794	1901	0
Flt Permitted	0.984			0.994		
Satd. Flow (perm)	1533	0	0	1794	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	17%	0%	6%	0%	0%	0%
Adj. Flow (vph)	7	14	20	138	431	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	158	446	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

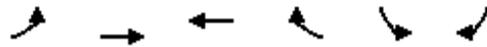
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	12	17	119	371	13
Future Vol, veh/h	6	12	17	119	371	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	17	0	6	0	0	0
Mvmt Flow	7	14	20	138	431	15
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	8.6	11.2
HCM LOS	A	A	B

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	12%	33%	0%
Vol Thru, %	88%	0%	97%
Vol Right, %	0%	67%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	136	18	384
LT Vol	17	6	0
Through Vol	119	0	371
RT Vol	0	12	13
Lane Flow Rate	158	21	447
Geometry Grp	1	1	1
Degree of Util (X)	0.198	0.03	0.501
Departure Headway (Hd)	4.506	5.145	4.036
Convergence, Y/N	Yes	Yes	Yes
Cap	800	699	884
Service Time	2.51	3.153	2.106
HCM Lane V/C Ratio	0.198	0.03	0.506
HCM Control Delay	8.6	8.3	11.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.7	0.1	2.9

Year 2022 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	125	0	0	12	384
Future Volume (vph)	0	125	0	0	12	384
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.869	
Flt Protected					0.999	
Satd. Flow (prot)	0	1791	1900	0	1842	0
Flt Permitted					0.999	
Satd. Flow (perm)	0	1791	1900	0	1842	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%
Adj. Flow (vph)	0	147	0	0	14	452
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	147	0	0	466	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	125	0	0	12	384
Future Vol, veh/h	0	125	0	0	12	384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	1	0	0	0	1
Mvmt Flow	0	147	0	0	14	452

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	148
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	147
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	842
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	878
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	842
Mov Cap-2 Maneuver	-	-	-	-	842
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	878

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1077
HCM Lane V/C Ratio	-	-	-	-	0.433
HCM Control Delay (s)	0	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.2

Year 2022 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	46	3	29	0	205	0	25	37	102	2	0
Future Volume (vph)	88	46	3	29	0	205	0	25	37	102	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Frt		0.992			0.882			0.919				
Flt Protected	0.950				0.994						0.953	
Satd. Flow (prot)	1805	1885	0	0	1878	0	0	1737	0	0	1847	0
Flt Permitted	0.950				0.994						0.953	
Satd. Flow (perm)	1805	1885	0	0	1878	0	0	1737	0	0	1847	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	96	50	3	32	0	223	0	27	40	111	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	53	0	0	255	0	0	67	0	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷↶			↷			↶	
Traffic Vol, veh/h	88	46	3	29	0	205	0	25	37	102	2	0
Future Vol, veh/h	88	46	3	29	0	205	0	25	37	102	2	0
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	96	50	3	32	0	223	0	27	40	111	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9	8.9	8.1	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	98%
Vol Thru, %	40%	0%	94%	0%	2%
Vol Right, %	60%	0%	6%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	88	49	234	104
LT Vol	0	88	0	29	102
Through Vol	25	0	46	0	2
RT Vol	37	0	3	205	0
Lane Flow Rate	67	96	53	254	113
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.086	0.15	0.076	0.293	0.16
Departure Headway (Hd)	4.608	5.651	5.105	4.142	5.088
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	774	634	700	867	703
Service Time	2.66	3.39	2.844	2.175	3.136
HCM Lane V/C Ratio	0.087	0.151	0.076	0.293	0.161
HCM Control Delay	8.1	9.4	8.3	8.9	9.1
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.2	1.2	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	184	290	54	255	176	1375	348	238	1357	5
Future Volume (vph)	0	0	184	290	54	255	176	1375	348	238	1357	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.876				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1759	3333	1615	0	1796	5110	1560	1787	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1734	3315	1615	0	1795	5110	1560	1787	3574	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		176				265			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					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
Heavy Vehicles (%)	0%	0%	1%	4%	0%	1%	0%	1%	3%	1%	1%	0%
Adj. Flow (vph)	0	0	196	309	57	271	187	1463	370	253	1444	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	196	309	328	0	187	1463	370	253	1444	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.62	0.61	0.83		0.70	0.56	0.40	0.78	0.74	0.01
Control Delay			40.4	49.2	38.9		60.0	20.1	6.4	62.9	24.0	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.4	49.2	38.9		60.0	20.1	6.4	62.9	24.0	0.0
Queue Length 50th (ft)			90	107	108		126	246	37	173	396	0
Queue Length 95th (ft)			182	156	219		222	347	113	#349	611	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			367	905	1035		325	2775	968	323	1941	901
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			0.53	0.34	0.32		0.58	0.53	0.38	0.78	0.74	0.01

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 111.1

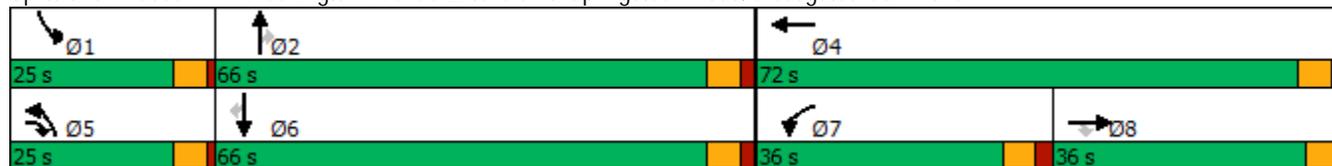
Natural Cycle: 80

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	184	290	54	255	176	1375	348	238	1357	5
Future Volume (veh/h)	0	0	184	290	54	255	176	1375	348	238	1357	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1976	1961	1817	1876	1876	1894	1879	1850	1885	1885	1900
Adj Flow Rate, veh/h	0	0	196	309	57	271	187	1463	370	253	1444	5
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	1	4	0	0	0	1	3	1	1	0
Cap, veh/h	0	242	402	380	81	387	217	2101	641	281	1597	717
Arrive On Green	0.00	0.00	0.12	0.11	0.29	0.29	0.12	0.41	0.41	0.16	0.45	0.45
Sat Flow, veh/h	0	1976	1653	3357	283	1346	1804	5130	1566	1795	3582	1608
Grp Volume(v), veh/h	0	0	196	309	0	328	187	1463	370	253	1444	5
Grp Sat Flow(s),veh/h/ln	0	1976	1653	1679	0	1629	1804	1710	1566	1795	1791	1608
Q Serve(g_s), s	0.0	0.0	11.8	10.4	0.0	20.8	11.8	27.3	21.2	16.0	43.4	0.2
Cycle Q Clear(g_c), s	0.0	0.0	11.8	10.4	0.0	20.8	11.8	27.3	21.2	16.0	43.4	0.2
Prop In Lane	0.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	242	402	380	0	468	217	2101	641	281	1597	717
V/C Ratio(X)	0.00	0.00	0.49	0.81	0.00	0.70	0.86	0.70	0.58	0.90	0.90	0.01
Avail Cap(c_a), veh/h	0	529	642	869	0	928	311	2656	811	310	1855	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	37.7	50.2	0.0	36.8	50.0	28.3	26.5	48.0	29.8	17.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.6	0.0	0.7	11.7	0.7	1.2	24.8	6.4	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	0.0	0.0	11.1	4.5	0.0	8.3	5.9	10.7	19.1	8.9	18.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	38.1	51.8	0.0	37.6	61.7	29.0	27.6	72.8	36.2	17.9
LnGrp LOS	A	A	D	D	A	D	E	C	C	E	D	B
Approach Vol, veh/h		196			637			2020			1702	
Approach Delay, s/veh		38.1			44.5			31.8			41.6	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.1	53.4		39.3	18.9	57.7	19.1	20.2				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	18.0	29.3		22.8	13.8	45.4	12.4	13.8				
Green Ext Time (p_c), s	0.1	10.2		0.8	0.2	6.3	0.7	0.4				

Intersection Summary

HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour

10/23/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	421	513	150	0	390	642	228	0	0
Future Volume (vph)	421	513	150	0	390	642	228	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.918				0.850				
Flt Protected	0.978					0.950			
Satd. Flow (prot)	3308	0	1890	0	1660	1727	1699	0	0
Flt Permitted	0.978					0.451			
Satd. Flow (perm)	3308	0	1890	0	1660	820	1699	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	316				411				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	443	540	158	0	411	676	240	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	983	0	158	0	411	676	240	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 10/23/2019

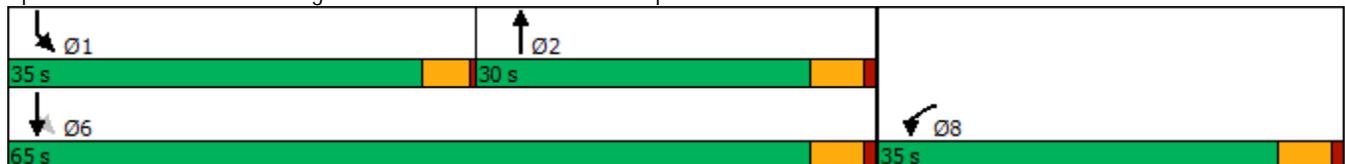


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.81		0.53		0.25	0.86	0.25		
Control Delay	23.0		38.9		0.4	25.1	9.9		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	23.0		38.9		0.4	25.1	9.9		
Queue Length 50th (ft)	162		74		0	207	54		
Queue Length 95th (ft)	258		143		0	#439	108		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1544		646		1660	861	1348		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.64		0.24		0.25	0.79	0.18		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 76.2
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour

10/23/2019

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 				
Traffic Volume (veh/h)	421	513	150	0	390	642	228	0	0
Future Volume (veh/h)	421	513	150	0	390	642	228	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1970	1970	1876	1773		
Adj Flow Rate, veh/h	443	540	158	0	0	676	240		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0	7		
Cap, veh/h	647	598	219			765	921		
Arrive On Green	0.35	0.35	0.12	0.00	0.00	0.35	0.52		
Sat Flow, veh/h	1847	1709	1894	1669	1669	1787	1773		
Grp Volume(v), veh/h	443	540	158	0	0	676	240		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1669	1669	1787	1773		
Q Serve(g_s), s	15.7	23.0	6.2	0.0	0.0	23.6	5.8		
Cycle Q Clear(g_c), s	15.7	23.0	6.2	0.0	0.0	23.6	5.8		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	647	598	219			765	921		
V/C Ratio(X)	0.69	0.90	0.72			0.88	0.26		
Avail Cap(c_a), veh/h	723	669	618			861	1389		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	21.3	23.6	32.7	0.0	0.0	16.5	10.2		
Incr Delay (d2), s/veh	2.3	14.6	4.4	0.0	0.0	9.9	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.8	11.0	3.0	0.0	0.0	10.7	2.1		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	23.6	38.2	37.1	0.0	0.0	26.4	10.4		
LnGrp LOS	C	D	D			C	B		
Approach Vol, veh/h	983		158	A	A		916		
Approach Delay, s/veh	31.6		37.1				22.2		
Approach LOS	C		D				C		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.9	13.9				44.8	31.8		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	25.6	8.2				7.8	25.0		
Green Ext Time (p_c), s	1.3	0.7				1.6	1.8		

Intersection Summary

HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 No-Build Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Weekday Peak PM Hour
 10/23/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	27	171	338	64	77	62
Future Volume (vph)	27	171	338	64	77	62
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.976		0.940	
Flt Protected		0.993			0.973	
Satd. Flow (prot)	0	3383	3488	0	1658	0
Flt Permitted		0.993			0.973	
Satd. Flow (perm)	0	3383	3488	0	1658	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	0%	0%	1%	28%
Adj. Flow (vph)	30	188	371	70	85	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	218	441	0	153	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection

Int Delay, s/veh 3.3

Movement SEL SET NWT NWR SWL SWR

Lane Configurations		↑↑	↑↑		⚡	
Traffic Vol, veh/h	27	171	338	64	77	62
Future Vol, veh/h	27	171	338	64	77	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	1	28
Mvmt Flow	30	188	371	70	85	68

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	441	0	-	0	560	221
Stage 1	-	-	-	-	406	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	4.1	-	-	-	7.62	7.86
Critical Hdwy Stg 1	-	-	-	-	6.62	-
Critical Hdwy Stg 2	-	-	-	-	6.62	-
Follow-up Hdwy	2.2	-	-	-	3.51	3.58
Pot Cap-1 Maneuver	1130	-	-	-	407	691
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1130	-	-	-	395	691
Mov Cap-2 Maneuver	-	-	-	-	395	-
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	832	-

Approach SE NW SW

HCM Control Delay, s	1.2	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1130	-	488
HCM Lane V/C Ratio	-	-	0.026	-	0.313
HCM Control Delay (s)	-	-	8.3	0.1	15.7
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.1	-	1.3

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour

10/23/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	35	210	3	7	354	291	1	0	7	199	2	47
Future Volume (vph)	35	210	3	7	354	291	1	0	7	199	2	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.998			0.933			0.882				0.856
Flt Protected		0.993			0.999			0.994		0.950		
Satd. Flow (prot)	0	3512	0	0	3244	0	0	1636	0	1787	1626	0
Flt Permitted		0.846			0.952			0.984		0.752		
Satd. Flow (perm)	0	2992	0	0	3092	0	0	1620	0	1403	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			297			27				48
Link Speed (mph)		30			30			30				30
Link Distance (ft)		786			547			189				414
Travel Time (s)		17.9			12.4			4.3				9.4
Confl. Peds. (#/hr)									11	11		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	18%	1%	0%	0%	0%	6%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	36	214	3	7	361	297	1	0	7	203	2	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	253	0	0	665	0	0	8	0	203	50	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4				8
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.21			0.47			0.01		0.36	0.07	
Control Delay		8.4			6.0			1.5		10.8	3.6	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019

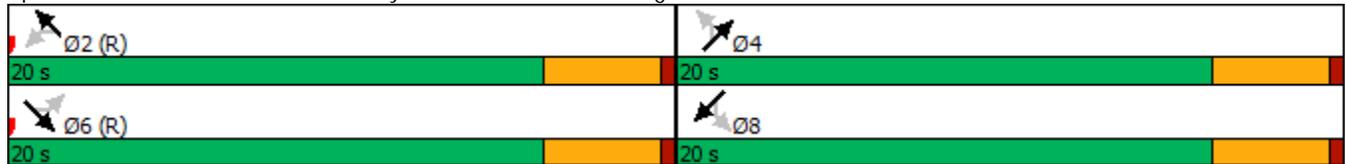


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.4			6.0			1.5		10.8	3.6	
Queue Length 50th (ft)		17			27			0		30	0	
Queue Length 95th (ft)		34			55			3		66	13	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1198			1415			664		561	679	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.21			0.47			0.01		0.36	0.07	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour

10/23/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	35	210	3	7	354	291	1	0	7	199	2	47
Future Volume (veh/h)	35	210	3	7	354	291	1	0	7	199	2	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	36	214	3	7	361	297	1	0	7	203	2	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	217	1188	17	95	745	579	135	47	561	744	26	617
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40
Sat Flow, veh/h	251	2971	43	9	1862	1447	83	117	1401	1408	64	1543
Grp Volume(v), veh/h	125	0	128	368	0	297	8	0	0	203	0	50
Grp Sat Flow(s),veh/h/ln	1450	0	1815	1871	0	1447	1601	0	0	1408	0	1607
Q Serve(g_s), s	0.2	0.0	1.8	0.0	0.0	6.2	0.0	0.0	0.0	3.9	0.0	0.8
Cycle Q Clear(g_c), s	6.4	0.0	1.8	5.9	0.0	6.2	0.1	0.0	0.0	4.0	0.0	0.8
Prop In Lane	0.29		0.02	0.02		1.00	0.12		0.87	1.00		0.96
Lane Grp Cap(c), veh/h	696	0	726	840	0	579	742	0	0	744	0	643
V/C Ratio(X)	0.18	0.00	0.18	0.44	0.00	0.51	0.01	0.00	0.00	0.27	0.00	0.08
Avail Cap(c_a), veh/h	696	0	726	840	0	579	742	0	0	744	0	643
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	7.7	9.0	0.0	9.1	7.2	0.0	0.0	8.4	0.0	7.4
Incr Delay (d2), s/veh	0.6	0.0	0.5	1.7	0.0	3.2	0.0	0.0	0.0	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.6	2.1	0.0	1.9	0.0	0.0	0.0	1.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	0.0	8.3	10.6	0.0	12.3	7.3	0.0	0.0	9.3	0.0	7.7
LnGrp LOS	A	A	A	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		253			665			8			253	
Approach Delay, s/veh		8.3			11.4			7.3			9.0	
Approach LOS		A			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		8.2		2.1		8.4		6.0				
Green Ext Time (p_c), s		2.6		0.0		0.9		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

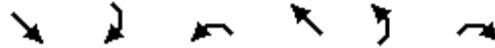
Weekday Peak PM Hour
 10/23/2019



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	319	97	179	516	136	198
Future Volume (vph)	319	97	179	516	136	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.965					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3432	0	1762	1801	1787	1599
Flt Permitted			0.450		0.950	
Satd. Flow (perm)	3432	0	835	1801	1787	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	44					215
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%
Adj. Flow (vph)	347	105	195	561	148	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	452	0	195	561	148	215
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019

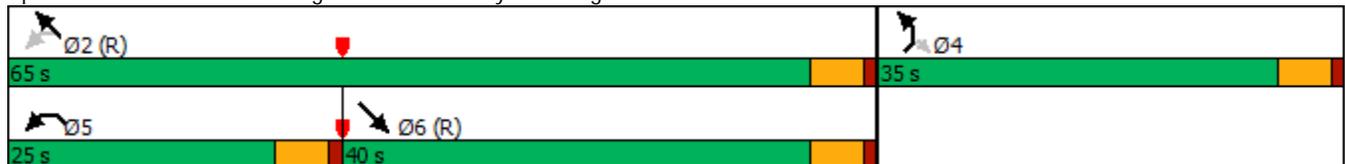


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.21		0.27	0.41	0.61	0.54
Control Delay	8.2		4.6	5.6	60.9	18.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	8.2		4.6	5.6	60.9	18.4
Queue Length 50th (ft)	52		27	100	95	26
Queue Length 95th (ft)	94		58	189	m134	m80
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2169		823	1375	536	620
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.21		0.24	0.41	0.28	0.35

Intersection Summary

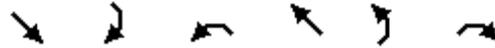
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 10/23/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	319	97	179	516	136	198
Future Volume (veh/h)	319	97	179	516	136	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1879	1879	1979	1934	1885	1885
Adj Flow Rate, veh/h	347	105	195	561	148	215
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	0	3	1	1
Cap, veh/h	1712	510	753	1430	288	257
Arrive On Green	0.63	0.63	0.06	0.74	0.16	0.16
Sat Flow, veh/h	2805	808	1884	1934	1795	1598
Grp Volume(v), veh/h	227	225	195	561	148	215
Grp Sat Flow(s),veh/h/ln	1785	1734	1884	1934	1795	1598
Q Serve(g_s), s	5.4	5.5	3.4	10.7	7.5	13.1
Cycle Q Clear(g_c), s	5.4	5.5	3.4	10.7	7.5	13.1
Prop In Lane		0.47	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1128	1095	753	1430	288	257
V/C Ratio(X)	0.20	0.21	0.26	0.39	0.51	0.84
Avail Cap(c_a), veh/h	1128	1095	1021	1430	539	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.65	0.65	1.00	1.00
Uniform Delay (d), s/veh	7.8	7.8	5.1	4.8	38.4	40.7
Incr Delay (d2), s/veh	0.4	0.4	0.1	0.5	1.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.0	1.1	3.7	3.4	11.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.2	8.2	5.2	5.3	39.8	47.8
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	452			756	363	
Approach Delay, s/veh	8.2			5.3	44.6	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.9		21.1	10.8	68.2
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		12.7		15.1	5.4	7.5
Green Ext Time (p_c), s		4.3		1.0	0.4	2.9
Intersection Summary						
HCM 6th Ctrl Delay			15.2			
HCM 6th LOS			B			

Year 2022 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak PM Hour
10/23/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	201	105	91	216	0	0
Future Volume (vph)	201	105	91	216	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.905			
Flt Protected		0.968				
Satd. Flow (prot)	0	1803	1720	0	0	1863
Flt Permitted		0.968				
Satd. Flow (perm)	0	1803	1720	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	218	114	99	235	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	332	334	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	201	105	91	216	0	0
Future Vol, veh/h	201	105	91	216	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	114	99	235	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	334	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1225	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1225	-	823
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	5.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1225	-	-	-
HCM Lane V/C Ratio	-	0.178	-	-	-
HCM Control Delay (s)	0	8.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-	-

Year 2022 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak PM Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	1006	2095	17	10	6
Future Volume (vph)	8	1006	2095	17	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999		0.949	
Flt Protected	0.950				0.970	
Satd. Flow (prot)	1805	3539	3536	0	1749	0
Flt Permitted	0.950				0.970	
Satd. Flow (perm)	1805	3539	3536	0	1749	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	8	1037	2160	18	10	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	1037	2178	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	8	1006	2095	17	10	6
Future Vol, veh/h	8	1006	2095	17	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	1037	2160	18	10	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	2178	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	248	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	248	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	276.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	248	-	-	-	26
HCM Lane V/C Ratio	0.033	-	-	-	0.634
HCM Control Delay (s)	20	-	-	-	276.4
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	2

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1103	1186	520	375	49
Future Volume (vph)	0	1103	1186	520	375	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.954			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4643	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4643	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			283			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1199	1289	565	408	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1199	1854	0	408	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 10/23/2019

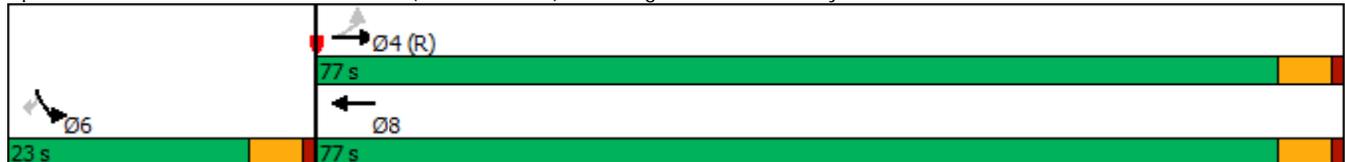


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.47	0.54		0.67	0.16
Control Delay		6.7	5.9		33.9	8.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.7	5.9		33.9	8.2
Queue Length 50th (ft)		146	139		126	10
Queue Length 95th (ft)		183	169		153	m23
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3422		605	322
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.47	0.54		0.67	0.16

Intersection Summary

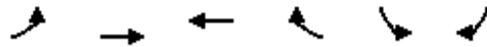
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 10/23/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1103	1186	520	375	49
Future Volume (veh/h)	0	1103	1186	520	375	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1199	1289	565	408	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	2480	1076	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	248	3647	3611	1494	3282	1505
Grp Volume(v), veh/h	0	1199	1257	597	408	53
Grp Sat Flow(s),veh/h/ln	248	1777	1681	1578	1641	1505
Q Serve(g_s), s	0.0	14.3	16.7	17.0	11.6	3.0
Cycle Q Clear(g_c), s	0.0	14.3	16.7	17.0	11.6	3.0
Prop In Lane	1.00			0.95	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1136	591	271
V/C Ratio(X)	0.00	0.47	0.52	0.53	0.69	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1136	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.78	0.78
Uniform Delay (d), s/veh	0.0	5.9	6.3	6.3	38.4	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.4	5.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.5	4.4	5.0	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.5	6.5	6.8	43.5	36.1
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1199	1854		461	
Approach Delay, s/veh		6.5	6.6		42.7	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				16.3	13.6	19.0
Green Ext Time (p_c), s				11.3	0.7	21.5
Intersection Summary						
HCM 6th Ctrl Delay			11.3			
HCM 6th LOS			B			

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷			↷			↷	
Traffic Volume (vph)	2	1166	23	55	1176	3	27	0	55	5	0	2
Future Volume (vph)	2	1166	23	55	1176	3	27	0	55	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.909			0.961	
Flt Protected	0.950			0.950				0.984			0.966	
Satd. Flow (prot)	1832	3497	0	1778	3403	0	0	1635	0	0	1773	0
Flt Permitted	0.950			0.950				0.984			0.966	
Satd. Flow (perm)	1832	3497	0	1778	3403	0	0	1635	0	0	1773	0
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1018			964			269			394	
Travel Time (s)		17.4			16.4			6.1			9.0	
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
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	1227	24	58	1238	3	28	0	58	5	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1251	0	58	1241	0	0	86	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 10/23/2019

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	1166	23	55	1176	3	27	0	55	5	0	2
Future Vol, veh/h	2	1166	23	55	1176	3	27	0	55	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	1227	24	58	1238	3	28	0	58	5	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1241	0	0	1251	0	0	1978	2600	626	1974	2611	621
Stage 1	-	-	-	-	-	-	1243	1243	-	1356	1356	-
Stage 2	-	-	-	-	-	-	735	1357	-	618	1255	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.7	7	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	568	-	-	563	-	-	34	22	424	42	29	443
Stage 1	-	-	-	-	-	-	175	232	-	173	237	-
Stage 2	-	-	-	-	-	-	367	203	-	464	263	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	568	-	-	563	-	-	31	20	424	33	26	443
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	20	-	33	26	-
Stage 1	-	-	-	-	-	-	174	231	-	172	213	-
Stage 2	-	-	-	-	-	-	328	182	-	399	262	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	205.4	100.1
HCM LOS			F	F

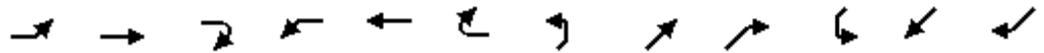
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	82	568	-	-	563	-	-	45
HCM Lane V/C Ratio	1.053	0.004	-	-	0.103	-	-	0.164
HCM Control Delay (s)	205.4	11.4	-	-	12.1	-	-	100.1
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6	0	-	-	0.3	-	-	0.5

Year 2022 No-Build Traffic Volumes

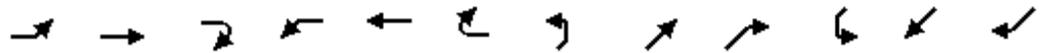
Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	179	978	93	73	931	87	134	102	77	81	86	172
Future Volume (vph)	179	978	93	73	931	87	134	102	77	81	86	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					0.99
Frt		0.987			0.987			0.989	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3531	0	1805	3513	0	1787	1785	1534	1680	1909	1607
Flt Permitted	0.158			0.140			0.699			0.670		
Satd. Flow (perm)	297	3531	0	266	3513	0	1313	1785	1534	1185	1909	1585
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7			2	77			127
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	0%	0%	1%	6%	1%	0%	0%	8%	0%	1%
Adj. Flow (vph)	186	1019	97	76	970	91	140	106	80	84	90	179
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	186	1116	0	76	1061	0	140	114	72	84	90	179
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

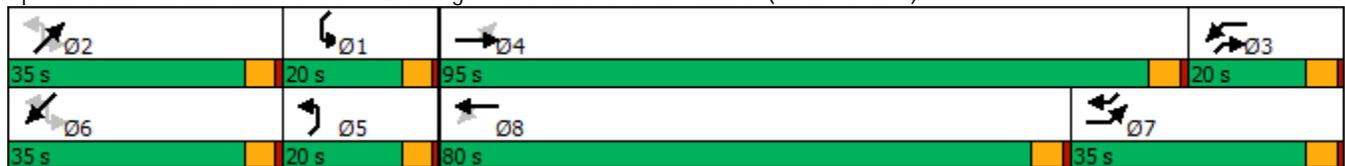


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.53	0.66		0.31	0.69		0.39	0.36	0.14	0.36	0.43	0.39
Control Delay	27.1	19.7		16.8	23.2		32.5	39.2	6.6	33.6	47.9	12.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	19.7		16.8	23.2		32.5	39.2	6.6	33.6	47.9	12.8
Queue Length 50th (ft)	36	204		14	212		55	54	0	32	42	19
Queue Length 95th (ft)	100	422		46	434		139	137	31	91	124	93
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	796	3289		446	3045		531	655	524	438	699	681
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	0.23	0.34		0.17	0.35		0.26	0.17	0.14	0.19	0.13	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 86.9
 Natural Cycle: 70
 Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

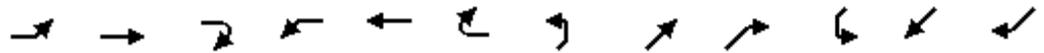


Year 2022 No-Build Traffic Volumes

Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	179	978	93	73	931	87	134	102	77	81	86	172
Future Volume (veh/h)	179	978	93	73	931	87	134	102	77	81	86	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1885	1885	1885	1900	1900	1819	1939	1924
Adj Flow Rate, veh/h	186	1019	97	76	970	91	140	106	80	84	90	179
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	1	1	1	0	0	8	0	1
Cap, veh/h	368	1501	143	318	1424	134	301	186	252	279	180	285
Arrive On Green	0.08	0.45	0.45	0.06	0.43	0.43	0.07	0.10	0.10	0.07	0.09	0.09
Sat Flow, veh/h	1795	3305	314	1810	3310	310	1795	1900	1605	1733	1939	1625
Grp Volume(v), veh/h	186	552	564	76	525	536	140	106	80	84	90	179
Grp Sat Flow(s),veh/h/ln	1795	1791	1829	1810	1791	1829	1795	1900	1605	1733	1939	1625
Q Serve(g_s), s	0.0	15.1	15.1	0.0	14.7	14.7	0.0	3.3	0.0	0.0	2.7	1.2
Cycle Q Clear(g_c), s	0.0	15.1	15.1	0.0	14.7	14.7	0.0	3.3	0.0	0.0	2.7	1.2
Prop In Lane	1.00		0.17	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	813	830	318	770	787	301	186	252	279	180	285
V/C Ratio(X)	0.51	0.68	0.68	0.24	0.68	0.68	0.46	0.57	0.32	0.30	0.50	0.63
Avail Cap(c_a), veh/h	1085	2591	2645	648	2159	2205	603	916	869	579	935	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	13.4	13.4	20.8	14.3	14.3	26.1	26.8	23.3	26.4	26.9	23.8
Incr Delay (d2), s/veh	0.4	2.1	2.1	0.1	2.3	2.2	0.4	1.0	0.3	0.2	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.3	5.4	0.9	5.3	5.4	1.9	1.5	1.0	1.1	1.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	15.5	15.5	20.9	16.6	16.5	26.6	27.8	23.5	26.6	27.7	24.6
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1302			1137			326			353	
Approach Delay, s/veh		16.6			16.8			26.2			25.9	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	11.1	8.7	33.2	9.6	10.8	10.1	31.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	5.3	2.0	17.1	2.0	4.7	2.0	16.7				
Green Ext Time (p_c), s	0.1	0.4	0.1	11.1	0.2	0.6	0.3	10.1				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (vph)	51	117	192	73	147	30	15	32	97	141	66	89
Future Volume (vph)	51	117	192	73	147	30	15	32	97	141	66	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.982				0.850		0.913	
Flt Protected		0.985			0.986			0.984		0.950		
Satd. Flow (prot)	0	1867	1584	0	3601	0	0	1870	1669	1702	1633	0
Flt Permitted		0.836			0.818			0.899		0.604		
Satd. Flow (perm)	0	1585	1584	0	2988	0	0	1708	1669	1082	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		22				160		94	
Link Speed (mph)		30			30			30		30		30
Link Distance (ft)		467			504			921		780		
Travel Time (s)		10.6			11.5			20.9		17.7		
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
Heavy Vehicles (%)	4%	0%	3%	3%	1%	0%	0%	0%	0%	5%	0%	9%
Adj. Flow (vph)	54	123	202	77	155	32	16	34	102	148	69	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	177	202	0	264	0	0	50	102	148	163	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12		12		
Link Offset(ft)		0			0			0		0		
Crosswalk Width(ft)		16			16			16		16		
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Free	Perm	NA		Perm	NA	Free	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		Free	8			6		Free	2		
Detector Phase	4	4		8	8		6	6		5	2	
Switch Phase												

Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
10/23/2019

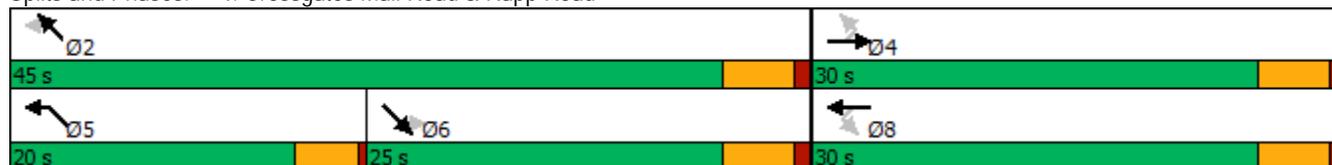


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		8.0	21.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0		20.0	45.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		33.3%	33.3%		26.7%	60.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		0.5	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		4.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
v/c Ratio		0.34	0.13		0.26			0.11	0.06	0.20	0.18	
Control Delay		21.0	0.2		17.5			21.6	0.1	9.3	4.7	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		21.0	0.2		17.5			21.6	0.1	9.3	4.7	
Queue Length 50th (ft)		61	0		42			18	0	32	15	
Queue Length 95th (ft)		111	0		70			43	0	59	42	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		528	1584		1010			455	1669	723	914	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.34	0.13		0.26			0.11	0.06	0.20	0.18	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
10/23/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↕		↕↕			↕	↕	↕	↕	
Traffic Volume (veh/h)	51	117	192	73	147	30	15	32	97	141	66	89
Future Volume (veh/h)	51	117	192	73	147	30	15	32	97	141	66	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1934	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	54	123	0	77	155	32	16	34	0	148	69	94
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	3	1	1	1	0	0	0	5	0	0
Cap, veh/h	203	440		340	653	137	173	339		869	384	523
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.27	0.27	0.00	0.21	0.53	0.53
Sat Flow, veh/h	422	1319	1639	795	1958	412	412	1270	1675	1717	720	980
Grp Volume(v), veh/h	177	0	0	138	0	126	50	0	0	148	0	163
Grp Sat Flow(s),veh/h/ln	1741	0	1639	1544	0	1621	1682	0	1675	1717	0	1700
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	3.5	0.0	3.7
Cycle Q Clear(g_c), s	5.0	0.0	0.0	4.1	0.0	4.2	1.5	0.0	0.0	3.5	0.0	3.7
Prop In Lane	0.31		1.00	0.56		0.25	0.32		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	643	0		589	0	540	512	0		869	0	907
V/C Ratio(X)	0.28	0.00		0.23	0.00	0.23	0.10	0.00		0.17	0.00	0.18
Avail Cap(c_a), veh/h	643	0		589	0	540	512	0		869	0	907
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	0.0	18.0	0.0	18.1	20.7	0.0	0.0	10.0	0.0	9.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.9	0.0	1.0	0.4	0.0	0.0	0.4	0.0	0.4
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	2.3	0.0	0.0	1.8	0.0	1.7	0.7	0.0	0.0	1.3	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	0.0	18.9	0.0	19.1	21.1	0.0	0.0	10.4	0.0	9.5
LnGrp LOS	B	A		B	A	B	C	A		B	A	A
Approach Vol, veh/h		177	A		264			50	A		311	
Approach Delay, s/veh		19.4			19.0			21.1			9.9	
Approach LOS		B			B			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	16.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		5.7		7.0	5.5	3.5		6.2				
Green Ext Time (p_c), s		0.4		0.4	0.2	0.1		0.6				

Intersection Summary

HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

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

Year 2022 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	36	21	22	125	124	47
Future Volume (vph)	36	21	22	125	124	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.950				0.963	
Flt Protected	0.969			0.993		
Satd. Flow (prot)	1749	0	0	1868	1778	0
Flt Permitted	0.969			0.993		
Satd. Flow (perm)	1749	0	0	1868	1778	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	3	2	2			3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	41	24	25	144	143	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	0	0	169	197	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	36	21	22	125	124	47
Future Vol, veh/h	36	21	22	125	124	47
Conflicting Peds, #/hr	3	2	2	0	0	3
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	24	25	144	143	54

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	370	175	200	0	-	0
Stage 1	173	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	634	874	1384	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	619	870	1381	-	-	-
Mov Cap-2 Maneuver	619	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10.7	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1381	-	693	-	-
HCM Lane V/C Ratio	0.018	-	0.095	-	-
HCM Control Delay (s)	7.7	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Year 2022 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	13	17	143	157	15
Future Volume (vph)	13	13	17	143	157	15
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.988	
Flt Protected	0.976			0.995		
Satd. Flow (prot)	1531	0	0	1793	1887	0
Flt Permitted	0.976			0.995		
Satd. Flow (perm)	1531	0	0	1793	1887	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	0%	0%	1%	0%	0%
Adj. Flow (vph)	14	14	18	149	164	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	167	180	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

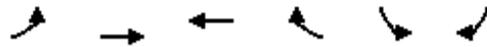
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	13	13	17	143	157	15
Future Vol, veh/h	13	13	17	143	157	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	15	0	0	1	0	0
Mvmt Flow	14	14	18	149	164	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8.1	8.1
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	11%	50%	0%
Vol Thru, %	89%	0%	91%
Vol Right, %	0%	50%	9%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	160	26	172
LT Vol	17	13	0
Through Vol	143	0	157
RT Vol	0	13	15
Lane Flow Rate	167	27	179
Geometry Grp	1	1	1
Degree of Util (X)	0.19	0.035	0.2
Departure Headway (Hd)	4.103	4.691	4.02
Convergence, Y/N	Yes	Yes	Yes
Cap	868	768	885
Service Time	2.16	2.691	2.078
HCM Lane V/C Ratio	0.192	0.035	0.202
HCM Control Delay	8.1	7.9	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.7

Year 2022 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	156	0	0	0	173
Future Volume (vph)	0	156	0	0	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected						
Satd. Flow (prot)	0	1791	1900	0	1853	0
Fl _t Permitted						
Satd. Flow (perm)	0	1791	1900	0	1853	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	166	0	0	0	184
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	166	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 4.7

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	156	0	0	0	173
Future Vol, veh/h	0	156	0	0	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	166	0	0	0	184

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1	0	-	0	167	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	4.1	-	-	-	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1635	-	-	-	820	1090
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1635	-	-	-	820	1090
Mov Cap-2 Maneuver	-	-	-	-	820	-
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	860	-

Approach EB WB SB

HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	-	-	-	-	0.169
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Year 2022 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	39	6	15	0	110	0	6	20	24	2	0
Future Volume (vph)	112	39	6	15	0	110	0	6	20	24	2	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.881			0.898				
Flt Protected	0.950				0.994						0.956	
Satd. Flow (prot)	1787	1831	0	0	1876	0	0	1698	0	0	1853	0
Flt Permitted	0.950				0.994						0.956	
Satd. Flow (perm)	1787	1831	0	0	1876	0	0	1698	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			746	
Travel Time (s)		11.1			2.8			9.8			17.0	
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
Heavy Vehicles (%)	1%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	122	42	7	16	0	120	0	7	22	26	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	49	0	0	136	0	0	29	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	112	39	6	15	0	110	0	6	20	24	2	0
Future Vol, veh/h	112	39	6	15	0	110	0	6	20	24	2	0
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
Heavy Vehicles, %	1	0	11	0	0	0	0	0	0	0	0	0
Mvmt Flow	122	42	7	16	0	120	0	7	22	26	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	8.7	7.5	7.3	8
HCM LOS	A	A	A	A

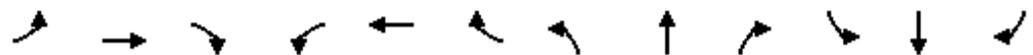
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	92%
Vol Thru, %	23%	0%	87%	0%	8%
Vol Right, %	77%	0%	13%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	112	45	125	26
LT Vol	0	112	0	15	24
Through Vol	6	0	39	0	2
RT Vol	20	0	6	110	0
Lane Flow Rate	28	122	49	136	28
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.033	0.175	0.062	0.144	0.038
Departure Headway (Hd)	4.161	5.186	4.574	3.819	4.806
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	864	689	778	943	748
Service Time	2.17	2.942	2.33	1.827	2.815
HCM Lane V/C Ratio	0.032	0.177	0.063	0.144	0.037
HCM Control Delay	7.3	9.1	7.6	7.5	8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.2	0.5	0.1

Year 2022 No-Build Traffic Volumes

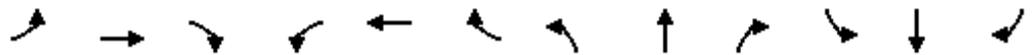
Saturday Peak Hour

9: Washington Avenue Extension & Springsteen Road/Crossgates Commons

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↖		↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	0	0	83	409	52	361	71	530	462	395	571	5
Future Volume (vph)	0	0	83	409	52	361	71	530	462	395	571	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99								
Frt			0.850		0.869				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1777	3432	1620	0	1796	5060	1591	1805	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1752	3414	1620	0	1796	5060	1591	1805	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105		256				476			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	0	0	86	422	54	372	73	546	476	407	589	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	86	422	426	0	73	546	476	407	589	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.33	0.65	0.83		0.43	0.30	0.54	0.93	0.32	0.01
Control Delay			9.1	35.7	27.0		43.9	20.1	4.8	63.1	13.7	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			9.1	35.7	27.0		43.9	20.1	4.8	63.1	13.7	0.0
Queue Length 50th (ft)			0	105	83		36	70	0	202	85	0
Queue Length 95th (ft)			31	150	194		81	114	65	#426	158	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			509	1244	1344		434	3670	1284	436	2592	1197
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			0.17	0.34	0.32		0.17	0.15	0.37	0.93	0.23	0.00

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 82.9

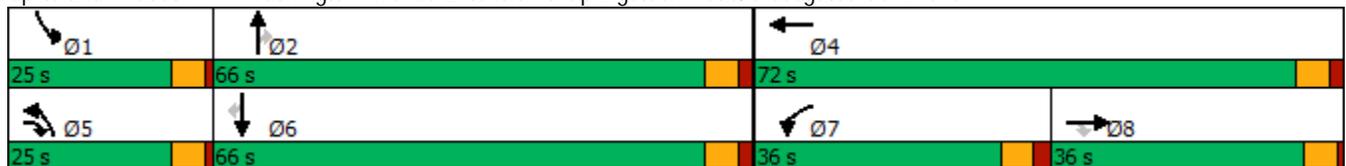
Natural Cycle: 90

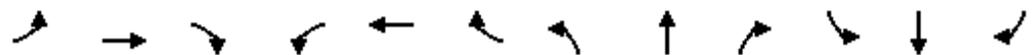
Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	83	409	52	361	71	530	462	395	571	5
Future Volume (veh/h)	0	0	83	409	52	361	71	530	462	395	571	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1976	1862	1876	1876	1894	1864	1879	1900	1885	1900
Adj Flow Rate, veh/h	0	0	86	422	54	372	73	546	476	407	589	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	0	0	0	2	1	0	1	0
Cap, veh/h	0	152	216	512	59	404	95	1751	548	362	1761	791
Arrive On Green	0.00	0.00	0.08	0.15	0.29	0.29	0.05	0.34	0.34	0.20	0.49	0.49
Sat Flow, veh/h	0	1976	1662	3440	205	1413	1804	5090	1593	1810	3582	1610
Grp Volume(v), veh/h	0	0	86	422	0	426	73	546	476	407	589	5
Grp Sat Flow(s),veh/h/ln	0	1976	1662	1720	0	1619	1804	1697	1593	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	4.7	11.9	0.0	25.5	4.0	7.9	27.9	20.0	10.0	0.2
Cycle Q Clear(g_c), s	0.0	0.0	4.7	11.9	0.0	25.5	4.0	7.9	27.9	20.0	10.0	0.2
Prop In Lane	0.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	152	216	512	0	462	95	1751	548	362	1761	791
V/C Ratio(X)	0.00	0.00	0.40	0.82	0.00	0.92	0.77	0.31	0.87	1.12	0.33	0.01
Avail Cap(c_a), veh/h	0	613	604	1033	0	1069	361	3056	956	362	2150	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	39.9	41.3	0.0	34.6	46.7	24.1	30.7	40.0	15.5	13.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.3	0.0	3.3	4.8	0.1	6.1	85.2	0.2	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	0.0	0.0	0.0	5.1	0.0	10.2	1.9	3.0	0.9	17.0	3.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	40.4	42.6	0.0	37.9	51.6	24.2	36.7	125.2	15.6	13.0
LnGrp LOS	A	A	D	D	A	D	D	C	D	F	B	B
Approach Vol, veh/h		86			848			1095			1001	
Approach Delay, s/veh		40.4			40.3			31.5			60.2	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	40.4		34.5	10.3	55.1	20.9	13.7				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	22.0	29.9		27.5	6.0	12.0	13.9	6.7				
Green Ext Time (p_c), s	0.0	4.4		1.0	0.1	2.6	1.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 10/23/2019

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	483	679	271	0	514	526	277	0	0
Future Volume (vph)	483	679	271	0	514	526	277	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912				0.850				
Flt Protected	0.980					0.950			
Satd. Flow (prot)	3292	0	1890	0	1644	1727	1783	0	0
Flt Permitted	0.980					0.242			
Satd. Flow (perm)	3292	0	1890	0	1644	440	1783	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	439				535				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	503	707	282	0	535	548	289	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1210	0	282	0	535	548	289	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 10/23/2019

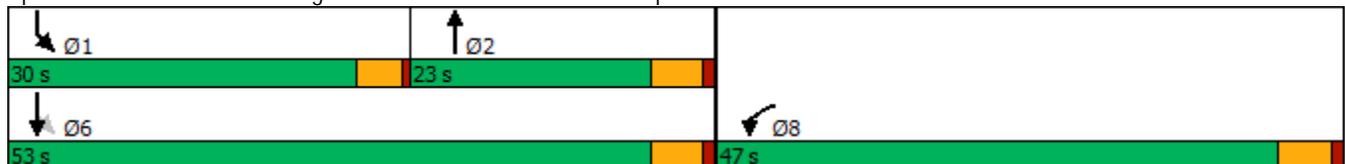


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	47.0		23.0			30.0	53.0		
Total Split (%)	47.0%		23.0%			30.0%	53.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.85		0.79		0.33	0.87	0.30		
Control Delay	22.9		52.2		0.5	34.7	13.6		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	22.9		52.2		0.5	34.7	13.6		
Queue Length 50th (ft)	211		147		0	209	81		
Queue Length 95th (ft)	293		#311		0	#502	171		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1838		397		1644	633	999		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.66		0.71		0.33	0.87	0.29		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 86.8
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 10/23/2019



Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	W	W	T		R	S	S		
Traffic Volume (veh/h)	483	679	271	0	514	526	277	0	0
Future Volume (veh/h)	483	679	271	0	514	526	277	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1954	1954	1876	1847		
Adj Flow Rate, veh/h	503	707	282	0	0	548	289		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	1	1	0	2		
Cap, veh/h	786	728	319			570	873		
Arrive On Green	0.43	0.43	0.17	0.00	0.00	0.26	0.47		
Sat Flow, veh/h	1847	1709	1894	1656	1656	1787	1847		
Grp Volume(v), veh/h	503	707	282	0	0	548	289		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1656	1656	1787	1847		
Q Serve(g_s), s	21.2	39.9	14.3	0.0	0.0	24.3	9.6		
Cycle Q Clear(g_c), s	21.2	39.9	14.3	0.0	0.0	24.3	9.6		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	786	728	319			570	873		
V/C Ratio(X)	0.64	0.97	0.88			0.96	0.33		
Avail Cap(c_a), veh/h	787	728	346			570	899		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	22.3	27.7	40.0	0.0	0.0	23.7	16.2		
Incr Delay (d2), s/veh	1.7	26.3	21.6	0.0	0.0	28.3	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9.2	20.8	8.5	0.0	0.0	14.3	4.0		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	24.1	54.0	61.7	0.0	0.0	52.1	16.5		
LnGrp LOS	C	D	E			D	B		
Approach Vol, veh/h	1210		282	A	A		837		
Approach Delay, s/veh	41.6		61.7				39.8		
Approach LOS	D		E				D		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.0	21.6				51.6	47.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	26.0	18.0				48.0	42.0		
Max Q Clear Time (g_c+I1), s	26.3	16.3				11.6	41.9		
Green Ext Time (p_c), s	0.0	0.3				1.8	0.0		

Intersection Summary

HCM 6th Ctrl Delay			43.4						
HCM 6th LOS			D						

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 No-Build Traffic Volumes
 11: Crossgates Mall Road & Mall Entrance #1

Saturday Peak Hour
 10/23/2019



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑	↑↑		↓	
Traffic Volume (vph)	92	205	200	169	117	96
Future Volume (vph)	92	205	200	169	117	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	15	15
Grade (%)		-2%	2%		4%	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.931		0.939	
Flt Protected		0.985			0.973	
Satd. Flow (prot)	0	3368	3312	0	1753	0
Flt Permitted		0.985			0.973	
Satd. Flow (perm)	0	3368	3312	0	1753	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		780	786		287	
Travel Time (s)		17.7	17.9		6.5	
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	4%	0%	1%	0%	15%
Adj. Flow (vph)	100	223	217	184	127	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	323	401	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		15	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.03	1.03	1.01	1.01	0.91	0.91
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection

Int Delay, s/veh 6.2

Movement SEL SET NWT NWR SWL SWR

Lane Configurations		↑↑	↑↑		⌵	
Traffic Vol, veh/h	92	205	200	169	117	96
Future Vol, veh/h	92	205	200	169	117	96
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	-2	2	-	4	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	4	0	1	0	15
Mvmt Flow	100	223	217	184	127	104

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	402	0	-	0	623	202
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.12	-	-	-	7.6	7.6
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6.6	-
Follow-up Hdwy	2.21	-	-	-	3.5	3.45
Pot Cap-1 Maneuver	1160	-	-	-	368	749
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1159	-	-	-	331	748
Mov Cap-2 Maneuver	-	-	-	-	331	-
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	671	-

Approach SE NW SW

HCM Control Delay, s	2.7	0	21.8
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1159	-	442
HCM Lane V/C Ratio	-	-	0.086	-	0.524
HCM Control Delay (s)	-	-	8.4	0.2	21.8
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.3	-	3

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	44	278	0	8	325	486	2	3	13	327	6	42
Future Volume (vph)	44	278	0	8	325	486	2	3	13	327	6	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.99		0.99	0.99	
Frt					0.911			0.901			0.868	
Flt Protected		0.993			0.999			0.995		0.950		
Satd. Flow (prot)	0	3550	0	0	3233	0	0	1681	0	1787	1631	0
Flt Permitted		0.809			0.951			0.985		0.745		
Satd. Flow (perm)	0	2892	0	0	3078	0	0	1664	0	1393	1631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					517			14			45	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)			3	3			1		8	8		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
Heavy Vehicles (%)	12%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	47	296	0	9	346	517	2	3	14	348	6	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	343	0	0	872	0	0	19	0	348	51	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.30			0.57			0.03		0.62	0.08	
Control Delay		9.1			5.2			5.1		16.1	3.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019

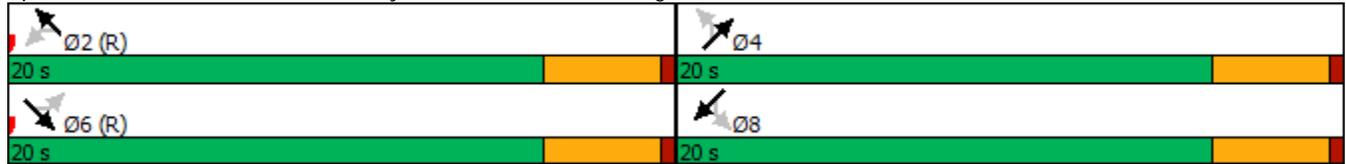


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		9.1			5.2			5.1		16.1	3.9	
Queue Length 50th (ft)		25			26			1		58	1	
Queue Length 95th (ft)		46			57			8		#130	14	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1156			1541			674		557	679	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.30			0.57			0.03		0.62	0.08	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	44	278	0	8	325	486	2	3	13	327	6	42
Future Volume (veh/h)	44	278	0	8	325	486	2	3	13	327	6	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	47	296	0	9	346	517	2	3	14	348	6	45
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, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	143	958	0	98	742	577	125	148	486	742	77	576
Arrive On Green	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	63	2485	0	13	1854	1442	63	370	1214	1399	192	1439
Grp Volume(v), veh/h	150	193	0	355	0	517	19	0	0	348	0	51
Grp Sat Flow(s),veh/h/ln	726	1732	0	1867	0	1442	1648	0	0	1399	0	1631
Q Serve(g_s), s	1.3	3.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0	7.6	0.0	0.8
Cycle Q Clear(g_c), s	14.7	3.0	0.0	5.6	0.0	13.4	0.3	0.0	0.0	7.8	0.0	0.8
Prop In Lane	0.31		0.00	0.03		1.00	0.11		0.74	1.00		0.88
Lane Grp Cap(c), veh/h	408	693	0	839	0	577	759	0	0	742	0	652
V/C Ratio(X)	0.37	0.28	0.00	0.42	0.00	0.90	0.03	0.00	0.00	0.47	0.00	0.08
Avail Cap(c_a), veh/h	408	693	0	839	0	577	759	0	0	742	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	8.1	0.0	8.9	0.0	11.2	7.3	0.0	0.0	9.5	0.0	7.4
Incr Delay (d2), s/veh	2.5	1.0	0.0	1.6	0.0	19.2	0.1	0.0	0.0	2.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.0	0.0	2.0	0.0	6.1	0.1	0.0	0.0	2.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	9.1	0.0	10.4	0.0	30.4	7.3	0.0	0.0	11.6	0.0	7.7
LnGrp LOS	B	A	A	B	A	C	A	A	A	B	A	A
Approach Vol, veh/h		343			872			19			399	
Approach Delay, s/veh		10.2			22.3			7.3			11.1	
Approach LOS		B			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		15.4		2.3		16.7		9.8				
Green Ext Time (p_c), s		0.3		0.0		0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

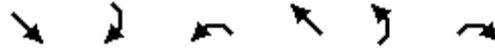
Saturday Peak Hour
 10/23/2019



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	487	131	293	522	297	347
Future Volume (vph)	487	131	293	522	297	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.99
Frt	0.968					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3470	0	1762	1837	1805	1615
Flt Permitted			0.303		0.950	
Satd. Flow (perm)	3470	0	562	1837	1805	1593
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	37					377
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%
Adj. Flow (vph)	529	142	318	567	323	377
Shared Lane Traffic (%)						
Lane Group Flow (vph)	671	0	318	567	323	377
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019

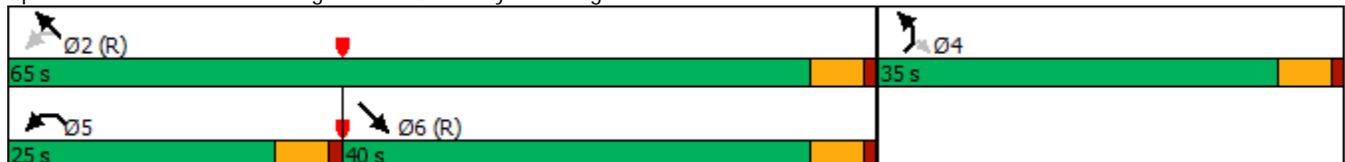


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.39		0.59	0.46	0.77	0.57
Control Delay	18.2		12.5	10.4	47.8	7.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.2		12.5	10.4	47.8	7.2
Queue Length 50th (ft)	127		73	155	161	12
Queue Length 95th (ft)	224		141	282	198	58
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	1700		615	1228	541	741
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.39		0.52	0.46	0.60	0.51

Intersection Summary

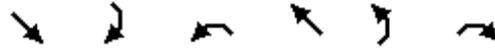
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 10/23/2019



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↙	↑	↘	↗
Traffic Volume (veh/h)	487	131	293	522	297	347
Future Volume (veh/h)	487	131	293	522	297	347
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1979	1964	1900	1900
Adj Flow Rate, veh/h	529	142	318	567	323	377
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	0
Cap, veh/h	1361	364	567	1258	469	418
Arrive On Green	0.48	0.48	0.11	0.64	0.26	0.26
Sat Flow, veh/h	2903	750	1884	1964	1810	1610
Grp Volume(v), veh/h	338	333	318	567	323	377
Grp Sat Flow(s),veh/h/ln	1799	1759	1884	1964	1810	1610
Q Serve(g_s), s	11.9	12.0	7.9	14.6	16.1	22.6
Cycle Q Clear(g_c), s	11.9	12.0	7.9	14.6	16.1	22.6
Prop In Lane		0.43	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	872	852	567	1258	469	418
V/C Ratio(X)	0.39	0.39	0.56	0.45	0.69	0.90
Avail Cap(c_a), veh/h	872	852	744	1258	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.58	0.58	1.00	1.00
Uniform Delay (d), s/veh	16.4	16.4	10.7	9.1	33.4	35.8
Incr Delay (d2), s/veh	1.2	1.2	0.5	0.7	3.0	18.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.0	3.1	5.9	7.3	20.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.5	17.6	11.2	9.8	36.4	54.3
LnGrp LOS	B	B	B	A	D	D
Approach Vol, veh/h	671			885	700	
Approach Delay, s/veh	17.5			10.3	46.0	
Approach LOS	B			B	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.1		30.9	15.6	53.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		16.6		24.6	9.9	14.0
Green Ext Time (p_c), s		4.3		1.3	0.7	4.2
Intersection Summary						
HCM 6th Ctrl Delay			23.5			
HCM 6th LOS			C			

Year 2022 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Saturday Peak Hour
10/23/2019



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↔			↗
Traffic Volume (vph)	78	109	12	63	0	0
Future Volume (vph)	78	109	12	63	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.887			
Flt Protected		0.980				
Satd. Flow (prot)	0	1825	1685	0	0	1900
Flt Permitted		0.980				
Satd. Flow (perm)	0	1825	1685	0	0	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		746	389		508	
Travel Time (s)		17.0	8.8		11.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Adj. Flow (vph)	84	117	13	68	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	201	81	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷			↶
Traffic Vol, veh/h	78	109	12	63	0	0
Future Vol, veh/h	78	109	12	63	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	84	117	13	68	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	81	0	-	0	- 47
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.2
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.3
Pot Cap-1 Maneuver	1517	-	-	-	0 1028
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1517	-	-	-	- 1028
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	3.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1517	-	-	-
HCM Lane V/C Ratio	-	0.055	-	-	-
HCM Control Delay (s)	0	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	-

Year 2022 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Saturday Peak Hour
 10/23/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	1241	1232	4	9	13
Future Volume (vph)	12	1241	1232	4	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt					0.918	
Flt Protected	0.950				0.981	
Satd. Flow (prot)	1805	3574	3574	0	1711	0
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	1805	3574	3574	0	1711	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1069	
Travel Time (s)		15.5	6.5		24.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	13	1293	1283	4	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1293	1287	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1241	1232	4	9	13
Future Vol, veh/h	12	1241	1232	4	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1293	1283	4	9	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1287	0	-	0	1958
Stage 1	-	-	-	-	1285
Stage 2	-	-	-	-	673
Critical Hdwy	4.1	-	-	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	546	-	-	-	57
Stage 1	-	-	-	-	227
Stage 2	-	-	-	-	474
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	546	-	-	-	56
Mov Cap-2 Maneuver	-	-	-	-	56
Stage 1	-	-	-	-	222
Stage 2	-	-	-	-	474

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	43.9
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	546	-	-	-	115
HCM Lane V/C Ratio	0.023	-	-	-	0.199
HCM Control Delay (s)	11.7	-	-	-	43.9
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

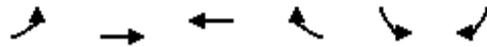
Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑↑	↑↑↑		↔	↔
Traffic Volume (vph)	0	1543	912	107	62	18
Future Volume (vph)	0	1543	912	107	62	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1837	3438	4540	0	3432	1583
Flt Permitted					0.950	
Satd. Flow (perm)	1837	3438	4540	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			52			20
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	0	1677	991	116	67	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1677	1107	0	67	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020

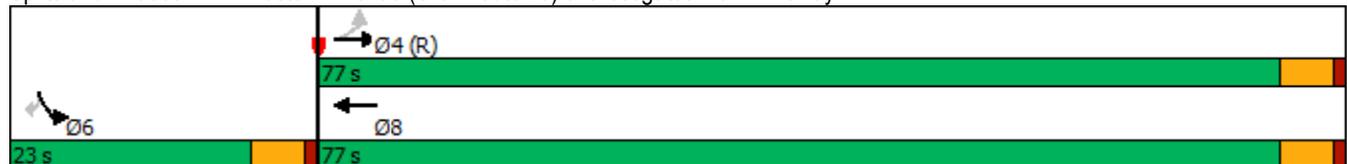


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.68	0.34		0.11	0.07
Control Delay		9.4	5.2		30.6	12.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.4	5.2		30.6	12.6
Queue Length 50th (ft)		263	77		18	3
Queue Length 95th (ft)		331	95		37	20
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2475	3283		617	301
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.68	0.34		0.11	0.07

Intersection Summary

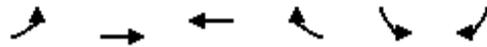
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷↶		↷↶	↷
Traffic Volume (veh/h)	0	1543	912	107	62	18
Future Volume (veh/h)	0	1543	912	107	62	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806
Adj Flow Rate, veh/h	0	1677	991	116	67	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	5	8	8	0	0
Cap, veh/h	72	2498	3137	366	601	275
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	517	3561	4515	509	3336	1530
Grp Volume(v), veh/h	0	1677	727	380	67	20
Grp Sat Flow(s),veh/h/ln	517	1735	1600	1666	1668	1530
Q Serve(g_s), s	0.0	26.2	8.2	8.3	1.7	1.1
Cycle Q Clear(g_c), s	0.0	26.2	8.2	8.3	1.7	1.1
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	72	2498	2304	1200	601	275
V/C Ratio(X)	0.00	0.67	0.32	0.32	0.11	0.07
Avail Cap(c_a), veh/h	72	2498	2304	1200	601	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.6	5.1	5.1	34.3	34.1
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.2	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	2.1	2.2	0.7	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.0	5.2	5.2	34.7	34.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1677	1107		87	
Approach Delay, s/veh		9.0	5.2		34.7	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				28.2	3.7	10.3
Green Ext Time (p_c), s				19.0	0.2	9.1
Intersection Summary						
HCM 6th Ctrl Delay			8.3			
HCM 6th LOS			A			

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1740	11	21	899	7	21	0	68	0	0	17
Future Volume (vph)	0	1740	11	21	899	7	21	0	68	0	0	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.897				0.865
Flt Protected				0.950				0.988				
Satd. Flow (prot)	1286	3403	0	1520	3181	0	0	1560	0	0	1652	0
Flt Permitted				0.950				0.988				
Satd. Flow (perm)	1286	3403	0	1520	3181	0	0	1560	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	50%	4%	0%	17%	8%	0%	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	0	1832	12	22	946	7	22	0	72	0	0	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1844	0	22	953	0	0	94	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	16.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	0	1740	11	21	899	7	21	0	68	0	0	17
Future Vol, veh/h	0	1740	11	21	899	7	21	0	68	0	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	4	0	17	8	0	0	0	5	0	0	0
Mvmt Flow	0	1832	12	22	946	7	22	0	72	0	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	953	0	0	1844	0	0	2355	2835	922	1910	2838	477
Stage 1	-	-	-	-	-	-	1838	1838	-	994	994	-
Stage 2	-	-	-	-	-	-	517	997	-	916	1844	-
Critical Hdwy	5.1	-	-	4.44	-	-	7.7	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.7	-	-	2.37	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	484	-	-	270	-	-	~ 17	15	260	47	21	547
Stage 1	-	-	-	-	-	-	72	115	-	282	344	-
Stage 2	-	-	-	-	-	-	500	307	-	313	140	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	484	-	-	270	-	-	~ 15	14	260	32	19	547
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	14	-	32	19	-
Stage 1	-	-	-	-	-	-	72	115	-	282	316	-
Stage 2	-	-	-	-	-	-	444	282	-	227	140	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 518.8	11.8
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	54	484	-	-	270	-	-	547
HCM Lane V/C Ratio	1.735	-	-	-	0.082	-	-	0.033
HCM Control Delay (s)	\$ 518.8	0	-	-	19.5	-	-	11.8
HCM Lane LOS	F	A	-	-	C	-	-	B
HCM 95th %tile Q(veh)	8.9	0	-	-	0.3	-	-	0.1

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

Year 2022 Build Traffic Volumes

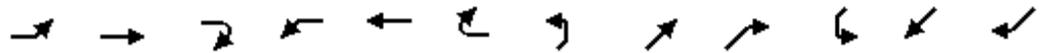
Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	263	1468	98	96	745	40	93	148	184	47	42	96
Future Volume (vph)	263	1468	98	96	745	40	93	148	184	47	42	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00	0.97	0.99		
Frt		0.991			0.992			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3452	0	1612	3333	0	1626	1720	1447	1440	1872	1623
Flt Permitted	0.156			0.082			0.726			0.606		
Satd. Flow (perm)	290	3452	0	139	3333	0	1243	1720	1405	909	1872	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			4			5	129			109
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		383			1018			654			346	
Travel Time (s)		6.5			17.4			14.9			7.9	
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	3%	10%	12%	7%	14%	11%	1%	6%	26%	2%	0%
Adj. Flow (vph)	299	1668	111	109	847	45	106	168	209	53	48	109
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	299	1779	0	109	892	0	106	201	176	53	48	109
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.44	0.88		0.62	0.77		0.32	0.75	0.41	0.45	0.44	0.16
Control Delay	29.6	32.7		56.4	47.7		50.8	76.8	16.5	62.0	84.5	6.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	32.7		56.4	47.7		50.8	76.8	16.5	62.0	84.5	6.2
Queue Length 50th (ft)	97	719		54	421		87	198	37	42	46	0
Queue Length 95th (ft)	220	1020		121	503		143	303	106	82	96	41
Internal Link Dist (ft)		303			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	682	2323		228	1869		341	389	459	204	419	708
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	0.44	0.77		0.48	0.48		0.31	0.52	0.38	0.26	0.11	0.15

Intersection Summary

Area Type: Other

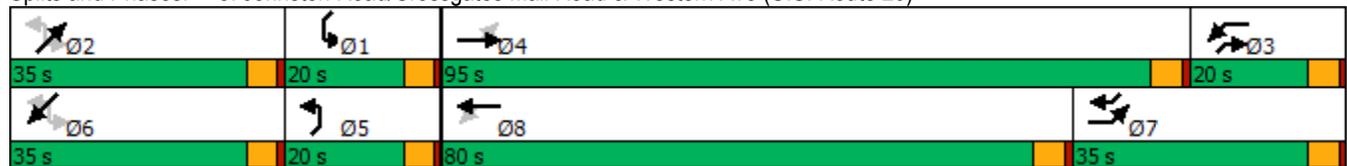
Cycle Length: 170

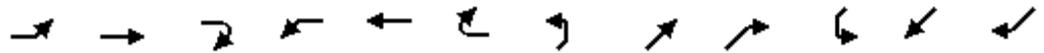
Actuated Cycle Length: 140.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	263	1468	98	96	745	40	93	148	184	47	42	96
Future Volume (veh/h)	263	1468	98	96	745	40	93	148	184	47	42	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.98		0.98	1.00		0.97
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	1856	1856	1722	1796	1796	1737	1885	1811	1549	1909	1939
Adj Flow Rate, veh/h	299	1668	111	109	847	45	106	199	188	53	48	109
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	3	3	12	7	7	11	1	6	26	2	0
Cap, veh/h	685	2013	133	134	1040	55	276	295	305	110	190	701
Arrive On Green	0.33	0.60	0.60	0.05	0.32	0.32	0.09	0.16	0.16	0.03	0.10	0.10
Sat Flow, veh/h	1781	3356	222	1640	3295	175	1654	1885	1505	1475	1909	1594
Grp Volume(v), veh/h	299	870	909	109	439	453	106	199	188	53	48	109
Grp Sat Flow(s),veh/h/ln	1781	1763	1815	1640	1706	1764	1654	1885	1505	1475	1909	1594
Q Serve(g_s), s	8.4	47.5	48.9	3.6	28.8	28.8	0.0	12.1	8.2	0.0	2.8	0.0
Cycle Q Clear(g_c), s	8.4	47.5	48.9	3.6	28.8	28.8	0.0	12.1	8.2	0.0	2.8	0.0
Prop In Lane	1.00		0.12	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	685	1057	1088	134	538	557	276	295	305	110	190	701
V/C Ratio(X)	0.44	0.82	0.84	0.82	0.81	0.81	0.38	0.68	0.62	0.48	0.25	0.16
Avail Cap(c_a), veh/h	685	1303	1341	261	1051	1086	330	464	441	241	470	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	19.3	19.5	56.2	38.4	38.4	48.0	48.5	44.3	56.8	50.6	21.2
Incr Delay (d2), s/veh	0.2	4.8	5.1	4.5	6.3	6.1	0.3	1.0	0.8	1.2	0.3	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	6.3	18.9	20.2	3.4	12.6	13.0	3.0	5.8	2.8	1.6	1.4	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	24.0	24.7	60.7	44.7	44.5	48.3	49.5	45.0	58.0	50.9	21.3
LnGrp LOS	C	C	C	E	D	D	D	D	D	E	D	C
Approach Vol, veh/h		2078			1001			493			210	
Approach Delay, s/veh		25.0			46.4			47.5			37.3	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	24.0	10.5	78.0	16.1	17.1	45.2	43.4				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	14.1	5.6	50.9	2.0	4.8	10.4	30.8				
Green Ext Time (p_c), s	0.1	0.8	0.1	22.1	0.1	0.3	0.6	7.6				

Intersection Summary

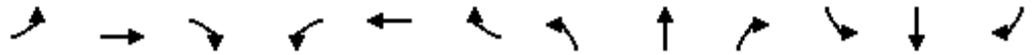
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕↔		↖	↔			↕	↗
Traffic Volume (vph)	91	92	238	14	41	3	80	44	20	0	66	95
Future Volume (vph)	91	92	238	14	41	3	80	44	20	0	66	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.993			0.953				0.850
Flt Protected		0.976			0.988		0.950					
Satd. Flow (prot)	0	1873	1631	0	3676	0	1702	1776	0	0	1900	1669
Flt Permitted		0.820			0.887		0.586					
Satd. Flow (perm)	0	1574	1631	0	3300	0	1050	1776	0	0	1900	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			270		3			23				108
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				915
Travel Time (s)		10.6			11.5			17.8				20.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	5%	0%	3%	0%	0%	0%
Adj. Flow (vph)	103	105	270	16	47	3	91	50	23	0	75	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	270	0	66	0	91	73	0	0	75	108
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA			NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		6	6	6
Switch Phase												

Year 2022 Build Traffic Volumes
 4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
 02/17/2020

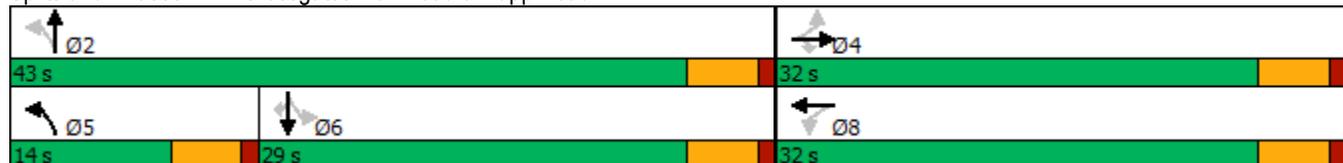


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		9.0	21.0		21.0	21.0	21.0
Total Split (s)	32.0	32.0	32.0	32.0	32.0		14.0	43.0		29.0	29.0	29.0
Total Split (%)	42.7%	42.7%	42.7%	42.7%	42.7%		18.7%	57.3%		38.7%	38.7%	38.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0			5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.37	0.36		0.06		0.15	0.08			0.12	0.18
Control Delay		20.1	3.9		15.3		10.4	7.4			18.8	5.0
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		20.1	3.9		15.3		10.4	7.4			18.8	5.0
Queue Length 50th (ft)		70	0		10		21	11			24	0
Queue Length 95th (ft)		121	42		22		42	29			52	30
Internal Link Dist (ft)		387			424			705			835	
Turn Bay Length (ft)												150
Base Capacity (vph)		566	759		1189		610	911			608	607
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.37	0.36		0.06		0.15	0.08			0.12	0.18

Intersection Summary

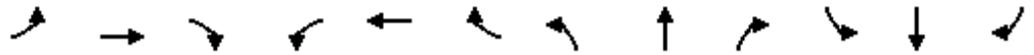
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

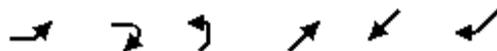
Weekday Peak AM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗			↖	↗
Traffic Volume (veh/h)	91	92	238	14	41	3	80	44	20	0	66	95
Future Volume (veh/h)	91	92	238	14	41	3	80	44	20	0	66	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	103	105	270	16	47	3	91	50	23	0	75	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	5	0	0	0	0	0
Cap, veh/h	346	334	604	250	779	53	640	616	283	0	608	536
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.12	0.51	0.51	0.00	0.32	0.32
Sat Flow, veh/h	762	926	1677	494	2164	149	1717	1216	559	0	1900	1675
Grp Volume(v), veh/h	208	0	270	32	0	34	91	0	73	0	75	108
Grp Sat Flow(s),veh/h/ln	1689	0	1677	1138	0	1668	1717	0	1776	0	1900	1675
Q Serve(g_s), s	4.4	0.0	9.2	0.1	0.0	1.0	2.2	0.0	1.6	0.0	2.1	3.5
Cycle Q Clear(g_c), s	6.4	0.0	9.2	6.5	0.0	1.0	2.2	0.0	1.6	0.0	2.1	3.5
Prop In Lane	0.50		1.00	0.50		0.09	1.00		0.32	0.00		1.00
Lane Grp Cap(c), veh/h	680	0	604	481	0	601	640	0	900	0	608	536
V/C Ratio(X)	0.31	0.00	0.45	0.07	0.00	0.06	0.14	0.00	0.08	0.00	0.12	0.20
Avail Cap(c_a), veh/h	680	0	604	481	0	601	640	0	900	0	608	536
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	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	18.3	15.8	0.0	15.7	11.4	0.0	9.5	0.0	18.1	18.5
Incr Delay (d2), s/veh	1.2	0.0	2.4	0.3	0.0	0.2	0.5	0.0	0.2	0.0	0.4	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	2.7	0.0	3.8	0.4	0.0	0.4	0.9	0.0	0.6	0.0	0.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	20.7	16.0	0.0	15.9	11.9	0.0	9.7	0.0	18.5	19.4
LnGrp LOS	B	A	C	B	A	B	B	A	A	A	B	B
Approach Vol, veh/h		478			66			164			183	
Approach Delay, s/veh		19.7			15.9			10.9			19.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		43.0		32.0	14.0	29.0		32.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		38.0		27.0	9.0	24.0		27.0				
Max Q Clear Time (g_c+I1), s		3.6		11.2	4.2	5.5		8.5				
Green Ext Time (p_c), s		0.2		1.2	0.1	0.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								

Year 2022 Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	96	41	7	134	86	20
Future Volume (vph)	96	41	7	134	86	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.959				0.975	
Flt Protected	0.966			0.998		
Satd. Flow (prot)	1721	0	0	1877	1739	0
Flt Permitted	0.966			0.998		
Satd. Flow (perm)	1721	0	0	1877	1739	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	3%	0%	0%	2%	10%
Adj. Flow (vph)	112	48	8	156	100	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	164	123	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	96	41	7	134	86	20
Future Vol, veh/h	96	41	7	134	86	20
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	3	0	0	2	10
Mvmt Flow	112	48	8	156	100	23

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	286	114	124	0	0
Stage 1	113	-	-	-	-
Stage 2	173	-	-	-	-
Critical Hdwy	6.42	6.23	4.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.2	-	-
Pot Cap-1 Maneuver	704	936	1475	-	-
Stage 1	912	-	-	-	-
Stage 2	857	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	698	934	1474	-	-
Mov Cap-2 Maneuver	698	-	-	-	-
Stage 1	906	-	-	-	-
Stage 2	856	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1474	-	755	-	-
HCM Lane V/C Ratio	0.006	-	0.211	-	-
HCM Control Delay (s)	7.5	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Year 2022 Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	17	19	3	227	87	4
Future Volume (vph)	17	19	3	227	87	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.994	
Flt Protected	0.977			0.999		
Satd. Flow (prot)	1640	0	0	1781	1812	0
Flt Permitted	0.977			0.999		
Satd. Flow (perm)	1640	0	0	1781	1812	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Adj. Flow (vph)	19	22	3	258	99	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	261	104	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

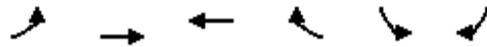
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	17	19	3	227	87	4
Future Vol, veh/h	17	19	3	227	87	4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	19	22	3	258	99	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.8	7.9
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	1%	47%	0%
Vol Thru, %	99%	0%	96%
Vol Right, %	0%	53%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	230	36	91
LT Vol	3	17	0
Through Vol	227	0	87
RT Vol	0	19	4
Lane Flow Rate	261	41	103
Geometry Grp	1	1	1
Degree of Util (X)	0.294	0.051	0.121
Departure Headway (Hd)	4.052	4.463	4.226
Convergence, Y/N	Yes	Yes	Yes
Cap	881	807	837
Service Time	2.107	2.463	2.311
HCM Lane V/C Ratio	0.296	0.051	0.123
HCM Control Delay	8.8	7.7	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.2	0.4

Year 2022 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	0	244	0	0	6	91
Future Volume (vph)	0	244	0	0	6	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.874	
Fl _t Protected					0.997	
Satd. Flow (prot)	0	1791	1900	0	1800	0
Fl _t Permitted					0.997	
Satd. Flow (perm)	0	1791	1900	0	1800	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	0%	0%	0%	4%
Adj. Flow (vph)	0	274	0	0	7	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	274	0	0	109	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	244	0	0	6	91
Future Vol, veh/h	0	244	0	0	6	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	0	0	0	4
Mvmt Flow	0	274	0	0	7	102

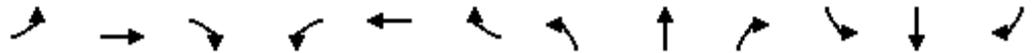
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	275
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	274
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	708
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	765
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1635	-	-	-	708
Mov Cap-2 Maneuver	-	-	-	-	708
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	765

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1044
HCM Lane V/C Ratio	-	-	-	-	0.104
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2022 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	96	7	44	0	127	0	12	20	18	2	0
Future Volume (vph)	147	96	7	44	0	127	0	12	20	18	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.990			0.900			0.916				
Fl _t Protected	0.950				0.987						0.956	
Satd. Flow (prot)	1770	1864	0	0	1847	0	0	1585	0	0	1687	0
Fl _t Permitted	0.950				0.987						0.956	
Satd. Flow (perm)	1770	1864	0	0	1847	0	0	1585	0	0	1687	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			741	
Travel Time (s)		11.1			2.8			9.8			16.8	
Confl. Peds. (#/hr)			1	1			1		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	1%	0%	9%	0%	1%	0%	8%	10%	6%	50%	0%
Adj. Flow (vph)	169	110	8	51	0	146	0	14	23	21	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	118	0	0	197	0	0	37	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

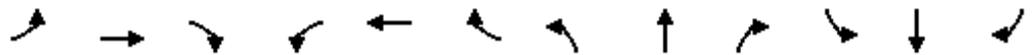
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↕			↘			↗	
Traffic Vol, veh/h	147	96	7	44	0	127	0	12	20	18	2	0
Future Vol, veh/h	147	96	7	44	0	127	0	12	20	18	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	1	0	9	0	1	0	8	10	6	50	0
Mvmt Flow	169	110	8	51	0	146	0	14	23	21	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.2	8.5	8	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	26%	90%
Vol Thru, %	38%	0%	93%	0%	10%
Vol Right, %	62%	0%	7%	74%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	147	103	171	20
LT Vol	0	147	0	44	18
Through Vol	12	0	96	0	2
RT Vol	20	0	7	127	0
Lane Flow Rate	37	169	118	197	23
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.049	0.246	0.154	0.23	0.034
Departure Headway (Hd)	4.775	5.24	4.674	4.221	5.317
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	752	678	757	853	675
Service Time	2.791	3.036	2.47	2.232	3.335
HCM Lane V/C Ratio	0.049	0.249	0.156	0.231	0.034
HCM Control Delay	8	9.8	8.3	8.5	8.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	1	0.5	0.9	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	135	106	35	128	128	1140	133	127	1320	8
Future Volume (vph)	0	0	135	106	35	128	128	1140	133	127	1320	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.882				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1742	3240	1525	0	1761	4963	1435	1703	3505	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1717	3222	1525	0	1760	4963	1435	1703	3505	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167		135				122			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	2%	7%	6%	8%	2%	4%	12%	6%	3%	0%
Adj. Flow (vph)	0	0	145	114	38	138	138	1226	143	137	1419	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	145	114	176	0	138	1226	143	137	1419	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.40	0.39	0.67		0.63	0.41	0.16	0.64	0.66	0.01
Control Delay			7.8	45.8	26.3		54.2	11.2	3.2	54.6	15.4	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			7.8	45.8	26.3		54.2	11.2	3.2	54.6	15.4	0.0
Queue Length 50th (ft)			0	34	24		80	129	5	79	270	0
Queue Length 95th (ft)			40	64	95		152	210	35	151	450	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			492	1003	1082		363	3074	935	351	2171	1015
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			0.29	0.11	0.16		0.38	0.40	0.15	0.39	0.65	0.01

Intersection Summary

Area Type: Other

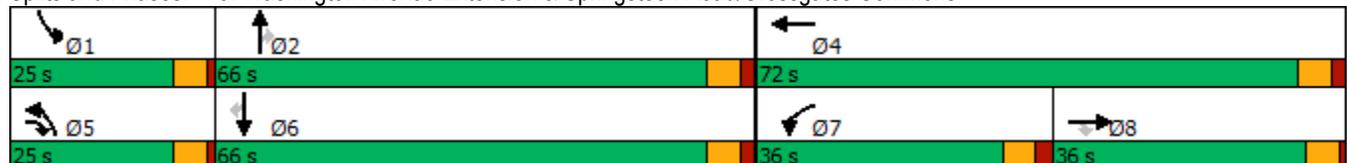
Cycle Length: 163

Actuated Cycle Length: 97.2

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	135	106	35	128	128	1140	133	127	1320	8
Future Volume (veh/h)	0	0	135	106	35	128	128	1140	133	127	1320	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1945	1773	1788	1788	1864	1835	1716	1811	1856	1900
Adj Flow Rate, veh/h	0	0	145	114	38	138	138	1226	143	137	1419	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	7	6	6	2	4	12	6	3	0
Cap, veh/h	0	206	332	184	78	283	173	2356	683	171	1663	759
Arrive On Green	0.00	0.00	0.10	0.06	0.23	0.23	0.10	0.47	0.47	0.10	0.47	0.47
Sat Flow, veh/h	0	1976	1639	3275	337	1224	1776	5009	1453	1725	3526	1608
Grp Volume(v), veh/h	0	0	145	114	0	176	138	1226	143	137	1419	9
Grp Sat Flow(s),veh/h/ln	0	1976	1639	1638	0	1561	1776	1670	1453	1725	1763	1608
Q Serve(g_s), s	0.0	0.0	6.6	2.9	0.0	8.3	6.5	14.6	4.9	6.6	30.3	0.3
Cycle Q Clear(g_c), s	0.0	0.0	6.6	2.9	0.0	8.3	6.5	14.6	4.9	6.6	30.3	0.3
Prop In Lane	0.00		1.00	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	206	332	184	0	361	173	2356	683	171	1663	759
V/C Ratio(X)	0.00	0.00	0.44	0.62	0.00	0.49	0.80	0.52	0.21	0.80	0.85	0.01
Avail Cap(c_a), veh/h	0	719	757	1154	0	1210	417	3530	1024	405	2484	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	29.8	39.3	0.0	28.4	37.6	15.8	13.3	37.5	19.9	11.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.3	0.0	0.4	3.2	0.3	0.2	3.3	2.5	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	0.0	0.0	0.0	1.2	0.0	3.1	2.8	4.9	0.0	2.8	11.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.1	40.5	0.0	28.7	40.8	16.1	13.5	40.9	22.3	12.0
LnGrp LOS	A	A	C	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		145			290			1507			1565	
Approach Delay, s/veh		30.1			33.4			18.1			23.9	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	46.0		25.7	13.3	46.2	10.8	14.9				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	8.6	16.6		10.3	8.5	32.3	4.9	8.6				
Green Ext Time (p_c), s	0.2	7.3		0.4	0.2	7.9	0.2	0.3				

Intersection Summary

HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	208	503	72	0	654	137	50	0	0
Future Volume (vph)	208	503	72	0	654	137	50	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.850				
Flt Protected	0.986					0.950			
Satd. Flow (prot)	3174	0	1818	0	1644	1529	1541	0	0
Flt Permitted	0.986					0.463			
Satd. Flow (perm)	3174	0	1818	0	1644	745	1541	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	541				703				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	224	541	77	0	703	147	54	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	765	0	77	0	703	147	54	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

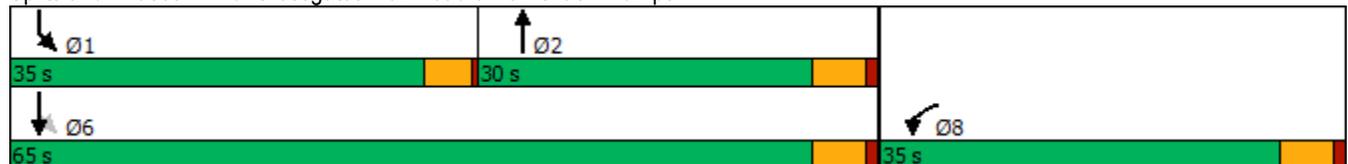


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.63		0.21		0.43	0.28	0.08		
Control Delay	6.8		16.7		0.8	7.1	6.2		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	6.8		16.7		0.8	7.1	6.2		
Queue Length 50th (ft)	20		14		0	14	5		
Queue Length 95th (ft)	60		47		0	43	20		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	2624		1259		1644	1240	1541		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.29		0.06		0.43	0.12	0.04		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 37.3
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (veh/h)	208	503	72	0	654	137	50	0	0
Future Volume (veh/h)	208	503	72	0	654	137	50	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1864	2017	1835	1954	1954	1684	1610		
Adj Flow Rate, veh/h	224	541	77	0	0	147	54		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	5	0	4	1	1	13	18		
Cap, veh/h	716	689	199			451	523		
Arrive On Green	0.40	0.40	0.11	0.00	0.00	0.11	0.33		
Sat Flow, veh/h	1776	1709	1835	1656	1656	1604	1610		
Grp Volume(v), veh/h	224	541	77	0	0	147	54		
Grp Sat Flow(s),veh/h/ln	1776	1709	1835	1656	1656	1604	1610		
Q Serve(g_s), s	3.2	10.2	1.4	0.0	0.0	2.7	0.9		
Cycle Q Clear(g_c), s	3.2	10.2	1.4	0.0	0.0	2.7	0.9		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	716	689	199			451	523		
V/C Ratio(X)	0.31	0.79	0.39			0.33	0.10		
Avail Cap(c_a), veh/h	1447	1393	1246			1629	2623		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	7.5	9.6	15.3	0.0	0.0	11.0	8.7		
Incr Delay (d2), s/veh	0.2	2.0	1.2	0.0	0.0	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.9	2.9	0.6	0.0	0.0	0.8	0.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	7.8	11.6	16.5	0.0	0.0	11.4	8.8		
LnGrp LOS	A	B	B			B	A		
Approach Vol, veh/h	765		77	A	A		201		
Approach Delay, s/veh	10.5		16.5				10.7		
Approach LOS	B		B				B		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	8.0	9.0				17.0	19.8		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	4.7	3.4				2.9	12.2		
Green Ext Time (p_c), s	0.4	0.3				0.3	2.7		

Intersection Summary

HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	298	7	58	119	5	6	0	58	8	0	19
Future Volume (vph)	12	298	7	58	119	5	6	0	58	8	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.994			0.878				0.905
Flt Protected	0.950			0.950				0.995				0.985
Satd. Flow (prot)	1762	1777	0	1752	1870	0	0	1627	0	0	1384	0
Flt Permitted	0.950			0.950				0.995				0.985
Satd. Flow (perm)	1762	1777	0	1752	1870	0	0	1627	0	0	1384	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	13	327	8	63	131	5	7	0	63	9	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	335	0	63	136	0	0	70	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	2.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	12	298	7	58	119	5	6	0	58	8	0	19
Future Vol, veh/h	12	298	7	58	119	5	6	0	58	8	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	91	91	92	92	91	91	92	92	92	91	92	91
Heavy Vehicles, %	0	4	2	2	0	0	2	2	2	1	2	28
Mvmt Flow	13	327	8	63	131	5	7	0	63	9	0	21

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	136	0	0	335	0	0	627	619	331	649	621	134
Stage 1	-	-	-	-	-	-	357	357	-	260	260	-
Stage 2	-	-	-	-	-	-	270	262	-	389	361	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.12	6.52	6.22	7.91	7.32	6.88
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.518	4.018	3.318	3.509	4.018	3.552
Pot Cap-1 Maneuver	1461	-	-	1224	-	-	396	404	711	333	351	838
Stage 1	-	-	-	-	-	-	661	628	-	705	654	-
Stage 2	-	-	-	-	-	-	736	691	-	584	578	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1461	-	-	1224	-	-	368	380	711	290	330	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	368	380	-	290	330	-
Stage 1	-	-	-	-	-	-	655	622	-	699	621	-
Stage 2	-	-	-	-	-	-	681	656	-	527	573	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	2.6	11.2	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	654	1224	-	-	1461	-	537
HCM Lane V/C Ratio	0.106	0.052	-	-	0.009	-	0.055
HCM Control Delay (s)	11.2	8.1	-	-	7.5	-	12.1
HCM Lane LOS	B	A	-	-	A	-	B
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-	0.2

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	10	344	10	8	172	46	5	10	49	20	1	5
Future Volume (vph)	10	344	10	8	172	46	5	10	49	20	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.996			0.970			0.897			0.875	
Flt Protected		0.999			0.998			0.996		0.950		
Satd. Flow (prot)	0	3472	0	0	3210	0	0	1413	0	1641	1662	0
Flt Permitted		0.946			0.940			0.990		0.713		
Satd. Flow (perm)	0	3288	0	0	3023	0	0	1404	0	1222	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			49			52			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			394			414	
Travel Time (s)		17.9			12.4			9.0			9.4	
Confl. Peds. (#/hr)									11	11		
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
Heavy Vehicles (%)	30%	2%	80%	25%	1%	30%	0%	80%	7%	10%	0%	0%
Adj. Flow (vph)	11	366	11	9	183	49	5	11	52	21	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	388	0	0	241	0	0	68	0	21	6	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.29			0.19			0.11		0.04	0.01	
Control Delay		8.7			6.7			4.3		7.7	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

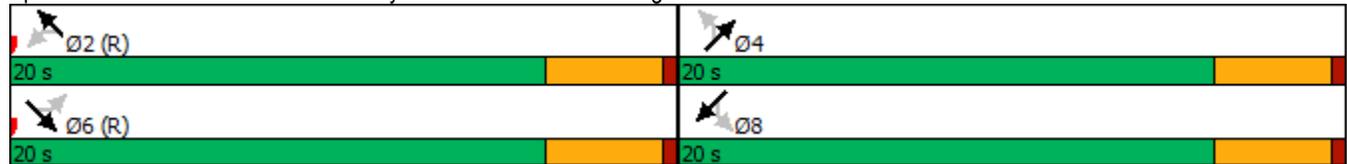


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.7			6.7			4.3		7.7	5.5	
Queue Length 50th (ft)		28			13			2		3	0	
Queue Length 95th (ft)		50			28			17		11	5	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1320			1238			592		488	667	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.29			0.19			0.11		0.04	0.01	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	10	344	10	8	172	46	5	10	49	20	1	5
Future Volume (veh/h)	10	344	10	8	172	46	5	10	49	20	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	1988	1988	1988	1862	1862	1862	714	714	714	1752	1900	1900
Adj Flow Rate, veh/h	11	366	11	9	183	49	5	11	52	21	1	5
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	1	1	1	80	80	80	10	0	0
Cap, veh/h	107	1448	43	110	1074	273	102	53	190	708	109	547
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	31	3620	107	35	2685	683	13	133	474	1246	273	1367
Grp Volume(v), veh/h	204	0	184	128	0	113	68	0	0	21	0	6
Grp Sat Flow(s),veh/h/ln	1968	0	1790	1832	0	1571	620	0	0	1246	0	1641
Q Serve(g_s), s	0.0	0.0	2.8	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	2.7	0.0	2.8	1.8	0.0	1.9	2.9	0.0	0.0	0.3	0.0	0.1
Prop In Lane	0.05		0.06	0.07		0.43	0.07		0.76	1.00		0.83
Lane Grp Cap(c), veh/h	882	0	716	829	0	628	345	0	0	708	0	656
V/C Ratio(X)	0.23	0.00	0.26	0.15	0.00	0.18	0.20	0.00	0.00	0.03	0.00	0.01
Avail Cap(c_a), veh/h	882	0	716	829	0	628	345	0	0	708	0	656
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	0.0	8.0	7.7	0.0	7.8	8.1	0.0	0.0	7.3	0.0	7.2
Incr Delay (d2), s/veh	0.6	0.0	0.9	0.4	0.0	0.6	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.9	0.6	0.0	0.6	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	0.0	8.9	8.1	0.0	8.4	9.4	0.0	0.0	7.4	0.0	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		388			241			68			27	
Approach Delay, s/veh		8.8			8.2			9.4			7.3	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		3.9		4.9		4.8		2.3				
Green Ext Time (p_c), s		1.0		0.2		1.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

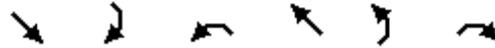
Weekday Peak AM Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (vph)	379	35	46	201	25	367
Future Volume (vph)	379	35	46	201	25	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.987					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3481	0	1762	1671	1805	1615
Flt Permitted			0.453		0.950	
Satd. Flow (perm)	3481	0	840	1671	1805	1584
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10					412
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	11%	0%	0%
Adj. Flow (vph)	426	39	52	226	28	412
Shared Lane Traffic (%)						
Lane Group Flow (vph)	465	0	52	226	28	412
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

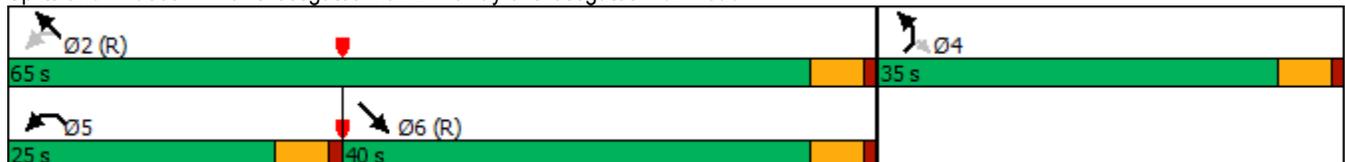


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.19		0.07	0.17	0.16	0.79
Control Delay	6.0		3.0	3.1	44.5	18.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	6.0		3.0	3.1	44.5	18.5
Queue Length 50th (ft)	42		4	20	18	20
Queue Length 95th (ft)	91		18	65	38	70
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2486		860	1343	541	763
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.19		0.06	0.17	0.05	0.54

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 Build Traffic Volumes
13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	379	35	46	201	25	367
Future Volume (veh/h)	379	35	46	201	25	367
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1864	1864	1979	1814	1900	1900
Adj Flow Rate, veh/h	426	39	52	226	28	412
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	11	0	0
Cap, veh/h	1788	163	597	1134	497	442
Arrive On Green	0.54	0.54	0.03	0.63	0.27	0.27
Sat Flow, veh/h	3376	299	1884	1814	1810	1610
Grp Volume(v), veh/h	229	236	52	226	28	412
Grp Sat Flow(s),veh/h/ln	1771	1811	1884	1814	1810	1610
Q Serve(g_s), s	6.8	6.8	1.1	5.3	1.1	24.9
Cycle Q Clear(g_c), s	6.8	6.8	1.1	5.3	1.1	24.9
Prop In Lane		0.17	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	965	986	597	1134	497	442
V/C Ratio(X)	0.24	0.24	0.09	0.20	0.06	0.93
Avail Cap(c_a), veh/h	965	986	917	1134	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.78	0.78	1.00	1.00
Uniform Delay (d), s/veh	11.9	11.9	8.8	8.0	26.7	35.4
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.3	0.0	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.8	0.5	2.0	0.5	22.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	12.5	8.9	8.3	26.8	59.3
LnGrp LOS	B	B	A	A	C	E
Approach Vol, veh/h				278	440	
Approach Delay, s/veh				8.4	57.3	
Approach LOS				A	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.5		32.5	8.1	59.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		7.3		26.9	3.1	8.8
Green Ext Time (p_c), s		1.5		0.5	0.1	2.9
Intersection Summary						
HCM 6th Ctrl Delay			28.2			
HCM 6th LOS			C			

Year 2022 Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	42	272	21	60	0	0
Future Volume (vph)	42	272	21	60	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.900			
Flt Protected		0.993				
Satd. Flow (prot)	0	1850	1710	0	0	1863
Flt Permitted		0.993				
Satd. Flow (perm)	0	1850	1710	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		741	433		503	
Travel Time (s)		16.8	9.8		11.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	286	22	63	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	330	85	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	42	272	21	60	0	0
Future Vol, veh/h	42	272	21	60	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	286	22	63	0	0

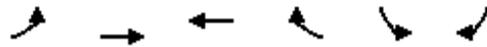
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	85	0	-	0	- 54
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.318
Pot Cap-1 Maneuver	1512	-	-	-	0 1013
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1512	-	-	-	- 1013
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1512	-	-	-
HCM Lane V/C Ratio	-	0.029	-	-	-
HCM Control Delay (s)	0	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	-

Year 2022 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1804	970	2	4	2
Future Volume (vph)	1	1804	970	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.955	
Fl _t Protected	0.950				0.968	
Satd. Flow (prot)	1805	3471	3374	0	1756	0
Fl _t Permitted	0.950				0.968	
Satd. Flow (perm)	1805	3471	3374	0	1756	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		970	
Travel Time (s)		15.5	6.5		22.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	7%	0%	0%	0%
Adj. Flow (vph)	1	1982	1066	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1982	1068	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	1	1804	970	2	4	2
Future Vol, veh/h	1	1804	970	2	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	7	0	0	0
Mvmt Flow	1	1982	1066	2	4	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1068	0	-	0	2060 534
Stage 1	-	-	-	-	1067 -
Stage 2	-	-	-	-	993 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	660	-	-	-	49 496
Stage 1	-	-	-	-	296 -
Stage 2	-	-	-	-	324 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	660	-	-	-	49 496
Mov Cap-2 Maneuver	-	-	-	-	49 -
Stage 1	-	-	-	-	295 -
Stage 2	-	-	-	-	324 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	61.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	660	-	-	-	70
HCM Lane V/C Ratio	0.002	-	-	-	0.094
HCM Control Delay (s)	10.5	-	-	-	61.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2022 Build Traffic Volumes
17: Rapp Road & Site 1 Driveway

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	39	12	125	122	5
Future Volume (vph)	16	39	12	125	122	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.995	
Flt Protected	0.986			0.996		
Satd. Flow (prot)	1660	0	0	1846	1853	0
Flt Permitted	0.986			0.996		
Satd. Flow (perm)	1660	0	0	1846	1853	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	369			915	439	
Travel Time (s)	8.4			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	42	13	136	133	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	0	149	138	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2

Movement EBL EBR NEL NET SWT SWR

Lane Configurations						
Traffic Vol, veh/h	16	39	12	125	122	5
Future Vol, veh/h	16	39	12	125	122	5
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	42	13	136	133	5

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	298	136	138	0	-	0
Stage 1	136	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	693	913	1446	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	686	913	1446	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach EB NE SW

HCM Control Delay, s	9.7	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt NEL NET EBLn1 SWT SWR

Capacity (veh/h)	1446	-	833	-	-
HCM Lane V/C Ratio	0.009	-	0.072	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Year 2022 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	385	15	44	173
Future Volume (vph)	0	35	385	15	44	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.994			
Flt Protected						0.990
Satd. Flow (prot)	0	1611	3622	0	0	3521
Flt Permitted						0.990
Satd. Flow (perm)	0	1611	3622	0	0	3521
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	38	418	16	48	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	38	434	0	0	236
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	35	385	15	44	173
Future Vol, veh/h	0	35	385	15	44	173
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	38	418	16	48	188

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	217	0	0	434
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	787	-	-	1122
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	787	-	-	1122
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	787	1122
HCM Lane V/C Ratio	-	-	0.048	0.043
HCM Control Delay (s)	-	-	9.8	8.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Year 2022 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	400	15	0	173
Future Volume (vph)	0	0	400	15	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1863	3625	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3625	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	435	16	0	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	451	0	0	188
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	400	15	0	173
Future Vol, veh/h	0	0	400	15	0	173
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	0	435	16	0	188

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	226	0	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	777	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	777	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2022 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	17	7	0	0	66
Future Volume (vph)	64	17	7	0	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.972				0.865	
Flt Protected	0.962			0.950		
Satd. Flow (prot)	1742	0	0	1770	1619	0
Flt Permitted	0.962			0.950		
Satd. Flow (perm)	1742	0	0	1770	1619	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	18	8	0	0	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	0	8	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	64	17	7	0	0	66
Future Vol, veh/h	64	17	7	0	0	66
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	18	8	0	0	72

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	52	36	72	0	0
Stage 1	36	-	-	-	-
Stage 2	16	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	957	1037	1528	-	-
Stage 1	986	-	-	-	-
Stage 2	1007	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	952	1037	1528	-	-
Mov Cap-2 Maneuver	952	-	-	-	-
Stage 1	981	-	-	-	-
Stage 2	1007	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	7.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1528	-	969	-	-
HCM Lane V/C Ratio	0.005	-	0.091	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Year 2022 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	64	0	0	66
Future Volume (vph)	0	0	64	0	0	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1872
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1872
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	70	0	0	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	70	0	0	72
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	64	0	0	66
Future Vol, veh/h	0	0	64	0	0	66
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	70	0	0	72

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	142	70	0	0	70	0
Stage 1	70	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	851	993	-	-	1531	-
Stage 1	953	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	851	993	-	-	1531	-
Mov Cap-2 Maneuver	851	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1531
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Year 2022 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	1863
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	-					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖			↗		↖
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	
Conflicting Flow All	0	-	0
Stage 1	0	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB
HCM Control Delay, s	0	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	0
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Traffic Volume (vph)	0	1116	1969	223	283	49
Future Volume (vph)	0	1116	1969	223	283	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.985			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4794	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4794	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			49			19
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1213	2140	242	308	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1213	2382	0	308	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020

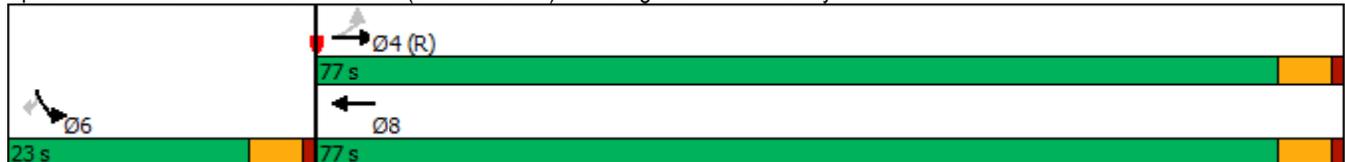


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.48	0.69		0.51	0.18
Control Delay		6.7	8.9		34.3	20.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.7	8.9		34.3	20.2
Queue Length 50th (ft)		148	258		92	18
Queue Length 95th (ft)		186	305		135	53
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3465		605	294
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.48	0.69		0.51	0.18

Intersection Summary

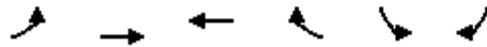
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↖↖↖		↘↘	↘
Traffic Volume (veh/h)	0	1116	1969	223	283	49
Future Volume (veh/h)	0	1116	1969	223	283	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1213	2140	242	308	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	3314	369	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	148	3647	4769	513	3282	1505
Grp Volume(v), veh/h	0	1213	1554	828	308	53
Grp Sat Flow(s),veh/h/ln	148	1777	1681	1754	1641	1505
Q Serve(g_s), s	0.0	14.5	24.1	25.0	8.5	3.0
Cycle Q Clear(g_c), s	0.0	14.5	24.1	25.0	8.5	3.0
Prop In Lane	1.00			0.29	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1263	591	271
V/C Ratio(X)	0.00	0.47	0.64	0.66	0.52	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1263	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.95	0.95
Uniform Delay (d), s/veh	0.0	6.0	7.3	7.4	37.1	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.6	1.2	3.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	6.6	7.4	3.6	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.6	7.9	8.7	40.2	36.4
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1213	2382		361	
Approach Delay, s/veh		6.6	8.1		39.6	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				16.5	10.5	27.0
Green Ext Time (p_c), s				11.5	0.8	29.0
Intersection Summary						
HCM 6th Ctrl Delay			10.5			
HCM 6th LOS			B			

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1166	30	70	1894	37	18	0	47	0	0	101
Future Volume (vph)	0	1166	30	70	1894	37	18	0	47	0	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.902				0.865
Flt Protected				0.950				0.986				
Satd. Flow (prot)	1928	3443	0	1778	3361	0	0	1501	0	0	1652	0
Flt Permitted				0.950				0.986				
Satd. Flow (perm)	1928	3443	0	1778	3361	0	0	1501	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	0%	2%	20%	0%	2%	0%	17%	0%	5%	0%	0%	0%
Adj. Flow (vph)	0	1240	32	74	2015	39	19	0	50	0	0	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1272	0	74	2054	0	0	69	0	0	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	28.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	0	1166	30	70	1894	37	18	0	47	0	0	101
Future Vol, veh/h	0	1166	30	70	1894	37	18	0	47	0	0	101
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	20	0	2	0	17	0	5	0	0	0
Mvmt Flow	0	1240	32	74	2015	39	19	0	50	0	0	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2054	0	0	1272	0	0	2412	3458	636	2803	3455	1027
Stage 1	-	-	-	-	-	-	1256	1256	-	2183	2183	-
Stage 2	-	-	-	-	-	-	1156	2202	-	620	1272	-
Critical Hdwy	4.1	-	-	4.1	-	-	8.04	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.67	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	277	-	-	553	-	-	~ 12	6	406	10	8	242
Stage 1	-	-	-	-	-	-	149	229	-	54	96	-
Stage 2	-	-	-	-	-	-	174	74	-	463	258	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	277	-	-	553	-	-	~ 6	5	406	8	7	242
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 6	5	-	8	7	-
Stage 1	-	-	-	-	-	-	149	229	-	54	83	-
Stage 2	-	-	-	-	-	-	84	64	-	406	258	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 1413.5	31.2
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	21	277	-	-	553	-	-	242
HCM Lane V/C Ratio	3.293	-	-	-	0.135	-	-	0.444
HCM Control Delay (s)	\$ 1413.5	0	-	-	12.5	-	-	31.2
HCM Lane LOS	F	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	8.9	0	-	-	0.5	-	-	2.1

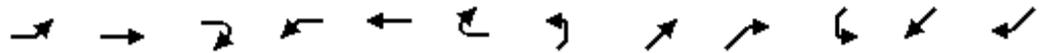
Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2022 Build Traffic Volumes

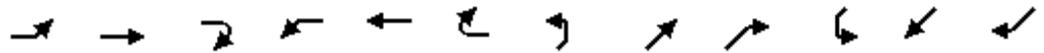
Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	221	953	99	134	1514	73	131	76	95	101	200	323
Future Volume (vph)	221	953	99	134	1514	73	131	76	95	101	200	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.986			0.993			0.976	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3517	0	1805	3493	0	1770	1753	1534	1634	1909	1607
Flt Permitted	0.067			0.095			0.238			0.584		
Satd. Flow (perm)	125	3517	0	180	3493	0	443	1753	1489	990	1909	1607
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			4			5	86			51
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		383			1018			654			346	
Travel Time (s)		6.5			17.4			14.9			7.9	
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	1%	0%	0%	2%	14%	2%	0%	0%	11%	0%	1%
Adj. Flow (vph)	238	1025	106	144	1628	78	141	82	102	109	215	347
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	238	1131	0	144	1706	0	141	98	86	109	215	347
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

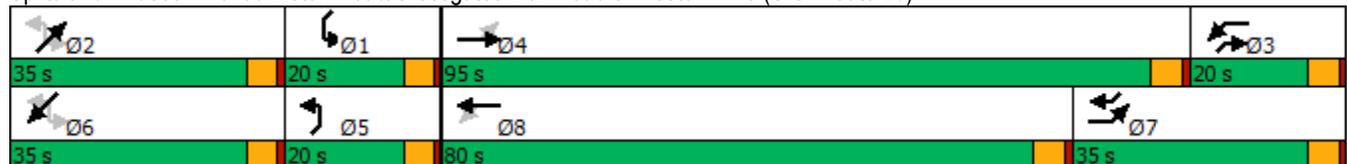


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.69	0.81		0.26	0.98		0.83	0.50	0.14	0.39	0.82	0.61
Control Delay	59.4	45.4		30.7	56.2		99.5	68.6	6.6	54.5	89.5	39.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	45.4		30.7	56.2		99.5	68.6	6.6	54.5	89.5	39.9
Queue Length 50th (ft)	173	542		46	~932		119	98	0	91	217	250
Queue Length 95th (ft)	277	586		123	#1259		187	162	42	149	320	361
Internal Link Dist (ft)		303			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	400	2098		558	1735		224	351	628	305	378	568
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	0.59	0.54		0.26	0.98		0.63	0.28	0.14	0.36	0.57	0.61

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 152.2
 Natural Cycle: 100
 Control Type: Semi Act-Uncoord
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2022 Build Traffic Volumes

Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	221	953	99	134	1514	73	131	76	95	101	200	323
Future Volume (veh/h)	221	953	99	134	1514	73	131	76	95	101	200	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.98		0.98
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	1885	1885	1900	1870	1870	1870	1900	1900	1774	1939	1924
Adj Flow Rate, veh/h	238	1025	106	144	1628	78	141	97	92	109	215	347
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	1	0	2	2	2	0	0	11	0	1
Cap, veh/h	265	1238	128	565	1794	86	166	213	596	283	301	443
Arrive On Green	0.12	0.38	0.38	0.26	0.52	0.52	0.06	0.11	0.11	0.10	0.16	0.16
Sat Flow, veh/h	1781	3275	338	1810	3452	165	1781	1900	1567	1690	1939	1599
Grp Volume(v), veh/h	238	560	571	144	834	872	141	97	92	109	215	347
Grp Sat Flow(s),veh/h/ln	1781	1791	1822	1810	1777	1840	1781	1900	1567	1690	1939	1599
Q Serve(g_s), s	14.0	39.0	39.0	1.1	58.5	59.5	6.2	6.6	0.0	0.0	14.5	10.9
Cycle Q Clear(g_c), s	14.0	39.0	39.0	1.1	58.5	59.5	6.2	6.6	0.0	0.0	14.5	10.9
Prop In Lane	1.00		0.19	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	677	689	565	923	956	166	213	596	283	301	443
V/C Ratio(X)	0.90	0.83	0.83	0.25	0.90	0.91	0.85	0.46	0.15	0.39	0.71	0.78
Avail Cap(c_a), veh/h	441	1171	1192	565	968	1003	252	414	762	292	423	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	38.8	38.8	36.1	29.9	30.2	62.4	57.2	28.7	53.5	55.2	46.1
Incr Delay (d2), s/veh	8.0	5.5	5.5	0.1	12.1	12.7	10.1	0.6	0.0	0.3	1.4	4.7
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	8.6	17.7	18.0	3.6	26.7	28.3	5.3	3.2	2.0	3.4	7.2	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	44.3	44.2	36.2	42.1	42.8	72.4	57.7	28.7	53.9	56.7	50.8
LnGrp LOS	E	D	D	D	D	D	E	E	C	D	E	D
Approach Vol, veh/h		1369			1850			330			671	
Approach Delay, s/veh		48.0			42.0			55.9			53.2	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	20.4	40.9	57.0	13.3	26.4	21.4	76.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	8.6	3.1	41.0	8.2	16.5	16.0	61.5				
Green Ext Time (p_c), s	0.1	0.4	0.2	11.0	0.1	1.2	0.4	10.0				

Intersection Summary

HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

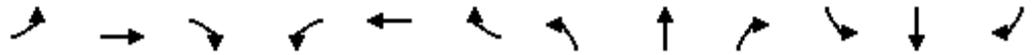
Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕↗		↖	↗			↕	↗
Traffic Volume (vph)	82	110	107	61	234	19	270	101	78	10	70	262
Future Volume (vph)	82	110	107	61	234	19	270	101	78	10	70	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%				0%
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.991			0.935				0.850
Flt Protected		0.979			0.990		0.950				0.994	
Satd. Flow (prot)	0	1879	1631	0	3675	0	1702	1736	0	0	1889	1669
Flt Permitted		0.719			0.849		0.582				0.958	
Satd. Flow (perm)	0	1380	1631	0	3152	0	1043	1736	0	0	1820	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122		10			77				298
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				915
Travel Time (s)		10.6			11.5			17.8				20.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	5%	0%	3%	0%	0%	0%
Adj. Flow (vph)	93	125	122	69	266	22	307	115	89	11	80	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	218	122	0	357	0	307	204	0	0	91	298
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2				6
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		6	6	6
Switch Phase												

Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020

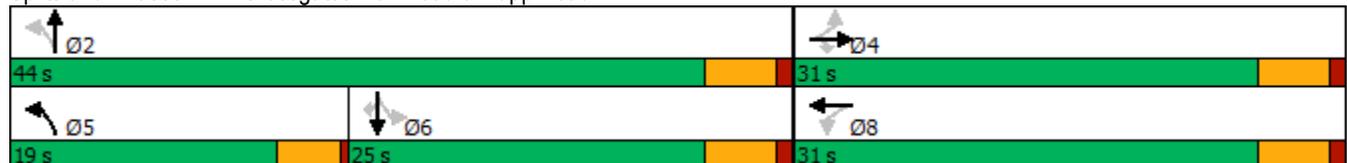


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		8.0	21.0		21.0	21.0	21.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0		19.0	44.0		25.0	25.0	25.0
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		25.3%	58.7%		33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		4.0	5.0			5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.46	0.19		0.32		0.45	0.22			0.19	0.45
Control Delay		22.8	4.5		18.5		12.4	6.6			22.5	5.4
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		22.8	4.5		18.5		12.4	6.6			22.5	5.4
Queue Length 50th (ft)		77	0		61		76	29			33	0
Queue Length 95th (ft)		135	31		92		122	60			66	51
Internal Link Dist (ft)		387			424			705			835	
Turn Bay Length (ft)												150
Base Capacity (vph)		478	645		1099		688	939			485	663
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.46	0.19		0.32		0.45	0.22			0.19	0.45

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗			↖	↗
Traffic Volume (veh/h)	82	110	107	61	234	19	270	101	78	10	70	262
Future Volume (veh/h)	82	110	107	61	234	19	270	101	78	10	70	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	93	125	122	69	266	22	307	115	89	11	80	298
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	5	0	0	0	0	0
Cap, veh/h	239	300	581	184	749	67	662	510	395	81	464	447
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.20	0.52	0.52	0.27	0.27	0.27
Sat Flow, veh/h	491	865	1677	336	2160	194	1717	981	759	101	1739	1675
Grp Volume(v), veh/h	218	0	122	169	0	188	307	0	204	91	0	298
Grp Sat Flow(s),veh/h/ln	1356	0	1677	1031	0	1660	1717	0	1740	1840	0	1675
Q Serve(g_s), s	5.2	0.0	3.8	3.7	0.0	6.3	8.3	0.0	4.8	0.0	0.0	11.9
Cycle Q Clear(g_c), s	11.4	0.0	3.8	15.1	0.0	6.3	8.3	0.0	4.8	2.8	0.0	11.9
Prop In Lane	0.43		1.00	0.41		0.12	1.00		0.44	0.12		1.00
Lane Grp Cap(c), veh/h	538	0	581	425	0	575	662	0	905	545	0	447
V/C Ratio(X)	0.40	0.00	0.21	0.40	0.00	0.33	0.46	0.00	0.23	0.17	0.00	0.67
Avail Cap(c_a), veh/h	538	0	581	425	0	575	662	0	905	545	0	447
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	17.3	20.8	0.0	18.1	11.9	0.0	9.8	21.2	0.0	24.5
Incr Delay (d2), s/veh	2.3	0.0	0.8	2.8	0.0	1.5	2.3	0.0	0.6	0.7	0.0	7.7
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	3.3	0.0	1.5	2.8	0.0	2.5	3.3	0.0	1.8	1.3	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	0.0	18.1	23.6	0.0	19.6	14.3	0.0	10.4	21.8	0.0	32.2
LnGrp LOS	C	A	B	C	A	B	B	A	B	C	A	C
Approach Vol, veh/h		340			357			511				389
Approach Delay, s/veh		20.6			21.5			12.7				29.8
Approach LOS		C			C			B				C
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.0		31.0	19.0	25.0		31.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		39.0		26.0	15.0	20.0		26.0				
Max Q Clear Time (g_c+I1), s		6.8		13.4	10.3	13.9		17.1				
Green Ext Time (p_c), s		0.5		0.8	0.4	0.6		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				20.5								
HCM 6th LOS				C								

Year 2022 Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	49	21	49	123	314	112
Future Volume (vph)	49	21	49	123	314	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.959				0.964	
Flt Protected	0.966			0.986		
Satd. Flow (prot)	1689	0	0	1855	1775	0
Flt Permitted	0.966			0.986		
Satd. Flow (perm)	1689	0	0	1855	1775	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	0%	0%	0%	0%	1%
Adj. Flow (vph)	56	24	56	141	361	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	197	490	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	49	21	49	123	314	112
Future Vol, veh/h	49	21	49	123	314	112
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	0	0	0	0	1
Mvmt Flow	56	24	56	141	361	129

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	681	428	491	0	0
Stage 1	427	-	-	-	-
Stage 2	254	-	-	-	-
Critical Hdwy	6.46	6.2	4.1	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	3.3	2.2	-	-
Pot Cap-1 Maneuver	410	631	1083	-	-
Stage 1	650	-	-	-	-
Stage 2	779	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	386	630	1082	-	-
Mov Cap-2 Maneuver	386	-	-	-	-
Stage 1	613	-	-	-	-
Stage 2	778	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	15.1	2.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1082	-	437	-	-
HCM Lane V/C Ratio	0.052	-	0.184	-	-
HCM Control Delay (s)	8.5	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Year 2022 Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	6	12	17	155	413	13
Future Volume (vph)	6	12	17	155	413	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.996	
Flt Protected	0.984			0.995		
Satd. Flow (prot)	1533	0	0	1798	1902	0
Flt Permitted	0.984			0.995		
Satd. Flow (perm)	1533	0	0	1798	1902	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	17%	0%	6%	0%	0%	0%
Adj. Flow (vph)	7	14	20	180	480	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	200	495	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

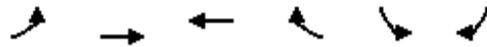
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	12	17	155	413	13
Future Vol, veh/h	6	12	17	155	413	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	17	0	6	0	0	0
Mvmt Flow	7	14	20	180	480	15
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	9.1	12.3
HCM LOS	A	A	B

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	10%	33%	0%
Vol Thru, %	90%	0%	97%
Vol Right, %	0%	67%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	172	18	426
LT Vol	17	6	0
Through Vol	155	0	413
RT Vol	0	12	13
Lane Flow Rate	200	21	495
Geometry Grp	1	1	1
Degree of Util (X)	0.253	0.031	0.56
Departure Headway (Hd)	4.553	5.335	4.069
Convergence, Y/N	Yes	Yes	Yes
Cap	792	674	872
Service Time	2.557	3.346	2.157
HCM Lane V/C Ratio	0.253	0.031	0.568
HCM Control Delay	9.1	8.5	12.3
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1	0.1	3.6

Year 2022 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	161	0	0	12	426
Future Volume (vph)	0	161	0	0	12	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.869	
Fl _t Protected					0.999	
Satd. Flow (prot)	0	1791	1900	0	1842	0
Fl _t Permitted					0.999	
Satd. Flow (perm)	0	1791	1900	0	1842	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%
Adj. Flow (vph)	0	189	0	0	14	501
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	189	0	0	515	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection

Int Delay, s/veh 8.3

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	161	0	0	12	426
Future Vol, veh/h	0	161	0	0	12	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	1	0	0	0	1
Mvmt Flow	0	189	0	0	14	501

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1	0	-	0	190	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	4.1	-	-	-	6.6	6.31
Critical Hdwy Stg 1	-	-	-	-	5.6	-
Critical Hdwy Stg 2	-	-	-	-	5.6	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	1635	-	-	-	795	1087
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1635	-	-	-	795	1087
Mov Cap-2 Maneuver	-	-	-	-	795	-
Stage 1	-	-	-	-	1027	-
Stage 2	-	-	-	-	839	-

Approach EB WB SB

HCM Control Delay, s 0 0 11.4
HCM LOS B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1635	-	-	-	1076
HCM Lane V/C Ratio	-	-	-	-	0.479
HCM Control Delay (s)	0	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.7

Year 2022 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	46	3	29	0	205	0	25	37	102	2	0
Future Volume (vph)	124	46	3	29	0	205	0	25	37	102	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.992			0.882			0.919				
Fl _t Protected	0.950				0.994						0.953	
Satd. Flow (prot)	1805	1885	0	0	1878	0	0	1737	0	0	1847	0
Fl _t Permitted	0.950				0.994						0.953	
Satd. Flow (perm)	1805	1885	0	0	1878	0	0	1737	0	0	1847	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			741	
Travel Time (s)		11.1			2.8			9.8			16.8	
Confl. Peds. (#/hr)			1	1			1		1			
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	135	50	3	32	0	223	0	27	40	111	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	53	0	0	255	0	0	67	0	0	113	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	124	46	3	29	0	205	0	25	37	102	2	0
Future Vol, veh/h	124	46	3	29	0	205	0	25	37	102	2	0
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	135	50	3	32	0	223	0	27	40	111	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.4	9	8.2	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	98%
Vol Thru, %	40%	0%	94%	0%	2%
Vol Right, %	60%	0%	6%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	124	49	234	104
LT Vol	0	124	0	29	102
Through Vol	25	0	46	0	2
RT Vol	37	0	3	205	0
Lane Flow Rate	67	135	53	254	113
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.088	0.212	0.076	0.297	0.163
Departure Headway (Hd)	4.714	5.657	5.11	4.197	5.192
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	755	633	699	852	687
Service Time	2.778	3.404	2.857	2.239	3.25
HCM Lane V/C Ratio	0.089	0.213	0.076	0.298	0.164
HCM Control Delay	8.2	9.9	8.3	9	9.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.8	0.2	1.2	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖		↖	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	184	290	54	255	176	1389	348	238	1371	5
Future Volume (vph)	0	0	184	290	54	255	176	1389	348	238	1371	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.876				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1759	3333	1615	0	1796	5110	1560	1787	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1734	3315	1615	0	1795	5110	1560	1787	3574	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		176				263			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					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
Heavy Vehicles (%)	0%	0%	1%	4%	0%	1%	0%	1%	3%	1%	1%	0%
Adj. Flow (vph)	0	0	196	309	57	271	187	1478	370	253	1459	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	196	309	328	0	187	1478	370	253	1459	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.62	0.61	0.83		0.70	0.56	0.40	0.78	0.75	0.01
Control Delay			40.4	49.2	38.9		60.0	20.2	6.5	62.9	24.2	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.4	49.2	38.9		60.0	20.2	6.5	62.9	24.2	0.0
Queue Length 50th (ft)			90	107	108		126	249	38	173	402	0
Queue Length 95th (ft)			182	156	219		222	352	114	#349	622	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			367	905	1035		325	2775	967	323	1941	901
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			0.53	0.34	0.32		0.58	0.53	0.38	0.78	0.75	0.01

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 111.1

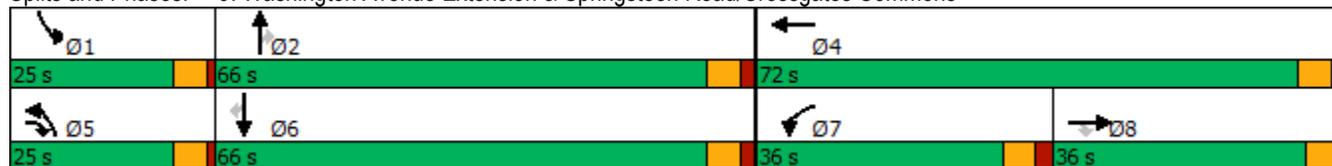
Natural Cycle: 80

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	184	290	54	255	176	1389	348	238	1371	5
Future Volume (veh/h)	0	0	184	290	54	255	176	1389	348	238	1371	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1976	1961	1817	1876	1876	1894	1879	1850	1885	1885	1900
Adj Flow Rate, veh/h	0	0	196	309	57	271	187	1478	370	253	1459	5
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	1	4	0	0	0	1	3	1	1	0
Cap, veh/h	0	242	401	379	81	386	216	2114	645	280	1606	721
Arrive On Green	0.00	0.00	0.12	0.11	0.29	0.29	0.12	0.41	0.41	0.16	0.45	0.45
Sat Flow, veh/h	0	1976	1653	3357	283	1346	1804	5130	1566	1795	3582	1608
Grp Volume(v), veh/h	0	0	196	309	0	328	187	1478	370	253	1459	5
Grp Sat Flow(s),veh/h/ln	0	1976	1653	1679	0	1629	1804	1710	1566	1795	1791	1608
Q Serve(g_s), s	0.0	0.0	11.9	10.5	0.0	21.1	11.9	27.9	21.3	16.2	44.4	0.2
Cycle Q Clear(g_c), s	0.0	0.0	11.9	10.5	0.0	21.1	11.9	27.9	21.3	16.2	44.4	0.2
Prop In Lane	0.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	242	401	379	0	467	216	2114	645	280	1606	721
V/C Ratio(X)	0.00	0.00	0.49	0.81	0.00	0.70	0.86	0.70	0.57	0.90	0.91	0.01
Avail Cap(c_a), veh/h	0	523	637	860	0	918	308	2629	802	307	1835	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	38.1	50.7	0.0	37.3	50.6	28.4	26.5	48.5	30.1	17.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.6	0.0	0.7	12.2	0.8	1.1	25.4	6.8	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	0.0	0.0	11.2	4.5	0.0	8.4	6.0	10.9	19.3	9.0	19.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	38.5	52.4	0.0	38.0	62.8	29.2	27.6	73.9	36.9	17.9
LnGrp LOS	A	A	D	D	A	D	E	C	C	E	D	B
Approach Vol, veh/h		196			637			2035			1717	
Approach Delay, s/veh		38.5			45.0			32.0			42.3	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.3	54.3		39.5	19.0	58.5	19.2	20.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	18.2	29.9		23.1	13.9	46.4	12.5	13.9				
Green Ext Time (p_c), s	0.1	10.3		0.8	0.2	6.1	0.7	0.4				

Intersection Summary

HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 								
Traffic Volume (vph)	552	513	150	0	511	642	228	0	0
Future Volume (vph)	552	513	150	0	511	642	228	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.928				0.850				
Flt Protected	0.975					0.950			
Satd. Flow (prot)	3336	0	1890	0	1660	1727	1699	0	0
Flt Permitted	0.975					0.424			
Satd. Flow (perm)	3336	0	1890	0	1660	771	1699	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	239				538				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	581	540	158	0	538	676	240	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1121	0	158	0	538	676	240	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

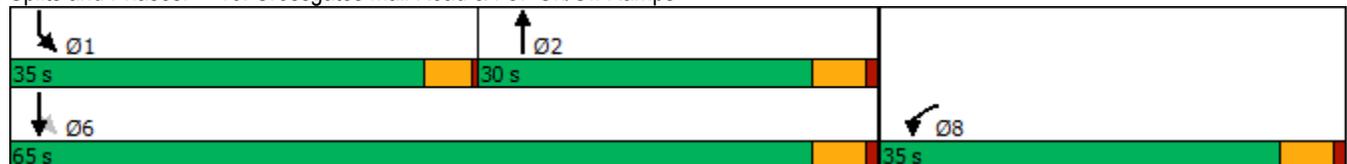


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.86		0.57		0.32	0.91	0.26		
Control Delay	29.1		42.5		0.5	32.4	11.4		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	29.1		42.5		0.5	32.4	11.4		
Queue Length 50th (ft)	237		83		0	255	66		
Queue Length 95th (ft)	#389		143		0	#455	108		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	1371		576		1660	783	1242		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.82		0.27		0.32	0.86	0.19		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 83.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	552	513	150	0	511	642	228	0	0
Future Volume (veh/h)	552	513	150	0	511	642	228	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1970	1970	1876	1773		
Adj Flow Rate, veh/h	560	562	158	0	0	676	240		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0	7		
Cap, veh/h	662	612	217			759	913		
Arrive On Green	0.36	0.36	0.11	0.00	0.00	0.35	0.52		
Sat Flow, veh/h	1847	1709	1894	1669	1669	1787	1773		
Grp Volume(v), veh/h	560	562	158	0	0	676	240		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1669	1669	1787	1773		
Q Serve(g_s), s	22.1	24.9	6.4	0.0	0.0	24.5	6.0		
Cycle Q Clear(g_c), s	22.1	24.9	6.4	0.0	0.0	24.5	6.0		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	662	612	217			759	913		
V/C Ratio(X)	0.85	0.92	0.73			0.89	0.26		
Avail Cap(c_a), veh/h	701	649	599			834	1346		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	23.4	24.3	33.8	0.0	0.0	17.2	10.7		
Incr Delay (d2), s/veh	9.1	17.6	4.6	0.0	0.0	11.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.7	12.4	3.1	0.0	0.0	11.3	2.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	32.4	41.9	38.4	0.0	0.0	28.3	10.9		
LnGrp LOS	C	D	D			C	B		
Approach Vol, veh/h	1122		158	A	A		916		
Approach Delay, s/veh	37.2		38.4				23.8		
Approach LOS	D		D				C		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	31.7	14.1				45.7	33.3		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	26.5	8.4				8.0	26.9		
Green Ext Time (p_c), s	1.1	0.7				1.6	1.5		

Intersection Summary

HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	27	177	32	142	351	64	35	12	195	77	12	62
Future Volume (vph)	27	177	32	142	351	64	35	12	195	77	12	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.977			0.891				0.945
Flt Protected	0.950			0.950				0.993				0.975
Satd. Flow (prot)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Flt Permitted	0.950			0.950				0.993				0.975
Satd. Flow (perm)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	30	195	35	154	386	70	38	13	212	85	13	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	230	0	154	456	0	0	263	0	0	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	27.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	27	177	32	142	351	64	35	12	195	77	12	62
Future Vol, veh/h	27	177	32	142	351	64	35	12	195	77	12	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	91	91	92	92	91	91	92	92	92	91	92	91
Heavy Vehicles, %	0	4	2	2	0	0	2	2	2	1	2	28
Mvmt Flow	30	195	35	154	386	70	38	13	212	85	13	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	456	0	0	230	0	0	1043	1037	213	1114	1019	421
Stage 1	-	-	-	-	-	-	273	273	-	729	729	-
Stage 2	-	-	-	-	-	-	770	764	-	385	290	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.12	6.52	6.22	7.91	7.32	6.88
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.518	4.018	3.318	3.509	4.018	3.552
Pot Cap-1 Maneuver	1115	-	-	1338	-	-	207	231	827	145	189	554
Stage 1	-	-	-	-	-	-	733	684	-	354	364	-
Stage 2	-	-	-	-	-	-	393	413	-	588	630	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1115	-	-	1338	-	-	153	199	827	92	163	554
Mov Cap-2 Maneuver	-	-	-	-	-	-	153	199	-	92	163	-
Stage 1	-	-	-	-	-	-	713	666	-	344	322	-
Stage 2	-	-	-	-	-	-	293	366	-	417	613	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	1	2	22.7	170.4
HCM LOS			C	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	461	1338	-	-	1115	-	148
HCM Lane V/C Ratio	0.571	0.115	-	-	0.027	-	1.12
HCM Control Delay (s)	22.7	8	-	-	8.3	-	170.4
HCM Lane LOS	C	A	-	-	A	-	F
HCM 95th %tile Q(veh)	3.5	0.4	-	-	0.1	-	9.1

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

													
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations													
Traffic Volume (vph)	47	399	3	7	497	291	1	0	7	199	2	59	
Future Volume (vph)	47	399	3	7	497	291	1	0	7	199	2	59	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Grade (%)		-3%			2%			0%				0%	
Storage Length (ft)	0		0	0		0	0		0	55		0	
Storage Lanes	0		0	0		0	0		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor								0.98		0.99			
Frt		0.999			0.945			0.882				0.855	
Flt Protected		0.995						0.994		0.950			
Satd. Flow (prot)	0	3544	0	0	3305	0	0	1636	0	1787	1624	0	
Flt Permitted		0.837			0.951			0.983		0.752			
Satd. Flow (perm)	0	2981	0	0	3143	0	0	1618	0	1403	1624	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		2			297			27				60	
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		786			547			394				414	
Travel Time (s)		17.9			12.4			9.0				9.4	
Confl. Peds. (#/hr)									11	11			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	18%	1%	0%	0%	0%	6%	0%	0%	0%	1%	0%	0%	
Adj. Flow (vph)	48	407	3	7	507	297	1	0	7	203	2	60	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	458	0	0	811	0	0	8	0	203	62	0	
Enter Blocked Intersection	No	No	No	No	No	No							
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)		0			0			12				12	
Link Offset(ft)		0			0			0				0	
Crosswalk Width(ft)		16			16			16				16	
Two way Left Turn Lane													
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		6			2			4				8	
Permitted Phases	6			2			4			8			
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0		
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0		
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5		
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0		
Lead/Lag													
Lead-Lag Optimize?													
v/c Ratio		0.38			0.57			0.01		0.36	0.09		
Control Delay		9.7			7.5			1.5		10.8	3.4		
Queue Delay		0.0			0.0			0.0		0.0	0.0		

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

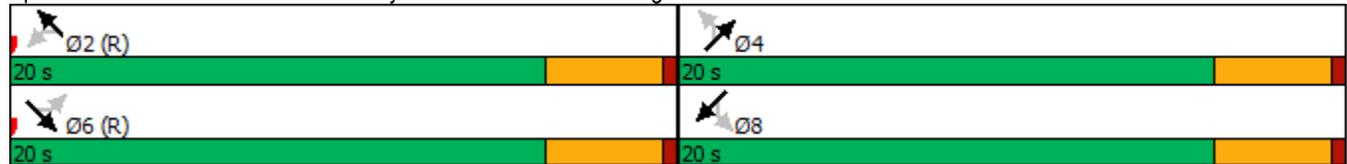


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		9.7			7.5			1.5		10.8	3.4	
Queue Length 50th (ft)		35			40			0		30	0	
Queue Length 95th (ft)		61			75			3		66	14	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1193			1435			663		561	685	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.38			0.57			0.01		0.36	0.09	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (veh/h)	47	399	3	7	497	291	1	0	7	199	2	59
Future Volume (veh/h)	47	399	3	7	497	291	1	0	7	199	2	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	48	407	3	7	507	297	1	0	7	203	2	60
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	174	1273	9	94	848	491	134	47	560	744	21	621
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40
Sat Flow, veh/h	162	3183	23	7	2121	1228	83	117	1400	1408	52	1553
Grp Volume(v), veh/h	226	0	232	451	0	360	8	0	0	203	0	62
Grp Sat Flow(s),veh/h/ln	1549	0	1818	1870	0	1487	1600	0	0	1408	0	1605
Q Serve(g_s), s	0.2	0.0	3.5	0.0	0.0	7.7	0.0	0.0	0.0	3.9	0.0	1.0
Cycle Q Clear(g_c), s	7.9	0.0	3.5	7.6	0.0	7.7	0.1	0.0	0.0	4.0	0.0	1.0
Prop In Lane	0.21		0.01	0.02		0.83	0.12		0.87	1.00		0.97
Lane Grp Cap(c), veh/h	729	0	727	839	0	595	741	0	0	744	0	642
V/C Ratio(X)	0.31	0.00	0.32	0.54	0.00	0.60	0.01	0.00	0.00	0.27	0.00	0.10
Avail Cap(c_a), veh/h	729	0	727	839	0	595	741	0	0	744	0	642
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	8.3	9.5	0.0	9.5	7.2	0.0	0.0	8.4	0.0	7.5
Incr Delay (d2), s/veh	1.1	0.0	1.2	2.5	0.0	4.5	0.0	0.0	0.0	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.2	2.8	0.0	2.5	0.0	0.0	0.0	1.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	9.4	11.9	0.0	14.0	7.3	0.0	0.0	9.3	0.0	7.8
LnGrp LOS	A	A	A	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		458			811			8				265
Approach Delay, s/veh		9.3			12.9			7.3				8.9
Approach LOS		A			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		9.7		2.1		9.9		6.0				
Green Ext Time (p_c), s		2.8		0.0		1.5		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				11.1								
HCM 6th LOS				B								

Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (vph)	452	153	179	659	136	198
Future Volume (vph)	452	153	179	659	136	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3421	0	1762	1801	1787	1599
Flt Permitted			0.350		0.950	
Satd. Flow (perm)	3421	0	649	1801	1787	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51					215
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%
Adj. Flow (vph)	491	166	195	716	148	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	657	0	195	716	148	215
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

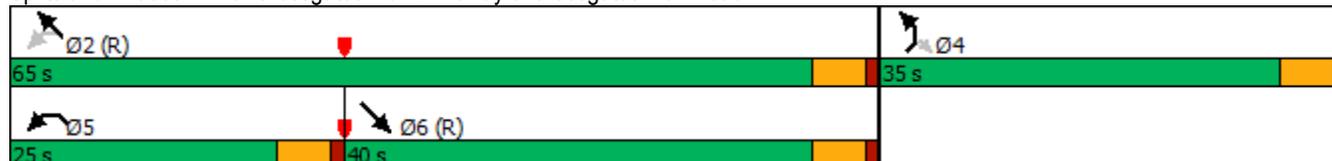


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.30		0.33	0.52	0.61	0.54
Control Delay	9.0		5.2	6.8	60.4	18.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.0		5.2	6.8	60.4	18.0
Queue Length 50th (ft)	83		27	145	95	25
Queue Length 95th (ft)	143		58	275	m134	m77
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2165		718	1375	536	620
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.30		0.27	0.52	0.28	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	452	153	179	659	136	198
Future Volume (veh/h)	452	153	179	659	136	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1879	1879	1979	1934	1885	1885
Adj Flow Rate, veh/h	491	166	195	716	148	215
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	0	3	1	1
Cap, veh/h	1657	557	630	1430	288	257
Arrive On Green	0.63	0.63	0.06	0.74	0.16	0.16
Sat Flow, veh/h	2718	882	1884	1934	1795	1598
Grp Volume(v), veh/h	333	324	195	716	148	215
Grp Sat Flow(s),veh/h/ln	1785	1721	1884	1934	1795	1598
Q Serve(g_s), s	8.5	8.5	3.4	15.3	7.5	13.1
Cycle Q Clear(g_c), s	8.5	8.5	3.4	15.3	7.5	13.1
Prop In Lane		0.51	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1128	1087	630	1430	288	257
V/C Ratio(X)	0.30	0.30	0.31	0.50	0.51	0.84
Avail Cap(c_a), veh/h	1128	1087	898	1430	539	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.57	0.57	1.00	1.00
Uniform Delay (d), s/veh	8.3	8.4	5.4	5.4	38.4	40.7
Incr Delay (d2), s/veh	0.6	0.7	0.2	0.7	1.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.1	1.1	5.2	3.4	11.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.0	9.0	5.6	6.1	39.8	47.8
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	657			911	363	
Approach Delay, s/veh	9.0			6.0	44.6	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.9		21.1	10.8	68.2
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		17.3		15.1	5.4	10.5
Green Ext Time (p_c), s		6.1		1.0	0.4	4.4
Intersection Summary						
HCM 6th Ctrl Delay			14.3			
HCM 6th LOS			B			

Year 2022 Build Traffic Volumes
15: S. Frontage Road

Weekday Peak PM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	201	141	91	259	0	0
Future Volume (vph)	201	141	91	259	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.900			
Flt Protected		0.971				
Satd. Flow (prot)	0	1809	1710	0	0	1863
Flt Permitted		0.971				
Satd. Flow (perm)	0	1809	1710	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		741	433		503	
Travel Time (s)		16.8	9.8		11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	218	153	99	282	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	371	381	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	201	141	91	259	0	0
Future Vol, veh/h	201	141	91	259	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	153	99	282	0	0

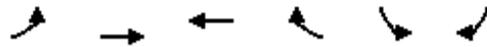
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	381	0	-	0	240
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	3.318
Pot Cap-1 Maneuver	1177	-	-	-	0 799
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1177	-	-	-	799
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	5.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1177	-	-	-
HCM Lane V/C Ratio	-	0.186	-	-	-
HCM Control Delay (s)	0	8.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	-

Year 2022 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	1054	2140	17	10	6
Future Volume (vph)	8	1054	2140	17	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t			0.999		0.949	
Fl _t Protected	0.950				0.970	
Satd. Flow (prot)	1805	3539	3536	0	1749	0
Fl _t Permitted	0.950				0.970	
Satd. Flow (perm)	1805	3539	3536	0	1749	0
Link Speed (mph)		40	30		30	
Link Distance (ft)		911	383		970	
Travel Time (s)		15.5	8.7		22.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	8	1087	2206	18	10	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	1087	2224	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	8	1054	2140	17	10	6
Future Vol, veh/h	8	1054	2140	17	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	1087	2206	18	10	6

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	2224	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	238	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	238	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0.2	0	\$ 331.5
HCM LOS			F

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	238	-	-	-	23
HCM Lane V/C Ratio	0.035	-	-	-	0.717
HCM Control Delay (s)	20.7	-	-	-	\$ 331.5
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	2.1

Notes

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

Year 2022 Build Traffic Volumes
17: Rapp Road & Site 1 Driveway

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	9	23	39	163	319	16
Future Volume (vph)	9	23	39	163	319	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.994	
Flt Protected	0.986			0.991		
Satd. Flow (prot)	1660	0	0	1837	1852	0
Flt Permitted	0.986			0.991		
Satd. Flow (perm)	1660	0	0	1837	1852	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	369			915	439	
Travel Time (s)	8.4			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	25	42	177	347	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	219	364	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	9	23	39	163	319	16
Future Vol, veh/h	9	23	39	163	319	16
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	25	42	177	347	17

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	617	356	364	0	-	0
Stage 1	356	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	453	688	1195	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	688	1195	-	-	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.5	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1195	-	591	-	-
HCM Lane V/C Ratio	0.035	-	0.059	-	-
HCM Control Delay (s)	8.1	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Year 2022 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	87	211	56	96	671
Future Volume (vph)	0	87	211	56	96	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.968			
Flt Protected						0.994
Satd. Flow (prot)	0	1611	3515	0	0	3536
Flt Permitted						0.994
Satd. Flow (perm)	0	1611	3515	0	0	3536
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	95	229	61	104	729
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	95	290	0	0	833
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	87	211	56	96	671
Future Vol, veh/h	0	87	211	56	96	671
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	95	229	61	104	729

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	145	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	876	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	876	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	876	1269
HCM Lane V/C Ratio	-	-	0.108	0.082
HCM Control Delay (s)	-	-	9.6	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3

Year 2022 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	267	56	0	671
Future Volume (vph)	0	0	267	56	0	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.974			
Flt Protected						
Satd. Flow (prot)	0	1863	3539	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3539	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	290	61	0	729
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	351	0	0	729
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	267	56	0	671
Future Vol, veh/h	0	0	267	56	0	671
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	0	290	61	0	729

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	176	0	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	837	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	837	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2022 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	242	101	36	0	0	186
Future Volume (vph)	242	101	36	0	0	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960				0.865	
Flt Protected	0.966			0.950		
Satd. Flow (prot)	1727	0	0	1770	1619	0
Flt Permitted	0.966			0.950		
Satd. Flow (perm)	1727	0	0	1770	1619	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	263	110	39	0	0	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	373	0	0	39	202	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	242	101	36	0	0	186
Future Vol, veh/h	242	101	36	0	0	186
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	263	110	39	0	0	202

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	179	101	202	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	811	954	1370	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	788	954	1370	-	-	-
Mov Cap-2 Maneuver	788	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	7.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1370	-	831	-	-
HCM Lane V/C Ratio	0.029	-	0.449	-	-
HCM Control Delay (s)	7.7	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.3	-	-

Year 2022 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	242	0	0	186
Future Volume (vph)	0	0	242	0	0	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1872
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1872
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	263	0	0	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	263	0	0	202
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	242	0	0	186
Future Vol, veh/h	0	0	242	0	0	186
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	263	0	0	202

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	465	263	0	0	263	0
Stage 1	263	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	556	776	-	-	1301	-
Stage 1	781	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	556	776	-	-	1301	-
Mov Cap-2 Maneuver	556	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1301
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Year 2022 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	1863
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection

Int Delay, s/veh -

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖			↗		↖
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor

	Minor2	Major1	
Conflicting Flow All	0	-	0
Stage 1	0	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	NB
HCM Control Delay, s	0	0
HCM LOS	A	

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	0
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1060	1230	520	463	49
Future Volume (vph)	0	1060	1230	520	463	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.955			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4648	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4648	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			272			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1152	1337	565	503	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1152	1902	0	503	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

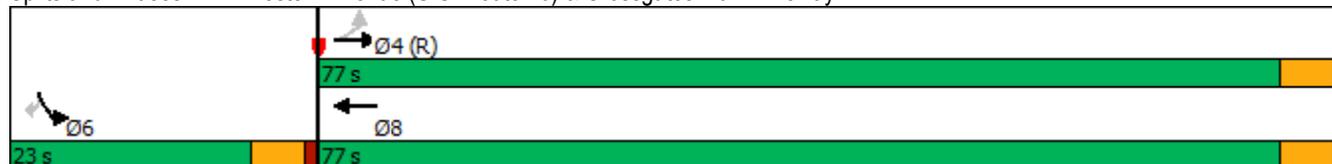


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.45	0.56		0.83	0.16
Control Delay		6.5	6.1		41.3	8.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.5	6.1		41.3	8.4
Queue Length 50th (ft)		137	147		148	3
Queue Length 95th (ft)		173	179		#236	m13
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3422		605	322
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.45	0.56		0.83	0.16

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2022 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

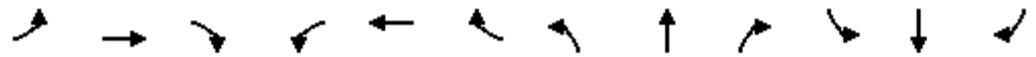
Saturday Peak Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑↑		↖↗	↖
Traffic Volume (veh/h)	0	1060	1230	520	463	49
Future Volume (veh/h)	0	1060	1230	520	463	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1152	1337	565	503	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	2513	1048	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	237	3647	3656	1456	3282	1505
Grp Volume(v), veh/h	0	1152	1287	615	503	53
Grp Sat Flow(s),veh/h/ln	237	1777	1681	1585	1641	1505
Q Serve(g_s), s	0.0	13.4	17.4	17.8	14.8	3.0
Cycle Q Clear(g_c), s	0.0	13.4	17.4	17.8	14.8	3.0
Prop In Lane	1.00			0.92	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1141	591	271
V/C Ratio(X)	0.00	0.45	0.53	0.54	0.85	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1141	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.63	0.63
Uniform Delay (d), s/veh	0.0	5.8	6.4	6.4	39.7	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.5	9.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	4.7	4.6	6.7	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.4	6.6	6.9	49.3	35.9
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1152	1902		556	
Approach Delay, s/veh		6.4	6.7		48.0	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				15.4	16.8	19.8
Green Ext Time (p_c), s				10.6	0.3	22.4
Intersection Summary						
HCM 6th Ctrl Delay			13.0			
HCM 6th LOS			B			

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1124	23	55	1178	43	27	0	55	0	0	123
Future Volume (vph)	0	1124	23	55	1178	43	27	0	55	0	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.995			0.909				0.865
Flt Protected				0.950				0.984				
Satd. Flow (prot)	1928	3497	0	1778	3387	0	0	1635	0	0	1652	0
Flt Permitted				0.950				0.984				
Satd. Flow (perm)	1928	3497	0	1778	3387	0	0	1635	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1183	24	58	1240	45	28	0	58	0	0	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1207	0	58	1285	0	0	86	0	0	129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 02/17/2020

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	0	1124	23	55	1178	43	27	0	55	0	0	123
Future Vol, veh/h	0	1124	23	55	1178	43	27	0	55	0	0	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	0	1183	24	58	1240	45	28	0	58	0	0	129

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1285	0	0	1207	0	0	1931	2596	604	1971	2586	643
Stage 1	-	-	-	-	-	-	1195	1195	-	1379	1379	-
Stage 2	-	-	-	-	-	-	736	1401	-	592	1207	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.7	7	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	547	-	-	585	-	-	37	22	439	42	30	429
Stage 1	-	-	-	-	-	-	188	245	-	167	231	-
Stage 2	-	-	-	-	-	-	366	193	-	480	276	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	547	-	-	585	-	-	~ 24	20	439	34	27	429
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 24	20	-	34	27	-
Stage 1	-	-	-	-	-	-	188	245	-	167	208	-
Stage 2	-	-	-	-	-	-	230	174	-	417	276	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	\$ 320.9	17
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	66	547	-	-	585	-	-	429
HCM Lane V/C Ratio	1.308	-	-	-	0.099	-	-	0.302
HCM Control Delay (s)	\$ 320.9	0	-	-	11.8	-	-	17
HCM Lane LOS	F	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	7.1	0	-	-	0.3	-	-	1.3

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

Year 2022 Build Traffic Volumes

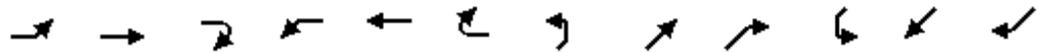
Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	292	928	93	78	999	138	134	102	77	89	81	169
Future Volume (vph)	292	928	93	78	999	138	134	102	77	89	81	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					0.99
Frt		0.986			0.982			0.989	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3527	0	1805	3489	0	1787	1785	1534	1680	1909	1607
Flt Permitted	0.103			0.143			0.700			0.551		
Satd. Flow (perm)	194	3527	0	272	3489	0	1315	1785	1534	974	1909	1585
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			2	77			118
Link Speed (mph)		40			40			30				30
Link Distance (ft)		374			1018			654				346
Travel Time (s)		6.4			17.4			14.9				7.9
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	0%	0%	1%	6%	1%	0%	0%	8%	0%	1%
Adj. Flow (vph)	304	967	97	81	1041	144	140	106	80	93	84	176
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	304	1064	0	81	1185	0	140	114	72	93	84	176
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.76	0.69		0.18	0.77		0.41	0.46	0.12	0.51	0.49	0.34
Control Delay	50.5	30.3		13.9	32.4		44.7	54.6	5.7	54.6	68.4	15.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	30.3		13.9	32.4		44.7	54.6	5.7	54.6	68.4	15.0
Queue Length 50th (ft)	123	279		15	329		80	74	0	52	54	27
Queue Length 95th (ft)	318	546		49	625		182	177	31	128	146	108
Internal Link Dist (ft)		294			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	590	2850		463	2467		440	507	606	324	540	606
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	0.52	0.37		0.17	0.48		0.32	0.22	0.12	0.29	0.16	0.29

Intersection Summary

Area Type: Other

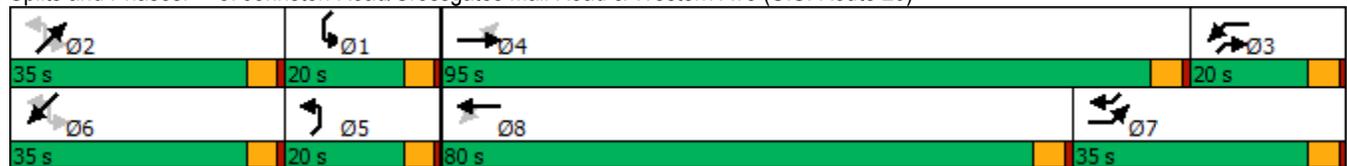
Cycle Length: 170

Actuated Cycle Length: 115

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2022 Build Traffic Volumes

Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	292	928	93	78	999	138	134	102	77	89	81	169
Future Volume (veh/h)	292	928	93	78	999	138	134	102	77	89	81	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1885	1885	1885	1900	1900	1819	1939	1924
Adj Flow Rate, veh/h	304	967	97	81	1041	144	140	106	80	93	84	176
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	1	1	1	0	0	8	0	1
Cap, veh/h	358	1367	137	462	1463	202	272	177	391	240	164	304
Arrive On Green	0.10	0.42	0.42	0.15	0.46	0.46	0.07	0.09	0.09	0.06	0.08	0.08
Sat Flow, veh/h	1795	3287	330	1810	3161	437	1795	1900	1605	1733	1939	1625
Grp Volume(v), veh/h	304	527	537	81	589	596	140	106	80	93	84	176
Grp Sat Flow(s),veh/h/ln	1795	1791	1826	1810	1791	1807	1795	1900	1605	1733	1939	1625
Q Serve(g_s), s	4.7	17.3	17.3	0.0	18.7	18.7	0.0	3.8	0.0	0.0	2.9	0.0
Cycle Q Clear(g_c), s	4.7	17.3	17.3	0.0	18.7	18.7	0.0	3.8	0.0	0.0	2.9	0.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	745	759	462	829	836	272	177	391	240	164	304
V/C Ratio(X)	0.85	0.71	0.71	0.18	0.71	0.71	0.51	0.60	0.20	0.39	0.51	0.58
Avail Cap(c_a), veh/h	933	2273	2317	575	1894	1910	530	804	920	504	820	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.1	17.1	19.5	15.2	15.3	30.3	30.9	21.4	31.0	31.1	26.3
Incr Delay (d2), s/veh	2.2	2.6	2.6	0.1	2.4	2.4	0.6	1.2	0.1	0.4	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	6.6	6.8	1.0	6.9	7.0	2.2	1.7	1.0	1.5	1.4	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	19.8	19.7	19.5	17.7	17.7	30.8	32.1	21.5	31.3	32.0	26.9
LnGrp LOS	C	B	B	B	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1368			1266			326			353	
Approach Delay, s/veh		22.1			17.8			28.9			29.3	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	11.6	15.6	34.5	9.8	11.0	12.3	37.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	5.8	2.0	19.3	2.0	4.9	6.7	20.7				
Green Ext Time (p_c), s	0.1	0.4	0.1	10.2	0.2	0.6	0.6	12.1				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖↗		↖	↗			↖	↗
Traffic Volume (vph)	105	194	192	106	221	30	141	89	124	15	56	150
Future Volume (vph)	105	194	192	106	221	30	141	89	124	15	56	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987			0.913				0.850
Flt Protected		0.983			0.985		0.950				0.989	
Satd. Flow (prot)	0	1860	1584	0	3614	0	1702	1632	0	0	1879	1669
Flt Permitted		0.748			0.738		0.585				0.916	
Satd. Flow (perm)	0	1415	1584	0	2708	0	1048	1632	0	0	1740	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			202		17			117				158
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				913
Travel Time (s)		10.6			11.5			17.8				20.8
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
Heavy Vehicles (%)	4%	0%	3%	3%	1%	0%	5%	0%	9%	0%	0%	0%
Adj. Flow (vph)	111	204	202	112	233	32	148	94	131	16	59	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	315	202	0	377	0	148	225	0	0	75	158
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		6			6
Detector Phase	4	4	4	8	8		5	2	6	6	6	
Switch Phase												

Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020

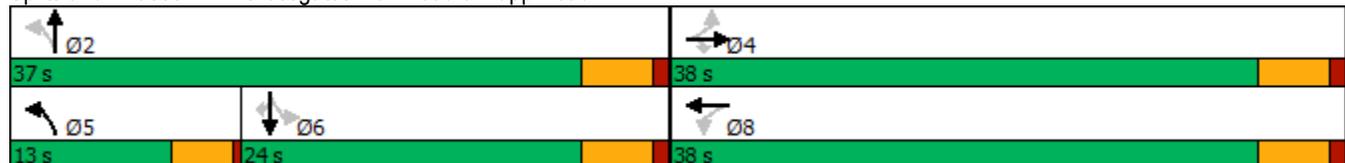


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		8.0	21.0		21.0	21.0	21.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0		13.0	37.0		24.0	24.0	24.0
Total Split (%)	50.7%	50.7%	50.7%	50.7%	50.7%		17.3%	49.3%		32.0%	32.0%	32.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		4.0	5.0			5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.51	0.25		0.31		0.27	0.29			0.17	0.29
Control Delay		18.7	3.0		13.9		14.5	8.0			23.2	5.8
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		18.7	3.0		13.9		14.5	8.0			23.2	5.8
Queue Length 50th (ft)		101	0		54		41	30			27	0
Queue Length 95th (ft)		173	34		85		76	73			60	42
Internal Link Dist (ft)		387			424			705			833	
Turn Bay Length (ft)												150
Base Capacity (vph)		622	810		1201		539	763			440	540
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.51	0.25		0.31		0.27	0.29			0.17	0.29

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2022 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗			↖	↗
Traffic Volume (veh/h)	105	194	192	106	221	30	141	89	124	15	56	150
Future Volume (veh/h)	105	194	192	106	221	30	141	89	124	15	56	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1934	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	111	204	202	112	233	32	148	94	131	16	59	158
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	3	1	1	1	5	0	0	0	0	0
Cap, veh/h	266	467	721	295	743	110	552	303	422	117	386	424
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.12	0.43	0.43	0.25	0.25	0.25
Sat Flow, veh/h	458	1061	1639	488	1689	250	1717	710	989	233	1522	1675
Grp Volume(v), veh/h	315	0	202	166	0	211	148	0	225	75	0	158
Grp Sat Flow(s),veh/h/ln	1519	0	1639	777	0	1650	1717	0	1698	1756	0	1675
Q Serve(g_s), s	6.2	0.0	5.9	7.3	0.0	6.2	4.2	0.0	6.6	0.0	0.0	5.8
Cycle Q Clear(g_c), s	12.3	0.0	5.9	19.6	0.0	6.2	4.2	0.0	6.6	2.3	0.0	5.8
Prop In Lane	0.35		1.00	0.67		0.15	1.00		0.58	0.21		1.00
Lane Grp Cap(c), veh/h	733	0	721	422	0	726	552	0	725	503	0	424
V/C Ratio(X)	0.43	0.00	0.28	0.39	0.00	0.29	0.27	0.00	0.31	0.15	0.00	0.37
Avail Cap(c_a), veh/h	733	0	721	422	0	726	552	0	725	503	0	424
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	13.4	20.1	0.0	13.5	14.9	0.0	14.2	21.8	0.0	23.1
Incr Delay (d2), s/veh	1.8	0.0	1.0	2.7	0.0	1.0	1.2	0.0	1.1	0.6	0.0	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	4.0	0.0	2.2	2.6	0.0	2.3	1.7	0.0	2.6	1.1	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	14.4	22.8	0.0	14.5	16.1	0.0	15.3	22.4	0.0	25.6
LnGrp LOS	B	A	B	C	A	B	B	A	B	C	A	C
Approach Vol, veh/h		517			377			373				233
Approach Delay, s/veh		16.0			18.2			15.6				24.6
Approach LOS		B			B			B				C
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		37.0		38.0	13.0	24.0		38.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		32.0		33.0	9.0	19.0		33.0				
Max Q Clear Time (g_c+I1), s		8.6		14.3	6.2	7.8		21.6				
Green Ext Time (p_c), s		0.6		1.4	0.1	0.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				17.8								
HCM 6th LOS				B								

Year 2022 Build Traffic Volumes
5: Rapp Road & Gipp Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	36	21	22	179	176	47
Future Volume (vph)	36	21	22	179	176	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.950				0.972	
Flt Protected	0.969			0.995		
Satd. Flow (prot)	1749	0	0	1872	1794	0
Flt Permitted	0.969			0.995		
Satd. Flow (perm)	1749	0	0	1872	1794	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	3	2	2			3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	41	24	25	206	202	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	0	0	231	256	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	36	21	22	179	176	47
Future Vol, veh/h	36	21	22	179	176	47
Conflicting Peds, #/hr	3	2	2	0	0	3
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	24	25	206	202	54

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	491	234	259	0	0
Stage 1	232	-	-	-	-
Stage 2	259	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	540	810	1317	-	-
Stage 1	811	-	-	-	-
Stage 2	789	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	527	807	1314	-	-
Mov Cap-2 Maneuver	527	-	-	-	-
Stage 1	792	-	-	-	-
Stage 2	787	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.7	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1314	-	604	-	-
HCM Lane V/C Ratio	0.019	-	0.108	-	-
HCM Control Delay (s)	7.8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Year 2022 Build Traffic Volumes
6: Rapp Road & Pine Lane

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	13	17	198	210	15
Future Volume (vph)	13	13	17	198	210	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.991	
Flt Protected	0.976			0.996		
Satd. Flow (prot)	1531	0	0	1795	1893	0
Flt Permitted	0.976			0.996		
Satd. Flow (perm)	1531	0	0	1795	1893	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	0%	0%	1%	0%	0%
Adj. Flow (vph)	14	14	18	206	219	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	224	235	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

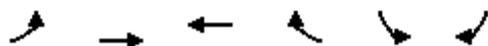
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	13	13	17	198	210	15
Future Vol, veh/h	13	13	17	198	210	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	15	0	0	1	0	0
Mvmt Flow	14	14	18	206	219	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	8.7	8.6
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	8%	50%	0%
Vol Thru, %	92%	0%	93%
Vol Right, %	0%	50%	7%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	215	26	225
LT Vol	17	13	0
Through Vol	198	0	210
RT Vol	0	13	15
Lane Flow Rate	224	27	234
Geometry Grp	1	1	1
Degree of Util (X)	0.257	0.037	0.265
Departure Headway (Hd)	4.138	4.928	4.075
Convergence, Y/N	Yes	Yes	Yes
Cap	858	731	872
Service Time	2.214	2.928	2.151
HCM Lane V/C Ratio	0.261	0.037	0.268
HCM Control Delay	8.7	8.1	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.1	1.1

Year 2022 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	211	0	0	0	225
Future Volume (vph)	0	211	0	0	0	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected						
Satd. Flow (prot)	0	1791	1900	0	1853	0
Fl _t Permitted						
Satd. Flow (perm)	0	1791	1900	0	1853	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	224	0	0	0	239
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	224	0	0	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	211	0	0	0	225
Future Vol, veh/h	0	211	0	0	0	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	224	0	0	0	239

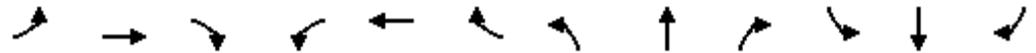
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	225
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	224
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	758
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	808
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	758
Mov Cap-2 Maneuver	-	-	-	-	758
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	808

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	-	-	-	-	0.22
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Year 2022 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	39	6	15	0	110	0	6	20	24	2	0
Future Volume (vph)	166	39	6	15	0	110	0	6	20	24	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.881			0.898				
Flt Protected	0.950				0.994						0.956	
Satd. Flow (prot)	1787	1831	0	0	1876	0	0	1698	0	0	1853	0
Flt Permitted	0.950				0.994						0.956	
Satd. Flow (perm)	1787	1831	0	0	1876	0	0	1698	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			755	
Travel Time (s)		11.1			2.8			9.8			17.2	
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
Heavy Vehicles (%)	1%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	180	42	7	16	0	120	0	7	22	26	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	49	0	0	136	0	0	29	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	166	39	6	15	0	110	0	6	20	24	2	0
Future Vol, veh/h	166	39	6	15	0	110	0	6	20	24	2	0
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
Heavy Vehicles, %	1	0	11	0	0	0	0	0	0	0	0	0
Mvmt Flow	180	42	7	16	0	120	0	7	22	26	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.3	7.6	7.5	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	92%
Vol Thru, %	23%	0%	87%	0%	8%
Vol Right, %	77%	0%	13%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	166	45	125	26
LT Vol	0	166	0	15	24
Through Vol	6	0	39	0	2
RT Vol	20	0	6	110	0
Lane Flow Rate	28	180	49	136	28
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.034	0.26	0.062	0.147	0.039
Departure Headway (Hd)	4.314	5.186	4.574	3.89	4.959
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	833	689	777	925	725
Service Time	2.325	2.948	2.336	1.899	2.97
HCM Lane V/C Ratio	0.034	0.261	0.063	0.147	0.039
HCM Control Delay	7.5	9.8	7.6	7.6	8.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	1	0.2	0.5	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↖	↖	↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	0	0	83	409	52	361	71	549	462	395	590	5
Future Volume (vph)	0	0	83	409	52	361	71	549	462	395	590	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99								
Frt			0.850		0.869				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1777	3432	1620	0	1796	5060	1591	1805	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1752	3414	1620	0	1796	5060	1591	1805	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99		256				476			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	0	0	86	422	54	372	73	566	476	407	608	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	86	422	426	0	73	566	476	407	608	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.33	0.65	0.83		0.42	0.31	0.54	0.93	0.33	0.01
Control Delay			10.3	35.6	26.9		43.9	20.2	4.8	63.2	13.8	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			10.3	35.6	26.9		43.9	20.2	4.8	63.2	13.8	0.0
Queue Length 50th (ft)			0	105	83		36	73	0	202	88	0
Queue Length 95th (ft)			35	150	194		81	119	66	#429	165	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			504	1243	1343		433	3668	1284	436	2590	1196
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			0.17	0.34	0.32		0.17	0.15	0.37	0.93	0.23	0.00

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 83

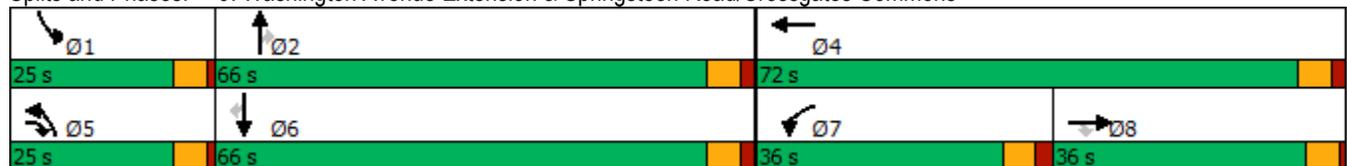
Natural Cycle: 90

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	83	409	52	361	71	549	462	395	590	5
Future Volume (veh/h)	0	0	83	409	52	361	71	549	462	395	590	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1976	1862	1876	1876	1894	1864	1879	1900	1885	1900
Adj Flow Rate, veh/h	0	0	86	422	54	372	73	566	476	407	608	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	0	0	0	2	1	0	1	0
Cap, veh/h	0	152	216	512	59	404	95	1755	549	361	1762	792
Arrive On Green	0.00	0.00	0.08	0.15	0.29	0.29	0.05	0.34	0.34	0.20	0.49	0.49
Sat Flow, veh/h	0	1976	1662	3440	205	1413	1804	5090	1593	1810	3582	1610
Grp Volume(v), veh/h	0	0	86	422	0	426	73	566	476	407	608	5
Grp Sat Flow(s),veh/h/ln	0	1976	1662	1720	0	1619	1804	1697	1593	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	4.8	11.9	0.0	25.5	4.0	8.2	28.0	20.0	10.4	0.2
Cycle Q Clear(g_c), s	0.0	0.0	4.8	11.9	0.0	25.5	4.0	8.2	28.0	20.0	10.4	0.2
Prop In Lane	0.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	152	216	512	0	462	95	1755	549	361	1762	792
V/C Ratio(X)	0.00	0.00	0.40	0.82	0.00	0.92	0.77	0.32	0.87	1.13	0.35	0.01
Avail Cap(c_a), veh/h	0	612	603	1031	0	1067	360	3051	954	361	2147	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	40.0	41.3	0.0	34.7	46.8	24.2	30.6	40.1	15.6	13.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.3	0.0	3.3	4.8	0.2	6.0	86.0	0.2	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	0.0	0.0	0.0	5.1	0.0	10.3	1.9	3.1	0.9	17.1	3.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	40.4	42.7	0.0	38.0	51.6	24.3	36.6	126.0	15.7	13.0
LnGrp LOS	A	A	D	D	A	D	D	C	D	F	B	B
Approach Vol, veh/h		86			848			1115			1020	
Approach Delay, s/veh		40.4			40.3			31.4			59.7	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	40.5		34.6	10.3	55.2	20.9	13.7				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	22.0	30.0		27.5	6.0	12.4	13.9	6.8				
Green Ext Time (p_c), s	0.0	4.6		1.0	0.1	2.7	1.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	653	679	271	0	692	526	277	0	0
Future Volume (vph)	653	679	271	0	692	526	277	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.924				0.850				
Flt Protected	0.976					0.950			
Satd. Flow (prot)	3324	0	1890	0	1644	1727	1783	0	0
Flt Permitted	0.976					0.206			
Satd. Flow (perm)	3324	0	1890	0	1644	375	1783	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	323				704				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	680	707	282	0	721	548	289	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1387	0	282	0	721	548	289	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

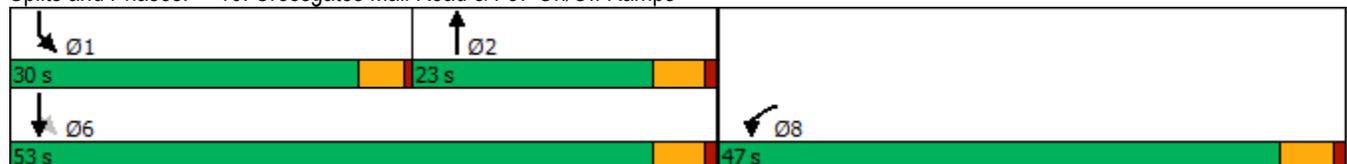


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	47.0		23.0			30.0	53.0		
Total Split (%)	47.0%		23.0%			30.0%	53.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.91		0.84		0.44	0.98	0.33		
Control Delay	30.5		61.5		0.9	58.9	16.7		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	30.5		61.5		0.9	58.9	16.7		
Queue Length 50th (ft)	327		175		0	~314	110		
Queue Length 95th (ft)	432		#311		0	#523	171		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	1653		359		1644	560	903		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.84		0.79		0.44	0.98	0.32		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 95.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2022 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	653	679	271	0	692	526	277	0	0
Future Volume (veh/h)	653	679	271	0	692	526	277	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1954	1954	1876	1847		
Adj Flow Rate, veh/h	680	707	282	0	0	548	289		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	1	1	0	2		
Cap, veh/h	786	728	319			570	873		
Arrive On Green	0.43	0.43	0.17	0.00	0.00	0.26	0.47		
Sat Flow, veh/h	1847	1709	1894	1656	1656	1787	1847		
Grp Volume(v), veh/h	680	707	282	0	0	548	289		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1656	1656	1787	1847		
Q Serve(g_s), s	33.0	39.9	14.3	0.0	0.0	24.3	9.6		
Cycle Q Clear(g_c), s	33.0	39.9	14.3	0.0	0.0	24.3	9.6		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	786	728	319			570	873		
V/C Ratio(X)	0.86	0.97	0.88			0.96	0.33		
Avail Cap(c_a), veh/h	787	728	346			570	899		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	25.7	27.7	40.0	0.0	0.0	23.7	16.2		
Incr Delay (d2), s/veh	9.9	26.3	21.6	0.0	0.0	28.3	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	16.0	20.8	8.5	0.0	0.0	14.3	4.0		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	35.6	54.0	61.7	0.0	0.0	52.1	16.5		
LnGrp LOS	D	D	E			D	B		
Approach Vol, veh/h	1387		282	A	A		837		
Approach Delay, s/veh	45.0		61.7				39.8		
Approach LOS	D		E				D		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.0	21.6				51.6	47.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	26.0	18.0				48.0	42.0		
Max Q Clear Time (g_c+I1), s	26.3	16.3				11.6	41.9		
Green Ext Time (p_c), s	0.0	0.3				1.8	0.0		

Intersection Summary

HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	92	215	46	190	210	169	47	15	287	117	15	96
Future Volume (vph)	92	215	46	190	210	169	47	15	287	117	15	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	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 Factor												
Fr _t		0.974			0.933			0.889			0.943	
Fl _t Protected	0.950			0.950				0.993			0.975	
Satd. Flow (prot)	1745	1743	0	1752	1747	0	0	1644	0	0	1608	0
Fl _t Permitted	0.950			0.950				0.993			0.975	
Satd. Flow (perm)	1745	1743	0	1752	1747	0	0	1644	0	0	1608	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		785			786			351			287	
Travel Time (s)		17.8			17.9			8.0			6.5	
Confl. Peds. (#/hr)	1		1	1		1			1	1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	100	234	50	207	228	184	51	16	312	127	16	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	284	0	207	412	0	0	379	0	0	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

Intersection												
Int Delay, s/veh	206.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	92	215	46	190	210	169	47	15	287	117	15	96
Future Vol, veh/h	92	215	46	190	210	169	47	15	287	117	15	96
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	4	2	2	0	1	2	2	2	0	2	15
Mvmt Flow	100	234	50	207	228	184	51	16	312	127	16	104

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	285	0	0	1254	1287	261	1359	1220	321
Stage 1	-	-	-	-	-	-	460	460	-	735	735	-
Stage 2	-	-	-	-	-	-	794	827	-	624	485	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.9	7.32	6.75
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.9	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.9	6.32	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.435
Pot Cap-1 Maneuver	1151	-	-	1277	-	-	149	164	778	~94	137	666
Stage 1	-	-	-	-	-	-	581	566	-	352	361	-
Stage 2	-	-	-	-	-	-	381	386	-	415	495	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1150	-	-	1276	-	-	91	125	777	~42	105	665
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	125	-	~42	105	-
Stage 1	-	-	-	-	-	-	530	516	-	321	302	-
Stage 2	-	-	-	-	-	-	255	323	-	219	451	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	2.2	2.8	110.8	\$ 1176
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	347	1276	-	-	1150	-	74
HCM Lane V/C Ratio	1.093	0.162	-	-	0.087	-	3.349
HCM Control Delay (s)	110.8	8.4	-	-	8.4	-	\$ 1176
HCM Lane LOS	F	A	-	-	A	-	F
HCM 95th %tile Q(veh)	14.1	0.6	-	-	0.3	-	25.4

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

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	59	561	0	8	510	486	2	3	13	327	6	57
Future Volume (vph)	59	561	0	8	510	486	2	3	13	327	6	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.99		0.99	0.99	
Frt					0.927			0.901			0.863	
Flt Protected		0.995						0.995		0.950		
Satd. Flow (prot)	0	3573	0	0	3297	0	0	1681	0	1787	1621	0
Flt Permitted		0.743			0.949			0.984		0.745		
Satd. Flow (perm)	0	2668	0	0	3129	0	0	1662	0	1393	1621	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					517			14			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			394			414	
Travel Time (s)		17.9			12.4			9.0			9.4	
Confl. Peds. (#/hr)			3	3			1		8	8		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
Heavy Vehicles (%)	12%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	63	597	0	9	543	517	2	3	14	348	6	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	660	0	0	1069	0	0	19	0	348	67	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.62			0.68			0.03		0.62	0.10	
Control Delay		12.7			7.6			5.1		16.1	3.6	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

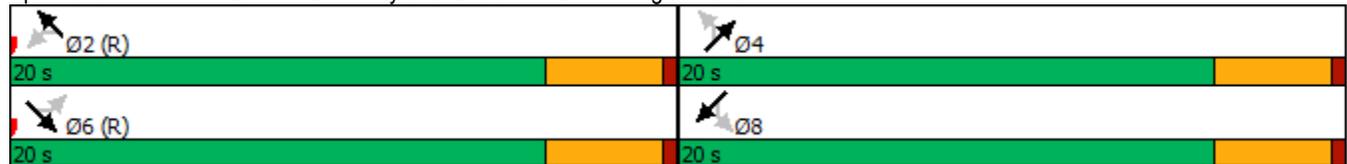


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		12.7			7.6			5.1		16.1	3.6	
Queue Length 50th (ft)		57			44			1		58	1	
Queue Length 95th (ft)		97			88			8		#130	16	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1067			1561			673		557	685	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.62			0.68			0.03		0.62	0.10	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2022 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	59	561	0	8	510	486	2	3	13	327	6	57
Future Volume (veh/h)	59	561	0	8	510	486	2	3	13	327	6	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	63	597	0	9	543	517	2	3	14	348	6	61
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, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	125	1066	0	95	743	577	125	148	485	742	58	591
Arrive On Green	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	43	2757	0	8	1857	1442	63	370	1214	1399	145	1478
Grp Volume(v), veh/h	318	342	0	552	0	517	19	0	0	348	0	67
Grp Sat Flow(s),veh/h/ln	977	1732	0	1866	0	1442	1647	0	0	1399	0	1623
Q Serve(g_s), s	2.3	5.9	0.0	0.0	0.0	13.4	0.0	0.0	0.0	7.6	0.0	1.0
Cycle Q Clear(g_c), s	15.7	5.9	0.0	10.0	0.0	13.4	0.3	0.0	0.0	7.8	0.0	1.0
Prop In Lane	0.20		0.00	0.02		1.00	0.11		0.74	1.00		0.91
Lane Grp Cap(c), veh/h	499	693	0	838	0	577	758	0	0	742	0	649
V/C Ratio(X)	0.64	0.49	0.00	0.66	0.00	0.90	0.03	0.00	0.00	0.47	0.00	0.10
Avail Cap(c_a), veh/h	499	693	0	838	0	577	758	0	0	742	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.4	9.0	0.0	10.2	0.0	11.2	7.3	0.0	0.0	9.5	0.0	7.5
Incr Delay (d2), s/veh	6.1	2.5	0.0	4.0	0.0	19.2	0.1	0.0	0.0	2.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.1	0.0	3.9	0.0	6.1	0.1	0.0	0.0	2.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	11.5	0.0	14.2	0.0	30.4	7.3	0.0	0.0	11.6	0.0	7.8
LnGrp LOS	B	B	A	B	A	C	A	A	A	B	A	A
Approach Vol, veh/h		660			1069			19				415
Approach Delay, s/veh		13.4			22.1			7.3				11.0
Approach LOS		B			C			A				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		15.4		2.3		17.7		9.8				
Green Ext Time (p_c), s		0.4		0.0		0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				17.2								
HCM 6th LOS				B								

Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↵	↑	↵	↵
Traffic Volume (vph)	681	220	293	708	297	347
Future Volume (vph)	681	220	293	708	297	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.99
Frt	0.963					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3451	0	1762	1837	1805	1615
Flt Permitted			0.165		0.950	
Satd. Flow (perm)	3451	0	306	1837	1805	1593
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48					377
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%
Adj. Flow (vph)	740	239	318	770	323	377
Shared Lane Traffic (%)						
Lane Group Flow (vph)	979	0	318	770	323	377
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2022 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

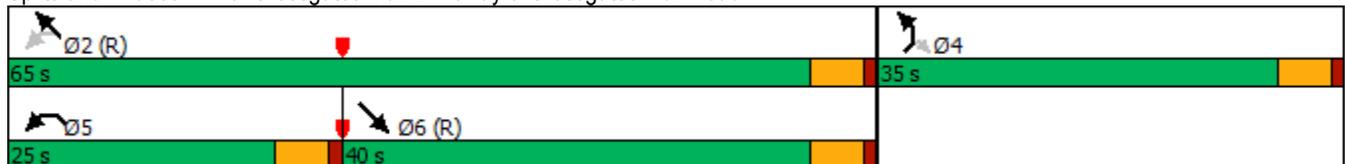


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.61		0.72	0.63	0.77	0.57
Control Delay	23.8		21.6	13.5	48.4	7.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	23.8		21.6	13.5	48.4	7.7
Queue Length 50th (ft)	236		78	249	163	14
Queue Length 95th (ft)	359		192	455	201	61
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	1592		500	1228	541	741
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.61		0.64	0.63	0.60	0.51

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2022 Build Traffic Volumes
13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↙	↑	↘	↗
Traffic Volume (veh/h)	681	220	293	708	297	347
Future Volume (veh/h)	681	220	293	708	297	347
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1979	1964	1900	1900
Adj Flow Rate, veh/h	740	239	318	770	323	377
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	0
Cap, veh/h	1296	419	447	1258	469	418
Arrive On Green	0.48	0.48	0.11	0.64	0.26	0.26
Sat Flow, veh/h	2769	864	1884	1964	1810	1610
Grp Volume(v), veh/h	498	481	318	770	323	377
Grp Sat Flow(s),veh/h/ln	1799	1739	1884	1964	1810	1610
Q Serve(g_s), s	19.7	19.7	7.9	23.2	16.1	22.6
Cycle Q Clear(g_c), s	19.7	19.7	7.9	23.2	16.1	22.6
Prop In Lane		0.50	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	872	842	447	1258	469	418
V/C Ratio(X)	0.57	0.57	0.71	0.61	0.69	0.90
Avail Cap(c_a), veh/h	872	842	624	1258	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.75	0.75	0.48	0.48	1.00	1.00
Uniform Delay (d), s/veh	18.4	18.4	14.1	10.6	33.4	35.8
Incr Delay (d2), s/veh	2.0	2.1	1.1	1.1	3.0	18.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	8.1	3.1	9.4	7.3	20.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.4	20.5	15.2	11.7	36.4	54.3
LnGrp LOS	C	C	B	B	D	D
Approach Vol, veh/h	979			1088	700	
Approach Delay, s/veh	20.4			12.7	46.0	
Approach LOS	C			B	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.1		30.9	15.6	53.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		25.2		24.6	9.9	21.7
Green Ext Time (p_c), s		6.6		1.3	0.7	5.4
Intersection Summary						
HCM 6th Ctrl Delay			23.9			
HCM 6th LOS			C			

Year 2022 Build Traffic Volumes
 15: Rapp Road & S. Frontage Road

Saturday Peak Hour
 02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	78	163	12	115	0	0
Future Volume (vph)	78	163	12	115	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.878			
Flt Protected		0.984				
Satd. Flow (prot)	0	1833	1668	0	0	1863
Flt Permitted		0.984				
Satd. Flow (perm)	0	1833	1668	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	432		517	
Travel Time (s)		17.2	9.8		11.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	84	175	13	124	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	259	137	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷			↶
Traffic Vol, veh/h	78	163	12	115	0	0
Future Vol, veh/h	78	163	12	115	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	175	13	124	0	0

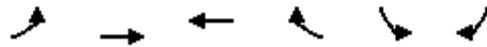
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	137	0	-	0	- 75
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.318
Pot Cap-1 Maneuver	1447	-	-	-	0 986
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1447	-	-	-	- 986
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	2.5	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1447	-	-	-
HCM Lane V/C Ratio	-	0.058	-	-	-
HCM Control Delay (s)	0	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	-

Year 2022 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	1304	1298	4	9	13
Future Volume (vph)	12	1304	1298	4	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.918	
Fl _t Protected	0.950				0.981	
Satd. Flow (prot)	1805	3574	3574	0	1711	0
Fl _t Permitted	0.950				0.981	
Satd. Flow (perm)	1805	3574	3574	0	1711	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		921	374		1043	
Travel Time (s)		15.7	6.4		23.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	13	1358	1352	4	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1358	1356	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1304	1298	4	9	13
Future Vol, veh/h	12	1304	1298	4	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1358	1352	4	9	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1356	0	-	0	2059 678
Stage 1	-	-	-	-	1354 -
Stage 2	-	-	-	-	705 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	514	-	-	-	49 399
Stage 1	-	-	-	-	209 -
Stage 2	-	-	-	-	456 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	514	-	-	-	48 399
Mov Cap-2 Maneuver	-	-	-	-	48 -
Stage 1	-	-	-	-	204 -
Stage 2	-	-	-	-	456 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	51.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	514	-	-	-	100
HCM Lane V/C Ratio	0.024	-	-	-	0.229
HCM Control Delay (s)	12.2	-	-	-	51.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Year 2022 Build Traffic Volumes
17: Rapp Road & Site 1 Driveway

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	16	39	39	186	182	16
Future Volume (vph)	16	39	39	186	182	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.989	
Flt Protected	0.986			0.991		
Satd. Flow (prot)	1694	0	0	1843	1845	0
Flt Permitted	0.986			0.991		
Satd. Flow (perm)	1694	0	0	1843	1845	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	359			913	439	
Travel Time (s)	8.2			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	17	42	42	202	198	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	0	244	215	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	16	39	39	186	182	16
Future Vol, veh/h	16	39	39	186	182	16
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	17	42	42	202	198	17

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	493	207	215	0	0
Stage 1	207	-	-	-	-
Stage 2	286	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	539	839	1367	-	-
Stage 1	832	-	-	-	-
Stage 2	767	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	520	839	1367	-	-
Mov Cap-2 Maneuver	520	-	-	-	-
Stage 1	803	-	-	-	-
Stage 2	767	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10.5	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1367	-	712	-	-
HCM Lane V/C Ratio	0.031	-	0.084	-	-
HCM Control Delay (s)	7.7	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Year 2022 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	133	359	82	125	386
Future Volume (vph)	0	133	359	82	125	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.972			
Flt Protected						0.988
Satd. Flow (prot)	0	1611	3475	0	0	3514
Flt Permitted						0.988
Satd. Flow (perm)	0	1611	3475	0	0	3514
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	145	390	89	136	420
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	145	479	0	0	556
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	133	359	82	125	386
Future Vol, veh/h	0	133	359	82	125	386
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	145	390	89	136	420

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	240	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	761	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	761	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	761	1080
HCM Lane V/C Ratio	-	-	0.19	0.126
HCM Control Delay (s)	-	-	10.8	8.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.4

Year 2022 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	441	83	0	386
Future Volume (vph)	0	0	441	83	0	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.976			
Flt Protected						
Satd. Flow (prot)	0	1863	3489	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3489	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	479	90	0	420
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	569	0	0	420
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	441	83	0	386
Future Vol, veh/h	0	0	441	83	0	386
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	479	90	0	420

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	285	0	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	712	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	712	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2022 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	349	123	43	0	0	251
Future Volume (vph)	349	123	43	0	0	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.965				0.865	
Flt Protected	0.964			0.950		
Satd. Flow (prot)	1733	0	0	1770	1619	0
Flt Permitted	0.964			0.950		
Satd. Flow (perm)	1733	0	0	1770	1619	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	379	134	47	0	0	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	513	0	0	47	273	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	11.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	349	123	43	0	0	251
Future Vol, veh/h	349	123	43	0	0	251
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	379	134	47	0	0	273

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	231	137	273	0	0
Stage 1	137	-	-	-	-
Stage 2	94	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	757	911	1290	-	-
Stage 1	890	-	-	-	-
Stage 2	930	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	730	911	1290	-	-
Mov Cap-2 Maneuver	730	-	-	-	-
Stage 1	858	-	-	-	-
Stage 2	930	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	7.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1290	-	770	-	-
HCM Lane V/C Ratio	0.036	-	0.666	-	-
HCM Control Delay (s)	7.9	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	5.2	-	-

Year 2022 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	349	0	0	251
Future Volume (vph)	0	0	349	0	0	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1872
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1872
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	379	0	0	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	379	0	0	273
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	0	349	0	0	251
Future Vol, veh/h	0	0	349	0	0	251
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	379	0	0	273

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	652	379	0	0	379	0
Stage 1	379	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	433	668	-	-	1179	-
Stage 1	692	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	433	668	-	-	1179	-
Mov Cap-2 Maneuver	433	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	773	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1179
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Year 2022 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	1863
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	-					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖			↗		↖
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	
Conflicting Flow All	0	-	0
Stage 1	0	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB
HCM Control Delay, s	0	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	0
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	-	-	-

INTERSECTION #11
W/ SIGNALIZATION

Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	298	7	58	119	5	6	0	58	8	0	19
Future Volume (vph)	12	298	7	58	119	5	6	0	58	8	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.996			0.994			0.878				0.905
Fl _t Protected	0.950			0.950				0.995				0.985
Satd. Flow (prot)	1762	1777	0	1752	1870	0	0	1627	0	0	1384	0
Fl _t Permitted	0.670			0.534				0.960				0.874
Satd. Flow (perm)	1243	1777	0	985	1870	0	0	1570	0	0	1228	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4			109				109
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	13	327	8	63	131	5	7	0	63	9	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	335	0	63	136	0	0	70	0	0	30	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		4			8		
Permitted Phases	6			2			4			8		

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	11.0	36.0		11.0	36.0		23.0	23.0		23.0	23.0	
Total Split (%)	15.7%	51.4%		15.7%	51.4%		32.9%	32.9%		32.9%	32.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.01	0.29		0.08	0.10			0.19			0.10	
Control Delay	3.5	8.3		3.5	5.6			3.9			0.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	3.5	8.3		3.5	5.6			3.9			0.7	
Queue Length 50th (ft)	1	27		4	10			0			0	
Queue Length 95th (ft)	5	117		13	48			15			0	
Internal Link Dist (ft)		705			706			271			207	
Turn Bay Length (ft)												
Base Capacity (vph)	886	1545		791	1627			901			715	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.01	0.22		0.08	0.08			0.08			0.04	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 34.8
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace & Crossgates Mall Road



Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	12	298	7	58	119	5	6	0	58	8	0	19
Future Volume (veh/h)	12	298	7	58	119	5	6	0	58	8	0	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	13	327	8	63	131	5	7	0	63	9	0	21
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	677	549	13	522	605	23	163	0	115	216	0	88
Arrive On Green	0.01	0.29	0.29	0.06	0.34	0.34	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1884	1865	46	1759	1796	69	162	0	1462	477	0	1113
Grp Volume(v), veh/h	13	0	335	63	0	136	70	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1910	1759	0	1864	1624	0	0	1591	0	0
Q Serve(g_s), s	0.1	0.0	3.9	0.6	0.0	1.4	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	3.9	0.6	0.0	1.4	1.1	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.04	0.10		0.90	0.30		0.70
Lane Grp Cap(c), veh/h	677	0	563	522	0	628	279	0	0	303	0	0
V/C Ratio(X)	0.02	0.00	0.60	0.12	0.00	0.22	0.25	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	1081	0	2252	824	0	2197	1225	0	0	1167	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	0.0	7.9	6.1	0.0	6.2	11.6	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.1	0.0	0.2	0.5	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.1	0.1	0.0	0.3	0.3	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	0.0	8.9	6.2	0.0	6.4	12.1	0.0	0.0	11.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		348			199			70			30	
Approach Delay, s/veh		8.8			6.3			12.1			11.5	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	13.9		7.1	6.5	12.7		7.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	31.0		18.0	6.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	3.4		3.1	2.6	5.9		2.4				
Green Ext Time (p_c), s	0.0	0.6		0.2	0.0	1.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									

Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	27	177	32	142	351	64	35	12	195	77	12	62
Future Volume (vph)	27	177	32	142	351	64	35	12	195	77	12	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.977			0.977			0.891				0.945
Fl _t Protected	0.950			0.950				0.993				0.975
Satd. Flow (prot)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Fl _t Permitted	0.457			0.533				0.934				0.678
Satd. Flow (perm)	848	1748	0	983	1838	0	0	1550	0	0	1064	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			16			212				51
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	30	195	35	154	386	70	38	13	212	85	13	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	230	0	154	456	0	0	263	0	0	166	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		4			8		
Permitted Phases	6			2			4			8		

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

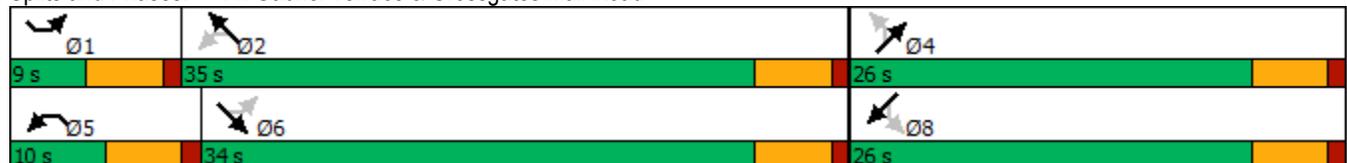


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	9.0	34.0		10.0	35.0		26.0	26.0		26.0	26.0	
Total Split (%)	12.9%	48.6%		14.3%	50.0%		37.1%	37.1%		37.1%	37.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.07	0.38		0.27	0.55			0.49			0.56	
Control Delay	6.7	13.9		7.7	13.5			8.4			20.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.7	13.9		7.7	13.5			8.4			20.5	
Queue Length 50th (ft)	3	40		16	56			9			22	
Queue Length 95th (ft)	15	106		54	219			67			92	
Internal Link Dist (ft)		705			706			271			207	
Turn Bay Length (ft)												
Base Capacity (vph)	435	1221		569	1315			904			575	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.07	0.19		0.27	0.35			0.29			0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 45.1
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace & Crossgates Mall Road



Year 2022 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	27	177	32	142	351	64	35	12	195	77	12	62
Future Volume (veh/h)	27	177	32	142	351	64	35	12	195	77	12	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	30	195	35	154	386	70	38	13	212	85	13	68
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	364	438	79	551	525	95	141	40	297	289	69	148
Arrive On Green	0.03	0.28	0.28	0.09	0.34	0.34	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1884	1583	284	1759	1546	280	137	170	1276	618	298	635
Grp Volume(v), veh/h	30	0	230	154	0	456	263	0	0	166	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1867	1759	0	1826	1583	0	0	1551	0	0
Q Serve(g_s), s	0.4	0.0	3.8	2.3	0.0	8.3	2.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	3.8	2.3	0.0	8.3	5.7	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.15	0.14		0.81	0.51		0.41
Lane Grp Cap(c), veh/h	364	0	517	551	0	620	478	0	0	506	0	0
V/C Ratio(X)	0.08	0.00	0.45	0.28	0.00	0.74	0.55	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	510	0	1440	624	0	1457	983	0	0	922	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.7	0.0	11.2	8.4	0.0	10.9	13.2	0.0	0.0	12.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.3	0.0	1.7	1.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.3	0.7	0.0	2.7	1.7	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	0.0	11.8	8.7	0.0	12.6	14.2	0.0	0.0	12.7	0.0	0.0
LnGrp LOS	A	A	B	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		260			610			263			166	
Approach Delay, s/veh		11.6			11.7			14.2			12.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	17.8		13.8	8.4	15.4		13.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	30.0		21.0	5.0	29.0		21.0				
Max Q Clear Time (g_c+I1), s	2.4	10.3		7.7	4.3	5.8		5.2				
Green Ext Time (p_c), s	0.0	2.5		1.2	0.0	1.1		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				12.3								
HCM 6th LOS				B								

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	92	215	46	190	210	169	47	15	287	117	15	96
Future Volume (vph)	92	215	46	190	210	169	47	15	287	117	15	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	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 Factor	1.00	1.00		1.00	0.99			0.99			1.00	
Frt		0.974			0.933			0.889			0.943	
Flt Protected	0.950			0.950				0.993			0.975	
Satd. Flow (prot)	1745	1736	0	1752	1730	0	0	1626	0	0	1608	0
Flt Permitted	0.442			0.421				0.930			0.587	
Satd. Flow (perm)	811	1736	0	776	1730	0	0	1523	0	0	968	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			65			312			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		785			786			351			287	
Travel Time (s)		17.8			17.9			8.0			6.5	
Confl. Peds. (#/hr)	1		1	1		1			1	1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	100	234	50	207	228	184	51	16	312	127	16	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	284	0	207	412	0	0	379	0	0	247	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	

Year 2022 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

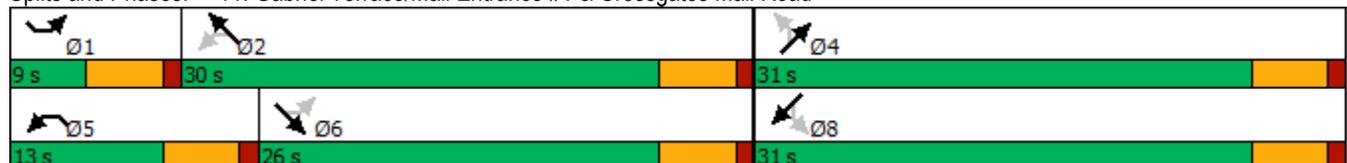


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		4	4		8		8
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0		21.0
Total Split (s)	9.0	26.0		13.0	30.0		31.0	31.0		31.0		31.0
Total Split (%)	12.9%	37.1%		18.6%	42.9%		44.3%	44.3%		44.3%		44.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0				5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None
v/c Ratio	0.28	0.58		0.40	0.66			0.55				0.72
Control Delay	11.6	22.6		11.4	19.5			7.1				26.1
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0
Total Delay	11.6	22.6		11.4	19.5			7.1				26.1
Queue Length 50th (ft)	15	72		32	88			15				50
Queue Length 95th (ft)	46	166		88	209			77				141
Internal Link Dist (ft)		705			706			271				207
Turn Bay Length (ft)												
Base Capacity (vph)	354	824		524	996			1006				581
Starvation Cap Reductn	0	0		0	0			0				0
Spillback Cap Reductn	0	0		0	0			0				0
Storage Cap Reductn	0	0		0	0			0				0
Reduced v/c Ratio	0.28	0.34		0.40	0.41			0.38				0.43

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 50.7
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road



Year 2022 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

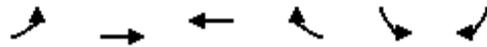
Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	92	215	46	190	210	169	47	15	287	117	15	96
Future Volume (veh/h)	92	215	46	190	210	169	47	15	287	117	15	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1964	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	100	234	50	207	228	184	51	16	312	127	16	104
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, %	1	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	370	379	81	495	293	237	132	45	398	280	60	158
Arrive On Green	0.06	0.25	0.25	0.12	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1870	1532	327	1759	960	775	137	151	1340	533	202	534
Grp Volume(v), veh/h	100	0	284	207	0	412	379	0	0	247	0	0
Grp Sat Flow(s),veh/h/ln	1870	0	1859	1759	0	1735	1628	0	0	1269	0	0
Q Serve(g_s), s	1.7	0.0	6.1	3.8	0.0	9.7	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	6.1	3.8	0.0	9.7	9.3	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.45	0.13		0.82	0.51		0.42
Lane Grp Cap(c), veh/h	370	0	460	495	0	530	574	0	0	498	0	0
V/C Ratio(X)	0.27	0.00	0.62	0.42	0.00	0.78	0.66	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	418	0	871	595	0	968	1011	0	0	839	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	15.0	10.6	0.0	14.2	14.4	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.4	0.6	0.0	2.5	1.3	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.4	1.2	0.0	3.5	3.1	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	16.4	11.2	0.0	16.7	15.7	0.0	0.0	14.2	0.0	0.0
LnGrp LOS	B	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		384			619			379			247	
Approach Delay, s/veh		15.3			14.9			15.7			14.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	18.7		18.3	10.5	16.1		18.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	25.0		26.0	8.0	21.0		26.0				
Max Q Clear Time (g_c+I1), s	3.7	11.7		11.3	5.8	8.1		9.2				
Green Ext Time (p_c), s	0.0	2.0		2.0	0.1	1.2		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				15.0								
HCM 6th LOS				B								

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

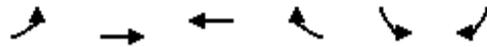
Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷↷	↷↷↷		↶↶	↷
Traffic Volume (vph)	0	1565	925	108	63	19
Future Volume (vph)	0	1565	925	108	63	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1837	3438	4540	0	3432	1583
Flt Permitted					0.950	
Satd. Flow (perm)	1837	3438	4540	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			51			21
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	0	1701	1005	117	68	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1701	1122	0	68	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020

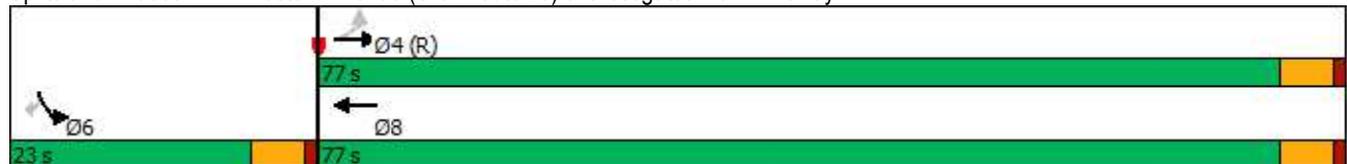


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.69	0.34		0.11	0.07
Control Delay		9.6	5.2		30.5	12.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.6	5.2		30.5	12.5
Queue Length 50th (ft)		271	78		19	2
Queue Length 95th (ft)		341	97		38	20
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2475	3283		617	302
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.69	0.34		0.11	0.07

Intersection Summary

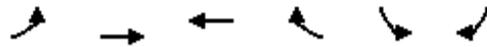
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↕↕	↕↕↕		↕↕	↕
Traffic Volume (veh/h)	0	1565	925	108	63	19
Future Volume (veh/h)	0	1565	925	108	63	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806
Adj Flow Rate, veh/h	0	1701	1005	117	68	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	5	8	8	0	0
Cap, veh/h	72	2498	3139	365	601	275
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	510	3561	4518	506	3336	1530
Grp Volume(v), veh/h	0	1701	737	385	68	21
Grp Sat Flow(s),veh/h/ln	510	1735	1600	1667	1668	1530
Q Serve(g_s), s	0.0	26.9	8.4	8.4	1.7	1.1
Cycle Q Clear(g_c), s	0.0	26.9	8.4	8.4	1.7	1.1
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	72	2498	2304	1200	601	275
V/C Ratio(X)	0.00	0.68	0.32	0.32	0.11	0.08
Avail Cap(c_a), veh/h	72	2498	2304	1200	601	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.7	5.1	5.1	34.3	34.1
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.2	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.9	2.1	2.3	0.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.2	5.2	5.3	34.7	34.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1701	1122		89	
Approach Delay, s/veh		9.2	5.2		34.7	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				28.9	3.7	10.4
Green Ext Time (p_c), s				19.3	0.2	9.2
Intersection Summary						
HCM 6th Ctrl Delay			8.4			
HCM 6th LOS			A			

Year 2025 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1766	11	21	912	7	21	0	69	0	0	17
Future Volume (vph)	0	1766	11	21	912	7	21	0	69	0	0	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.896			0.865	
Flt Protected				0.950				0.989				
Satd. Flow (prot)	1286	3403	0	1520	3181	0	0	1559	0	0	1652	0
Flt Permitted				0.950				0.989				
Satd. Flow (perm)	1286	3403	0	1520	3181	0	0	1559	0	0	1652	0
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		1018			964			269			394	
Travel Time (s)		17.4			16.4			6.1			9.0	
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
Heavy Vehicles (%)	50%	4%	0%	17%	8%	0%	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	0	1859	12	22	960	7	22	0	73	0	0	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1871	0	22	967	0	0	95	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	18.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕			↕			↕	↕
Traffic Vol, veh/h	0	1766	11	21	912	7	21	0	69	0	0	17
Future Vol, veh/h	0	1766	11	21	912	7	21	0	69	0	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	4	0	17	8	0	0	0	5	0	0	0
Mvmt Flow	0	1859	12	22	960	7	22	0	73	0	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	967	0	0	1871	0	0	2389	2876	936	1938	2879	484
Stage 1	-	-	-	-	-	-	1865	1865	-	1008	1008	-
Stage 2	-	-	-	-	-	-	524	1011	-	930	1871	-
Critical Hdwy	5.1	-	-	4.44	-	-	7.7	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.7	-	-	2.37	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	476	-	-	263	-	-	~ 16	14	254	45	19	541
Stage 1	-	-	-	-	-	-	69	111	-	277	339	-
Stage 2	-	-	-	-	-	-	495	302	-	307	136	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	476	-	-	263	-	-	~ 14	13	254	30	17	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 14	13	-	30	17	-
Stage 1	-	-	-	-	-	-	69	111	-	277	311	-
Stage 2	-	-	-	-	-	-	439	277	-	219	136	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 578.8	11.9
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	51	476	-	-	263	-	-	541
HCM Lane V/C Ratio	1.858	-	-	-	0.084	-	-	0.033
HCM Control Delay (s)	\$ 578.8	0	-	-	19.9	-	-	11.9
HCM Lane LOS	F	A	-	-	C	-	-	B
HCM 95th %tile Q(veh)	9.3	0	-	-	0.3	-	-	0.1

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

Year 2025 No-Build Traffic Volumes

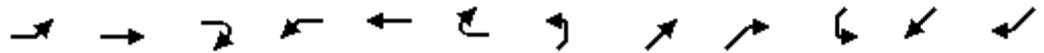
Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	266	1490	100	98	756	41	95	150	186	48	42	97
Future Volume (vph)	266	1490	100	98	756	41	95	150	186	48	42	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.991			0.992			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3452	0	1612	3332	0	1626	1720	1447	1440	1872	1623
Flt Permitted	0.145			0.081			0.726			0.597		
Satd. Flow (perm)	270	3452	0	137	3332	0	1243	1720	1405	896	1872	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			4			5	126			110
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		383			1018			654			735	
Travel Time (s)		6.5			17.4			14.9			16.7	
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	3%	10%	12%	7%	14%	11%	1%	6%	26%	2%	0%
Adj. Flow (vph)	302	1693	114	111	859	47	108	170	211	55	48	110
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	302	1807	0	111	906	0	108	204	177	55	48	110
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.44	0.88		0.65	0.79		0.33	0.78	0.42	0.46	0.45	0.15
Control Delay	31.0	33.3		58.8	49.4		51.6	80.0	17.5	63.9	86.0	6.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	33.3		58.8	49.4		51.6	80.0	17.5	63.9	86.0	6.2
Queue Length 50th (ft)	110	754		56	430		89	203	41	44	47	0
Queue Length 95th (ft)	239	#1072		125	513		145	307	110	84	97	41
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	684	2245		221	1806		337	376	450	197	405	716
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	0.44	0.80		0.50	0.50		0.32	0.54	0.39	0.28	0.12	0.15

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 143.9

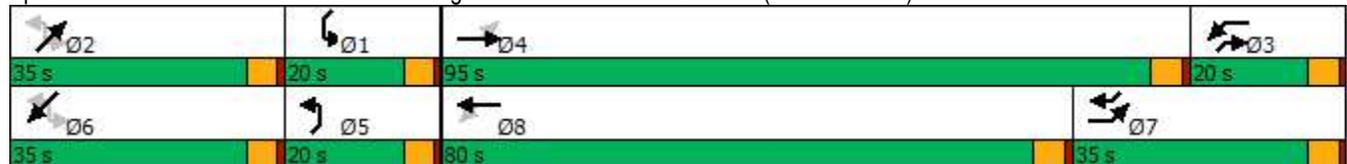
Natural Cycle: 90

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2025 No-Build Traffic Volumes

Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	266	1490	100	98	756	41	95	150	186	48	42	97
Future Volume (veh/h)	266	1490	100	98	756	41	95	150	186	48	42	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.97		0.98	1.00		0.97
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	1856	1856	1722	1796	1796	1737	1885	1811	1549	1909	1939
Adj Flow Rate, veh/h	302	1693	114	111	859	47	108	201	190	55	48	110
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	3	3	12	7	7	11	1	6	26	2	0
Cap, veh/h	686	2021	135	135	1048	57	274	294	307	108	188	702
Arrive On Green	0.33	0.60	0.60	0.05	0.32	0.32	0.09	0.16	0.16	0.03	0.10	0.10
Sat Flow, veh/h	1781	3353	224	1640	3290	180	1654	1885	1505	1475	1909	1594
Grp Volume(v), veh/h	302	883	924	111	446	460	108	201	190	55	48	110
Grp Sat Flow(s),veh/h/ln	1781	1763	1814	1640	1706	1763	1654	1885	1505	1475	1909	1594
Q Serve(g_s), s	9.0	49.8	51.5	3.9	30.1	30.1	0.0	12.6	8.3	0.0	2.9	0.0
Cycle Q Clear(g_c), s	9.0	49.8	51.5	3.9	30.1	30.1	0.0	12.6	8.3	0.0	2.9	0.0
Prop In Lane	1.00		0.12	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	686	1062	1094	135	544	562	274	294	307	108	188	702
V/C Ratio(X)	0.44	0.83	0.84	0.82	0.82	0.82	0.39	0.68	0.62	0.51	0.25	0.16
Avail Cap(c_a), veh/h	686	1270	1308	255	1025	1059	322	453	434	235	459	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	19.7	20.1	57.5	39.2	39.2	49.3	49.8	45.3	58.3	52.0	21.7
Incr Delay (d2), s/veh	0.2	5.2	5.7	4.6	6.4	6.2	0.3	1.1	0.8	1.4	0.3	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	6.6	20.1	21.4	3.6	13.2	13.6	3.1	6.0	2.8	1.7	1.4	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	25.0	25.8	62.1	45.7	45.5	49.7	50.9	46.1	59.6	52.3	21.8
LnGrp LOS	C	C	C	E	D	D	D	D	D	E	D	C
Approach Vol, veh/h		2109			1017			499				213
Approach Delay, s/veh		25.9			47.4			48.8				38.4
Approach LOS		C			D			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	24.4	10.9	80.3	16.4	17.3	46.4	44.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	14.6	5.9	53.5	2.0	4.9	11.0	32.1				
Green Ext Time (p_c), s	0.1	0.8	0.1	21.8	0.1	0.3	0.6	7.7				

Intersection Summary

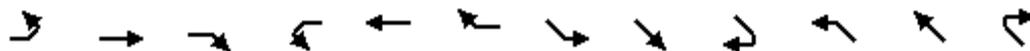
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

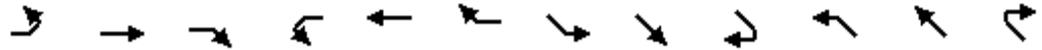
Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↖	↗		↔			↖	↗	↖	↗	
Traffic Volume (vph)	92	93	241	15	42	3	0	67	96	81	44	24
Future Volume (vph)	92	93	241	15	42	3	0	67	96	81	44	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992				0.850		0.946	
Flt Protected		0.976			0.988					0.950		
Satd. Flow (prot)	0	1827	1599	0	3573	0	0	1863	1669	1610	1361	0
Flt Permitted		0.816			0.882					0.569		
Satd. Flow (perm)	0	1528	1599	0	3190	0	0	1863	1669	964	1361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			287		4				114		29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		467			504			921			780	
Travel Time (s)		10.6			11.5			20.9			17.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	2%	14%	0%	0%	0%	2%	0%	11%	6%	75%
Adj. Flow (vph)	110	111	287	18	50	4	0	80	114	96	52	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	287	0	72	0	0	80	114	96	81	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		4	8			6		6	2		
Detector Phase	4	4	4	8	8		6	6	6	5	2	
Switch Phase												

Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
02/17/2020

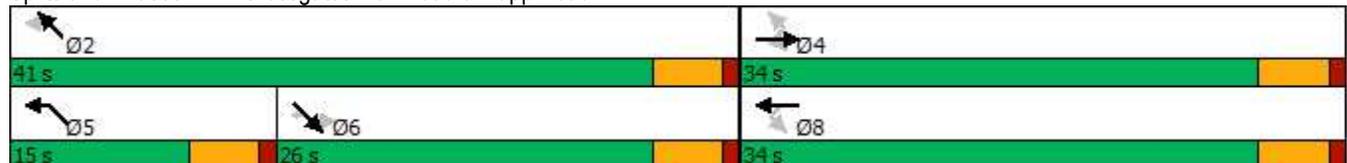


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	9.0	21.0	
Total Split (s)	34.0	34.0	34.0	34.0	34.0		26.0	26.0	26.0	15.0	41.0	
Total Split (%)	45.3%	45.3%	45.3%	45.3%	45.3%		34.7%	34.7%	34.7%	20.0%	54.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max		Max	Max	Max	Max	Max	
v/c Ratio		0.37	0.36		0.06			0.15	0.21	0.18	0.12	
Control Delay		18.8	3.6		14.0			21.4	5.7	11.8	8.1	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		18.8	3.6		14.0			21.4	5.7	11.8	8.1	
Queue Length 50th (ft)		72	0		10			28	0	23	12	
Queue Length 95th (ft)		116	35		21			56	30	45	32	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		590	794		1235			521	549	548	668	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.37	0.36		0.06			0.15	0.21	0.18	0.12	

Intersection Summary

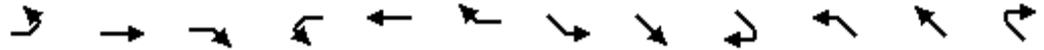
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (veh/h)	92	93	241	15	42	3	0	67	96	81	44	24
Future Volume (veh/h)	92	93	241	15	42	3	0	67	96	81	44	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1949	1949	1878	1878	1878	1870	1870	1976	1713	1788	1788
Adj Flow Rate, veh/h	110	111	287	18	50	4	0	80	114	96	52	29
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	0	0	0	2	2	0	11	6	6
Cap, veh/h	365	348	639	269	811	70	0	524	469	583	517	289
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.00	0.28	0.28	0.13	0.48	0.48
Sat Flow, veh/h	757	900	1651	507	2097	181	0	1870	1675	1632	1078	601
Grp Volume(v), veh/h	221	0	287	35	0	37	0	80	114	96	0	81
Grp Sat Flow(s),veh/h/ln	1657	0	1651	1109	0	1676	0	1870	1675	1632	0	1679
Q Serve(g_s), s	4.7	0.0	9.7	0.1	0.0	1.0	0.0	2.4	3.9	2.6	0.0	2.0
Cycle Q Clear(g_c), s	6.7	0.0	9.7	6.9	0.0	1.0	0.0	2.4	3.9	2.6	0.0	2.0
Prop In Lane	0.50		1.00	0.51		0.11	0.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	713	0	639	502	0	648	0	524	469	583	0	806
V/C Ratio(X)	0.31	0.00	0.45	0.07	0.00	0.06	0.00	0.15	0.24	0.16	0.00	0.10
Avail Cap(c_a), veh/h	713	0	639	502	0	648	0	524	469	583	0	806
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	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	17.1	14.5	0.0	14.4	0.0	20.3	20.9	12.6	0.0	10.7
Incr Delay (d2), s/veh	1.1	0.0	2.3	0.3	0.0	0.2	0.0	0.6	1.2	0.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	3.8	0.4	0.0	0.4	0.0	1.1	1.6	1.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	19.4	14.8	0.0	14.6	0.0	20.9	22.1	13.2	0.0	10.9
LnGrp LOS	B	A	B	B	A	B	A	C	C	B	A	B
Approach Vol, veh/h		508			72			194				177
Approach Delay, s/veh		18.4			14.7			21.6				12.2
Approach LOS		B			B			C				B
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		41.0		34.0	15.0	26.0		34.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		36.0		29.0	10.0	21.0		29.0				
Max Q Clear Time (g_c+I1), s		4.0		11.7	4.6	5.9		8.9				
Green Ext Time (p_c), s		0.2		1.3	0.1	0.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									

Year 2025 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	98	41	7	135	87	21
Future Volume (vph)	98	41	7	135	87	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.960				0.974	
Flt Protected	0.966			0.998		
Satd. Flow (prot)	1722	0	0	1877	1736	0
Flt Permitted	0.966			0.998		
Satd. Flow (perm)	1722	0	0	1877	1736	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	3%	0%	0%	2%	10%
Adj. Flow (vph)	114	48	8	157	101	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	0	0	165	125	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	98	41	7	135	87	21
Future Vol, veh/h	98	41	7	135	87	21
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	3	0	0	2	10
Mvmt Flow	114	48	8	157	101	24

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	288	115	126	0	0
Stage 1	114	-	-	-	-
Stage 2	174	-	-	-	-
Critical Hdwy	6.42	6.23	4.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.2	-	-
Pot Cap-1 Maneuver	702	935	1473	-	-
Stage 1	911	-	-	-	-
Stage 2	856	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	696	933	1472	-	-
Mov Cap-2 Maneuver	696	-	-	-	-
Stage 1	905	-	-	-	-
Stage 2	855	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1472	-	752	-	-
HCM Lane V/C Ratio	0.006	-	0.215	-	-
HCM Control Delay (s)	7.5	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Year 2025 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	18	20	3	230	88	4
Future Volume (vph)	18	20	3	230	88	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.994	
Flt Protected	0.977			0.999		
Satd. Flow (prot)	1640	0	0	1781	1812	0
Flt Permitted	0.977			0.999		
Satd. Flow (perm)	1640	0	0	1781	1812	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Adj. Flow (vph)	20	23	3	261	100	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	264	105	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

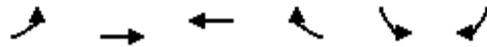
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	18	20	3	230	88	4
Future Vol, veh/h	18	20	3	230	88	4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	20	23	3	261	100	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.9	7.9
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	1%	47%	0%
Vol Thru, %	99%	0%	96%
Vol Right, %	0%	53%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	233	38	92
LT Vol	3	18	0
Through Vol	230	0	88
RT Vol	0	20	4
Lane Flow Rate	265	43	105
Geometry Grp	1	1	1
Degree of Util (X)	0.298	0.054	0.123
Departure Headway (Hd)	4.056	4.475	4.233
Convergence, Y/N	Yes	Yes	Yes
Cap	879	805	834
Service Time	2.114	2.475	2.321
HCM Lane V/C Ratio	0.301	0.053	0.126
HCM Control Delay	8.9	7.7	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.3	0.2	0.4

Year 2025 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	248	0	0	6	93
Future Volume (vph)	0	248	0	0	6	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.874	
Fl _t Protected					0.997	
Satd. Flow (prot)	0	1791	1900	0	1800	0
Fl _t Permitted					0.997	
Satd. Flow (perm)	0	1791	1900	0	1800	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	0%	0%	0%	4%
Adj. Flow (vph)	0	279	0	0	7	104
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	279	0	0	111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	248	0	0	6	93
Future Vol, veh/h	0	248	0	0	6	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	0	0	0	4
Mvmt Flow	0	279	0	0	7	104

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	280
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	279
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	703
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	761
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1635	-	-	-	703
Mov Cap-2 Maneuver	-	-	-	-	703
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	761

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1044
HCM Lane V/C Ratio	-	-	-	-	0.107
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Year 2025 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	98	7	44	0	129	0	12	21	19	2	0
Future Volume (vph)	149	98	7	44	0	129	0	12	21	19	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%			-4%	
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.990			0.900			0.915				
Fl _t Protected	0.950				0.987						0.956	
Satd. Flow (prot)	1770	1864	0	0	1847	0	0	1583	0	0	1689	0
Fl _t Permitted	0.950				0.987						0.956	
Satd. Flow (perm)	1770	1864	0	0	1847	0	0	1583	0	0	1689	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	1%	0%	9%	0%	1%	0%	8%	10%	6%	50%	0%
Adj. Flow (vph)	171	113	8	51	0	148	0	14	24	22	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	171	121	0	0	199	0	0	38	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

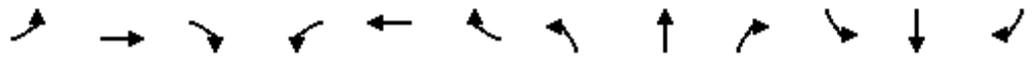
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

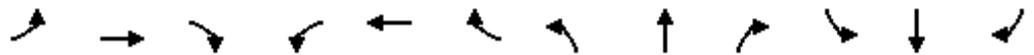
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	149	98	7	44	0	129	0	12	21	19	2	0
Future Vol, veh/h	149	98	7	44	0	129	0	12	21	19	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	1	0	9	0	1	0	8	10	6	50	0
Mvmt Flow	171	113	8	51	0	148	0	14	24	22	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.2	8.5	8.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	25%	90%
Vol Thru, %	36%	0%	93%	0%	10%
Vol Right, %	64%	0%	7%	75%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	149	105	173	21
LT Vol	0	149	0	44	19
Through Vol	12	0	98	0	2
RT Vol	21	0	7	129	0
Lane Flow Rate	38	171	121	199	24
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.05	0.25	0.157	0.234	0.036
Departure Headway (Hd)	4.786	5.246	4.681	4.23	5.335
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	750	676	756	851	673
Service Time	2.804	3.045	2.479	2.24	3.354
HCM Lane V/C Ratio	0.051	0.253	0.16	0.234	0.036
HCM Control Delay	8.1	9.8	8.4	8.5	8.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	1	0.6	0.9	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	137	107	35	130	130	1157	135	129	1340	8
Future Volume (vph)	0	0	137	107	35	130	130	1157	135	129	1340	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.882				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1742	3240	1525	0	1761	4963	1435	1703	3505	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1717	3222	1525	0	1760	4963	1435	1703	3505	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166		137				122			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	2%	7%	6%	8%	2%	4%	12%	6%	3%	0%
Adj. Flow (vph)	0	0	147	115	38	140	140	1244	145	139	1441	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	147	115	178	0	140	1244	145	139	1441	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.41	0.39	0.68		0.64	0.41	0.16	0.64	0.67	0.01
Control Delay			8.3	46.5	26.6		55.2	11.2	3.2	55.3	15.5	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			8.3	46.5	26.6		55.2	11.2	3.2	55.3	15.5	0.0
Queue Length 50th (ft)			0	35	24		83	132	5	83	278	0
Queue Length 95th (ft)			43	65	96		154	215	36	153	465	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			488	993	1073		360	3043	927	348	2149	1005
Starvation Cap Reductn			0	0	0		0	0	0	0	0	0
Spillback Cap Reductn			0	0	0		0	0	0	0	0	0
Storage Cap Reductn			0	0	0		0	0	0	0	0	0
Reduced v/c Ratio			0.30	0.12	0.17		0.39	0.41	0.16	0.40	0.67	0.01

Intersection Summary

Area Type: Other

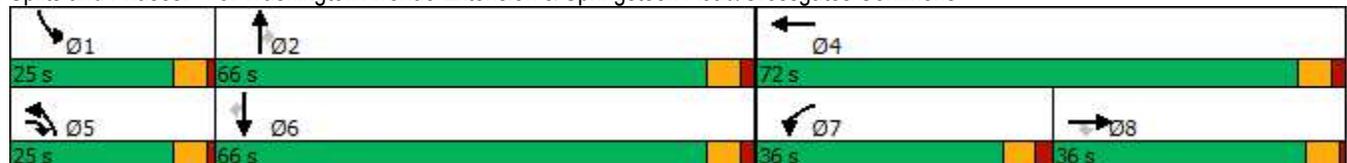
Cycle Length: 163

Actuated Cycle Length: 98.2

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	137	107	35	130	130	1157	135	129	1340	8
Future Volume (veh/h)	0	0	137	107	35	130	130	1157	135	129	1340	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1945	1773	1788	1788	1864	1835	1716	1811	1856	1900
Adj Flow Rate, veh/h	0	0	147	115	38	140	140	1244	145	139	1441	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	7	6	6	2	4	12	6	3	0
Cap, veh/h	0	207	334	185	77	282	175	2378	690	172	1679	766
Arrive On Green	0.00	0.00	0.10	0.06	0.23	0.23	0.10	0.47	0.47	0.10	0.48	0.48
Sat Flow, veh/h	0	1976	1639	3275	333	1228	1776	5009	1453	1725	3526	1608
Grp Volume(v), veh/h	0	0	147	115	0	178	140	1244	145	139	1441	9
Grp Sat Flow(s),veh/h/ln	0	1976	1639	1638	0	1561	1776	1670	1453	1725	1763	1608
Q Serve(g_s), s	0.0	0.0	6.8	3.0	0.0	8.6	6.7	15.1	5.1	6.9	31.5	0.3
Cycle Q Clear(g_c), s	0.0	0.0	6.8	3.0	0.0	8.6	6.7	15.1	5.1	6.9	31.5	0.3
Prop In Lane	0.00		1.00	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	207	334	185	0	359	175	2378	690	172	1679	766
V/C Ratio(X)	0.00	0.00	0.44	0.62	0.00	0.50	0.80	0.52	0.21	0.81	0.86	0.01
Avail Cap(c_a), veh/h	0	703	746	1128	0	1183	408	3450	1001	396	2428	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	30.4	40.2	0.0	29.1	38.4	16.0	13.3	38.4	20.2	12.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.3	0.0	0.4	3.2	0.3	0.2	3.3	2.7	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	0.0	0.0	0.0	1.2	0.0	3.2	2.9	5.1	0.0	2.9	11.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.7	41.5	0.0	29.5	41.6	16.2	13.6	41.7	22.9	12.0
LnGrp LOS	A	A	C	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		147			293			1529			1589	
Approach Delay, s/veh		30.7			34.2			18.3			24.5	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	47.4		26.0	13.6	47.5	10.9	15.1				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	8.9	17.1		10.6	8.7	33.5	5.0	8.8				
Green Ext Time (p_c), s	0.2	7.4		0.4	0.2	8.0	0.2	0.3				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	210	511	73	0	663	139	50	0	0
Future Volume (vph)	210	511	73	0	663	139	50	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894				0.850				
Flt Protected	0.986					0.950			
Satd. Flow (prot)	3174	0	1818	0	1644	1529	1541	0	0
Flt Permitted	0.986					0.465			
Satd. Flow (perm)	3174	0	1818	0	1644	748	1541	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	549				713				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	226	549	78	0	713	149	54	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	775	0	78	0	713	149	54	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

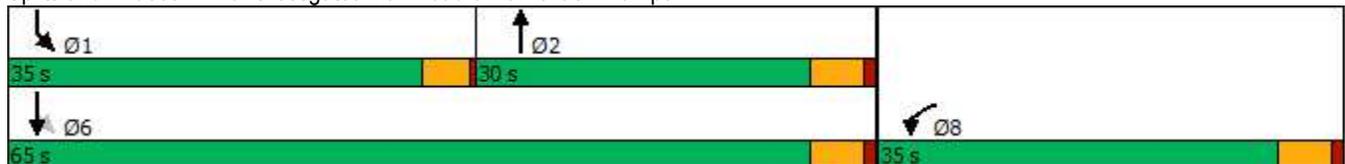


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.63		0.21		0.43	0.28	0.08		
Control Delay	6.7		17.1		0.8	7.3	6.4		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	6.7		17.1		0.8	7.3	6.4		
Queue Length 50th (ft)	20		15		0	15	5		
Queue Length 95th (ft)	61		49		0	46	21		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	2611		1250		1644	1230	1541		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.30		0.06		0.43	0.12	0.04		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 37.7
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour

02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	210	511	73	0	663	139	50	0	0
Future Volume (veh/h)	210	511	73	0	663	139	50	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1864	2017	1835	1954	1954	1684	1610		
Adj Flow Rate, veh/h	226	549	78	0	0	149	54		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	5	0	4	1	1	13	18		
Cap, veh/h	723	696	197			450	522		
Arrive On Green	0.41	0.41	0.11	0.00	0.00	0.11	0.32		
Sat Flow, veh/h	1776	1709	1835	1656	1656	1604	1610		
Grp Volume(v), veh/h	226	549	78	0	0	149	54		
Grp Sat Flow(s),veh/h/ln	1776	1709	1835	1656	1656	1604	1610		
Q Serve(g_s), s	3.2	10.4	1.5	0.0	0.0	2.8	0.9		
Cycle Q Clear(g_c), s	3.2	10.4	1.5	0.0	0.0	2.8	0.9		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	723	696	197			450	522		
V/C Ratio(X)	0.31	0.79	0.40			0.33	0.10		
Avail Cap(c_a), veh/h	1431	1377	1232			1609	2594		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	7.5	9.6	15.5	0.0	0.0	11.1	8.8		
Incr Delay (d2), s/veh	0.2	2.0	1.3	0.0	0.0	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.9	3.0	0.6	0.0	0.0	0.8	0.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	7.7	11.7	16.8	0.0	0.0	11.5	8.9		
LnGrp LOS	A	B	B			B	A		
Approach Vol, veh/h	775		78	A	A		203		
Approach Delay, s/veh	10.5		16.8				10.8		
Approach LOS	B		B				B		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	8.1	9.0				17.1	20.2		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	4.8	3.5				2.9	12.4		
Green Ext Time (p_c), s	0.4	0.3				0.3	2.7		

Intersection Summary

HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	303	7	58	121	5	6	0	58	8	0	20
Future Volume (vph)	12	303	7	58	121	5	6	0	58	8	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.997			0.994			0.877				0.902
Fl _t Protected	0.950			0.950				0.995				0.986
Satd. Flow (prot)	1762	1796	0	1752	1852	0	0	1625	0	0	912	0
Fl _t Permitted	0.950			0.950				0.995				0.986
Satd. Flow (perm)	1762	1796	0	1752	1852	0	0	1625	0	0	912	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		780			786			309				287
Travel Time (s)		17.7			17.9			7.0				6.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	2%	2%	75%	2%	84%
Adj. Flow (vph)	13	316	7	60	126	5	6	0	60	8	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	323	0	60	131	0	0	66	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	2.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	12	303	7	58	121	5	6	0	58	8	0	20
Future Vol, veh/h	12	303	7	58	121	5	6	0	58	8	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	3	2	2	1	0	2	2	2	75	2	84
Mvmt Flow	13	316	7	60	126	5	6	0	60	8	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	131	0	0	323	0	0	605	597	320	625	598	129
Stage 1	-	-	-	-	-	-	346	346	-	249	249	-
Stage 2	-	-	-	-	-	-	259	251	-	376	349	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.12	6.52	6.22	8.65	7.32	7.44
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	7.65	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	7.65	6.32	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.518	4.018	3.318	4.175	4.018	4.056
Pot Cap-1 Maneuver	1467	-	-	1237	-	-	410	416	721	270	364	730
Stage 1	-	-	-	-	-	-	670	635	-	585	663	-
Stage 2	-	-	-	-	-	-	746	699	-	479	586	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1467	-	-	1237	-	-	381	392	721	237	343	730
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	392	-	237	343	-
Stage 1	-	-	-	-	-	-	664	629	-	580	631	-
Stage 2	-	-	-	-	-	-	690	665	-	435	581	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	2.5	11	13.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	665	1237	-	-	1467	-	458
HCM Lane V/C Ratio	0.1	0.049	-	-	0.009	-	0.064
HCM Control Delay (s)	11	8.1	-	-	7.5	-	13.4
HCM Lane LOS	B	A	-	-	A	-	B
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	0.2

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	10	348	10	8	174	46	5	10	49	21	1	5
Future Volume (vph)	10	348	10	8	174	46	5	10	49	21	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.996			0.970			0.897			0.875	
Flt Protected		0.999			0.998			0.996		0.950		
Satd. Flow (prot)	0	3473	0	0	3211	0	0	1413	0	1641	1662	0
Flt Permitted		0.946			0.940			0.990		0.713		
Satd. Flow (perm)	0	3289	0	0	3025	0	0	1404	0	1222	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			49			52			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)									11	11		
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
Heavy Vehicles (%)	30%	2%	80%	25%	1%	30%	0%	80%	7%	10%	0%	0%
Adj. Flow (vph)	11	370	11	9	185	49	5	11	52	22	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	392	0	0	243	0	0	68	0	22	6	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.30			0.20			0.11		0.05	0.01	
Control Delay		8.8			6.7			4.3		7.7	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.8			6.7			4.3		7.7	5.5	
Queue Length 50th (ft)		28			13			2		3	0	
Queue Length 95th (ft)		50			29			17		12	5	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1320			1239			592		488	667	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.30			0.20			0.11		0.05	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 40

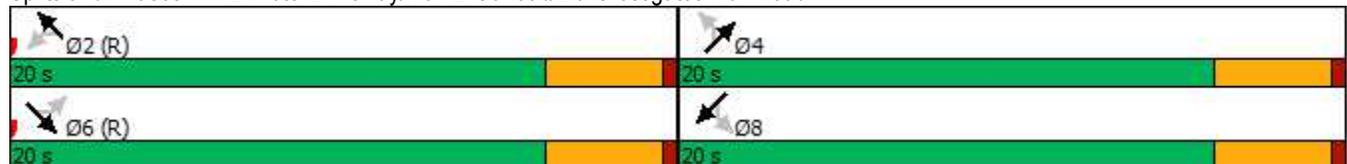
Actuated Cycle Length: 40

Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (veh/h)	10	348	10	8	174	46	5	10	49	21	1	5
Future Volume (veh/h)	10	348	10	8	174	46	5	10	49	21	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	1988	1988	1988	1862	1862	1862	714	714	714	1752	1900	1900
Adj Flow Rate, veh/h	11	370	11	9	185	49	5	11	52	22	1	5
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	1	1	1	80	80	80	10	0	0
Cap, veh/h	107	1449	42	110	1077	271	102	53	190	708	109	547
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	31	3621	106	34	2692	678	13	133	474	1246	273	1367
Grp Volume(v), veh/h	206	0	186	129	0	114	68	0	0	22	0	6
Grp Sat Flow(s),veh/h/ln	1968	0	1790	1832	0	1572	620	0	0	1246	0	1641
Q Serve(g_s), s	0.0	0.0	2.8	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	2.8	0.0	2.8	1.8	0.0	1.9	2.9	0.0	0.0	0.3	0.0	0.1
Prop In Lane	0.05		0.06	0.07		0.43	0.07		0.76	1.00		0.83
Lane Grp Cap(c), veh/h	882	0	716	829	0	629	345	0	0	708	0	656
V/C Ratio(X)	0.23	0.00	0.26	0.16	0.00	0.18	0.20	0.00	0.00	0.03	0.00	0.01
Avail Cap(c_a), veh/h	882	0	716	829	0	629	345	0	0	708	0	656
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	0.0	8.0	7.7	0.0	7.8	8.1	0.0	0.0	7.3	0.0	7.2
Incr Delay (d2), s/veh	0.6	0.0	0.9	0.4	0.0	0.6	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.0	0.6	0.0	0.6	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.7	0.0	8.9	8.1	0.0	8.4	9.4	0.0	0.0	7.4	0.0	7.3
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		392			243			68			28	
Approach Delay, s/veh		8.8			8.3			9.4			7.4	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		3.9		4.9		4.8		2.3				
Green Ext Time (p_c), s		1.0		0.2		1.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.6								
HCM 6th LOS				A								

Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

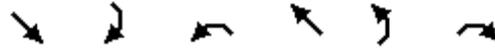
Weekday Peak AM Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↵	↑	↵	↵
Traffic Volume (vph)	383	35	46	203	26	373
Future Volume (vph)	383	35	46	203	26	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.988					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3485	0	1762	1671	1805	1615
Flt Permitted			0.451		0.950	
Satd. Flow (perm)	3485	0	837	1671	1805	1584
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10					419
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	11%	0%	0%
Adj. Flow (vph)	430	39	52	228	29	419
Shared Lane Traffic (%)						
Lane Group Flow (vph)	469	0	52	228	29	419
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

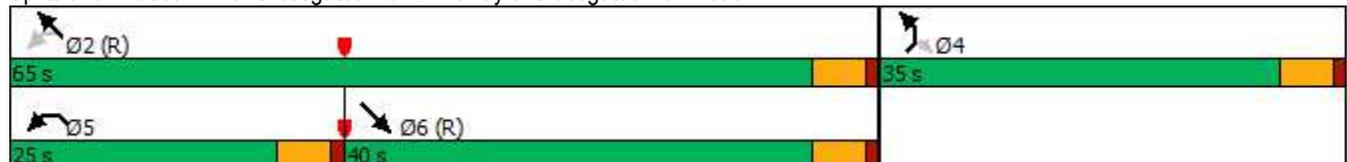


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.19		0.07	0.17	0.17	0.79
Control Delay	6.0		3.1	3.2	45.0	18.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	6.0		3.1	3.2	45.0	18.4
Queue Length 50th (ft)	42		4	20	18	21
Queue Length 95th (ft)	92		18	67	39	70
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2487		857	1342	541	768
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.19		0.06	0.17	0.05	0.55

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↵	↑	↵	↵
Traffic Volume (veh/h)	383	35	46	203	26	373
Future Volume (veh/h)	383	35	46	203	26	373
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1864	1864	1979	1814	1900	1900
Adj Flow Rate, veh/h	430	39	52	228	29	419
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	11	0	0
Cap, veh/h	1777	161	591	1127	504	448
Arrive On Green	0.54	0.54	0.03	0.62	0.28	0.28
Sat Flow, veh/h	3379	297	1884	1814	1810	1610
Grp Volume(v), veh/h	231	238	52	228	29	419
Grp Sat Flow(s),veh/h/ln	1771	1811	1884	1814	1810	1610
Q Serve(g_s), s	6.9	6.9	1.2	5.4	1.2	25.4
Cycle Q Clear(g_c), s	6.9	6.9	1.2	5.4	1.2	25.4
Prop In Lane		0.16	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	980	591	1127	504	448
V/C Ratio(X)	0.24	0.24	0.09	0.20	0.06	0.93
Avail Cap(c_a), veh/h	958	980	910	1127	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.78	0.78	1.00	1.00
Uniform Delay (d), s/veh	12.1	12.1	9.0	8.2	26.5	35.2
Incr Delay (d2), s/veh	0.6	0.6	0.0	0.3	0.0	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.9	0.5	2.1	0.5	23.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.7	12.7	9.1	8.5	26.5	59.8
LnGrp LOS	B	B	A	A	C	E
Approach Vol, veh/h				280	448	
Approach Delay, s/veh				8.6	57.7	
Approach LOS				A	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.1		32.9	8.1	59.1
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		7.4		27.4	3.2	8.9
Green Ext Time (p_c), s		1.5		0.5	0.1	2.9
Intersection Summary						
HCM 6th Ctrl Delay			28.6			
HCM 6th LOS			C			

Year 2025 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	42	276	22	61	0	0
Future Volume (vph)	42	276	22	61	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.901			
Flt Protected		0.993				
Satd. Flow (prot)	0	1850	1712	0	0	1863
Flt Permitted		0.993				
Satd. Flow (perm)	0	1850	1712	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	291	23	64	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	335	87	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	42	276	22	61	0	0
Future Vol, veh/h	42	276	22	61	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	291	23	64	0	0

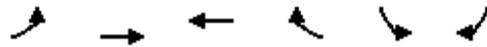
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	87	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1509	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1509	-	1012
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1509	-	-	-
HCM Lane V/C Ratio	-	0.029	-	-	-
HCM Control Delay (s)	0	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	-

Year 2025 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1830	984	2	4	2
Future Volume (vph)	1	1830	984	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.955	
Fl _t Protected	0.950				0.968	
Satd. Flow (prot)	1805	3471	3374	0	1756	0
Fl _t Permitted	0.950				0.968	
Satd. Flow (perm)	1805	3471	3374	0	1756	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	7%	0%	0%	0%
Adj. Flow (vph)	1	2011	1081	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	2011	1083	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1830	984	2	4	2
Future Vol, veh/h	1	1830	984	2	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	7	0	0	0
Mvmt Flow	1	2011	1081	2	4	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1083	0	0
Stage 1	-	-	1082
Stage 2	-	-	1008
Critical Hdwy	4.1	-	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	2.2	-	3.5
Pot Cap-1 Maneuver	652	-	46
Stage 1	-	-	291
Stage 2	-	-	318
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	652	-	46
Mov Cap-2 Maneuver	-	-	46
Stage 1	-	-	290
Stage 2	-	-	318

Approach	EB	WB	SB
HCM Control Delay, s	0	0	65.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	652	-	-	-	66
HCM Lane V/C Ratio	0.002	-	-	-	0.1
HCM Control Delay (s)	10.5	-	-	-	65.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

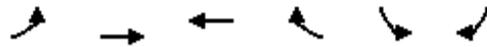
Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Traffic Volume (vph)	0	1133	1997	237	287	49
Future Volume (vph)	0	1133	1997	237	287	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4789	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4789	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			52			18
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1232	2171	258	312	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1232	2429	0	312	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020

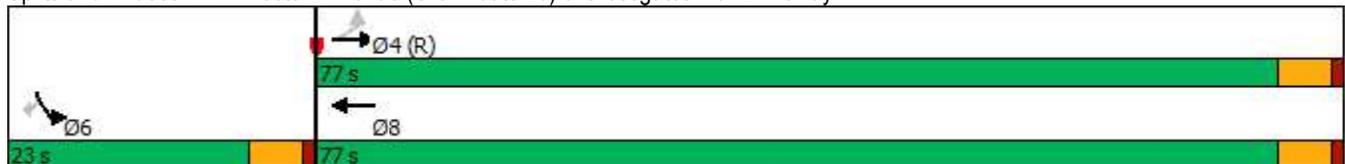


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.48	0.70		0.52	0.18
Control Delay		6.8	9.1		34.4	20.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.8	9.1		34.4	20.6
Queue Length 50th (ft)		152	269		93	19
Queue Length 95th (ft)		191	317		136	53
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3462		605	294
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.48	0.70		0.52	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↖↖↖		↘↘	↘
Traffic Volume (veh/h)	0	1133	1997	237	287	49
Future Volume (veh/h)	0	1133	1997	237	287	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1232	2171	258	312	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	3295	385	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	141	3647	4743	535	3282	1505
Grp Volume(v), veh/h	0	1232	1584	845	312	53
Grp Sat Flow(s),veh/h/ln	141	1777	1681	1751	1641	1505
Q Serve(g_s), s	0.0	14.9	25.0	26.1	8.6	3.0
Cycle Q Clear(g_c), s	0.0	14.9	25.0	26.1	8.6	3.0
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1260	591	271
V/C Ratio(X)	0.00	0.48	0.65	0.67	0.53	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1260	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.95	0.95
Uniform Delay (d), s/veh	0.0	6.0	7.4	7.6	37.2	34.8
Incr Delay (d2), s/veh	0.0	0.7	0.6	1.4	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	6.8	7.7	3.7	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.7	8.1	9.0	40.3	36.4
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1232	2429		365	
Approach Delay, s/veh		6.7	8.4		39.8	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				16.9	10.6	28.1
Green Ext Time (p_c), s				11.8	0.8	29.4
Intersection Summary						
HCM 6th Ctrl Delay			10.7			
HCM 6th LOS			B			

Year 2025 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1184	30	71	1923	37	18	0	48	0	0	101
Future Volume (vph)	0	1184	30	71	1923	37	18	0	48	0	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.902				0.865
Flt Protected				0.950				0.987				
Satd. Flow (prot)	1928	3444	0	1778	3361	0	0	1503	0	0	1652	0
Flt Permitted				0.950				0.987				
Satd. Flow (perm)	1928	3444	0	1778	3361	0	0	1503	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				394
Travel Time (s)		17.4			16.4			6.1				9.0
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
Heavy Vehicles (%)	0%	2%	20%	0%	2%	0%	17%	0%	5%	0%	0%	0%
Adj. Flow (vph)	0	1260	32	76	2046	39	19	0	51	0	0	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1292	0	76	2085	0	0	70	0	0	107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	34.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↘	↕			↕			↕	↕
Traffic Vol, veh/h	0	1184	30	71	1923	37	18	0	48	0	0	101
Future Vol, veh/h	0	1184	30	71	1923	37	18	0	48	0	0	101
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	20	0	2	0	17	0	5	0	0	0
Mvmt Flow	0	1260	32	76	2046	39	19	0	51	0	0	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2085	0	0	1292	0	0	2451	3513	646	2848	3510	1043
Stage 1	-	-	-	-	-	-	1276	1276	-	2218	2218	-
Stage 2	-	-	-	-	-	-	1175	2237	-	630	1292	-
Critical Hdwy	4.1	-	-	4.1	-	-	8.04	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.67	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	269	-	-	543	-	-	~ 11	5	400	9	8	236
Stage 1	-	-	-	-	-	-	145	223	-	52	93	-
Stage 2	-	-	-	-	-	-	169	71	-	457	253	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	269	-	-	543	-	-	~ 5	4	400	7	7	236
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 5	4	-	7	7	-
Stage 1	-	-	-	-	-	-	145	223	-	52	80	-
Stage 2	-	-	-	-	-	-	79	61	-	399	253	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	\$ 1739.2	32.4
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	18	269	-	-	543	-	-	236
HCM Lane V/C Ratio	3.901	-	-	-	0.139	-	-	0.455
HCM Control Delay (s)	\$ 1739.2	0	-	-	12.7	-	-	32.4
HCM Lane LOS	F	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	9.3	0	-	-	0.5	-	-	2.2

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

Year 2025 No-Build Traffic Volumes

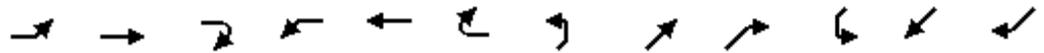
Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	223	968	101	136	1536	73	133	77	97	102	203	328
Future Volume (vph)	223	968	101	136	1536	73	133	77	97	102	203	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.986			0.993			0.974	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3517	0	1805	3493	0	1770	1749	1534	1634	1909	1607
Flt Permitted	0.065			0.092			0.237			0.576		
Satd. Flow (perm)	121	3517	0	175	3493	0	441	1749	1489	977	1909	1607
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			4			5	87			49
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	1%	0%	0%	2%	14%	2%	0%	0%	11%	0%	1%
Adj. Flow (vph)	240	1041	109	146	1652	78	143	83	104	110	218	353
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	240	1150	0	146	1730	0	143	100	87	110	218	353
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.70	0.81		0.27	1.00		0.83	0.51	0.14	0.39	0.83	0.61
Control Delay	60.2	45.2		32.3	61.6		98.5	69.6	6.8	54.5	90.5	40.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	45.2		32.3	61.6		98.5	69.6	6.8	54.5	90.5	40.6
Queue Length 50th (ft)	177	556		47	~1004		122	102	0	92	222	258
Queue Length 95th (ft)	282	596		131	#1296		190	165	44	150	327	374
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	397	2083		543	1723		223	348	618	306	376	569
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.55		0.27	1.00		0.64	0.29	0.14	0.36	0.58	0.62

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 153.3

Natural Cycle: 100

Control Type: Semi Act-Uncoord

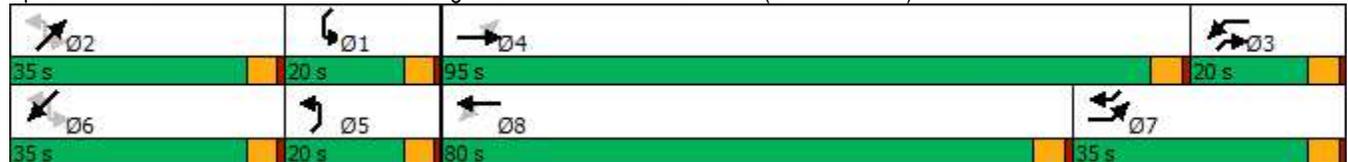
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2025 No-Build Traffic Volumes

Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	223	968	101	136	1536	73	133	77	97	102	203	328
Future Volume (veh/h)	223	968	101	136	1536	73	133	77	97	102	203	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.98		0.98
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	1885	1885	1900	1870	1870	1870	1900	1900	1774	1939	1924
Adj Flow Rate, veh/h	240	1041	109	146	1652	78	143	99	94	110	218	353
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	1	0	2	2	2	0	0	11	0	1
Cap, veh/h	266	1252	131	555	1792	84	168	213	588	285	301	445
Arrive On Green	0.12	0.38	0.38	0.26	0.52	0.52	0.06	0.11	0.11	0.11	0.16	0.16
Sat Flow, veh/h	1781	3270	342	1810	3455	162	1781	1900	1567	1690	1939	1599
Grp Volume(v), veh/h	240	570	580	146	846	884	143	99	94	110	218	353
Grp Sat Flow(s),veh/h/ln	1781	1791	1821	1810	1777	1841	1781	1900	1567	1690	1939	1599
Q Serve(g_s), s	14.5	40.4	40.4	1.5	61.2	62.4	6.7	6.8	0.0	0.0	15.0	11.4
Cycle Q Clear(g_c), s	14.5	40.4	40.4	1.5	61.2	62.4	6.7	6.8	0.0	0.0	15.0	11.4
Prop In Lane	1.00		0.19	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	686	697	555	922	955	168	213	588	285	301	445
V/C Ratio(X)	0.90	0.83	0.83	0.26	0.92	0.93	0.85	0.46	0.16	0.39	0.72	0.79
Avail Cap(c_a), veh/h	433	1150	1170	555	951	985	246	407	748	287	415	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	39.1	39.2	37.3	31.0	31.2	63.4	58.3	29.7	54.3	56.3	46.9
Incr Delay (d2), s/veh	9.3	5.6	5.5	0.1	13.9	14.6	12.1	0.6	0.0	0.3	2.0	5.4
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	8.9	18.3	18.7	3.8	28.4	30.1	5.6	3.3	2.1	3.5	7.5	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.3	44.7	44.7	37.4	44.9	45.9	75.5	58.9	29.7	54.6	58.3	52.3
LnGrp LOS	E	D	D	D	D	D	E	E	C	D	E	D
Approach Vol, veh/h		1390			1876			336			681	
Approach Delay, s/veh		48.7			44.8			57.8			54.6	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	20.7	40.9	58.7	13.8	26.8	21.9	77.7				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	8.8	3.5	42.4	8.7	17.0	16.5	64.4				
Green Ext Time (p_c), s	0.1	0.4	0.2	11.2	0.1	1.2	0.4	8.3				

Intersection Summary

HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

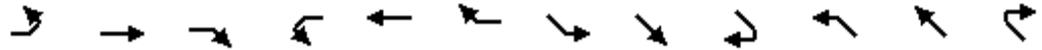
Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↖	↗		↔			↖	↗	↖	↗	
Traffic Volume (vph)	83	110	108	62	237	20	10	70	266	274	102	81
Future Volume (vph)	83	110	108	62	237	20	10	70	266	274	102	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0	150		0		0
Storage Lanes	0		1	0		0	0	1		1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990				0.850		0.934	
Flt Protected		0.979			0.990			0.994		0.950		
Satd. Flow (prot)	0	1879	1631	0	3671	0	0	1889	1669	1702	1734	0
Flt Permitted		0.712			0.848			0.957		0.558		
Satd. Flow (perm)	0	1366	1631	0	3145	0	0	1818	1669	1000	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		10				302		82	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		467			504			921			780	
Travel Time (s)		10.6			11.5			20.9			17.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	0%	0%	5%	0%	3%
Adj. Flow (vph)	94	125	123	70	269	23	11	80	302	311	116	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	123	0	362	0	0	91	302	311	208	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		4	8			6		6	2		
Detector Phase	4	4	4	8	8		6	6	6	5	2	
Switch Phase												

Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
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)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	9.0	21.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		25.0	25.0	25.0	20.0	45.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%		33.3%	33.3%	33.3%	26.7%	60.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max		Max	Max	Max	Max	Max	
v/c Ratio		0.48	0.20		0.34			0.19	0.45	0.46	0.22	
Control Delay		24.2	4.7		19.4			22.5	5.4	12.6	6.1	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		24.2	4.7		19.4			22.5	5.4	12.6	6.1	
Queue Length 50th (ft)		80	0		63			33	0	77	27	
Queue Length 95th (ft)		139	31		95			66	51	124	57	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		455	625		1055			484	666	673	963	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.48	0.20		0.34			0.19	0.45	0.46	0.22	

Intersection Summary

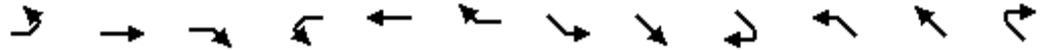
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↕	
Traffic Volume (veh/h)	83	110	108	62	237	20	10	70	266	274	102	81
Future Volume (veh/h)	83	110	108	62	237	20	10	70	266	274	102	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	94	125	123	70	269	23	11	80	302	311	116	92
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	5	0	0
Cap, veh/h	228	282	559	172	707	66	81	464	447	661	517	410
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.27	0.27	0.27	0.20	0.53	0.53
Sat Flow, veh/h	479	847	1677	313	2121	199	101	1738	1675	1717	969	769
Grp Volume(v), veh/h	219	0	123	170	0	192	91	0	302	311	0	208
Grp Sat Flow(s),veh/h/ln	1326	0	1677	973	0	1659	1840	0	1675	1717	0	1738
Q Serve(g_s), s	5.5	0.0	4.0	4.0	0.0	6.5	0.0	0.0	12.1	8.4	0.0	4.8
Cycle Q Clear(g_c), s	12.1	0.0	4.0	16.1	0.0	6.5	2.8	0.0	12.1	8.4	0.0	4.8
Prop In Lane	0.43		1.00	0.41		0.12	0.12		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	511	0	559	392	0	553	544	0	447	661	0	927
V/C Ratio(X)	0.43	0.00	0.22	0.43	0.00	0.35	0.17	0.00	0.68	0.47	0.00	0.22
Avail Cap(c_a), veh/h	511	0	559	392	0	553	544	0	447	661	0	927
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	18.0	22.1	0.0	18.8	21.2	0.0	24.6	12.0	0.0	9.3
Incr Delay (d2), s/veh	2.6	0.0	0.9	3.5	0.0	1.7	0.7	0.0	8.0	2.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	1.6	2.9	0.0	2.6	1.3	0.0	5.6	3.3	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	0.0	18.9	25.5	0.0	20.6	21.8	0.0	32.6	14.4	0.0	9.8
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	A	A
Approach Vol, veh/h		342			362			393			519	
Approach Delay, s/veh		21.8			22.9			30.1			12.6	
Approach LOS		C			C			C			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		45.0		30.0	20.0	25.0		30.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		40.0		25.0	15.0	20.0		25.0				
Max Q Clear Time (g_c+I1), s		6.8		14.1	10.4	14.1		18.1				
Green Ext Time (p_c), s		0.5		0.8	0.4	0.6		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				21.1								
HCM 6th LOS				C								

Year 2025 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	49	22	49	125	318	113
Future Volume (vph)	49	22	49	125	318	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.958				0.965	
Flt Protected	0.967			0.986		
Satd. Flow (prot)	1690	0	0	1855	1777	0
Flt Permitted	0.967			0.986		
Satd. Flow (perm)	1690	0	0	1855	1777	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	0%	0%	0%	0%	1%
Adj. Flow (vph)	56	25	56	144	366	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	81	0	0	200	496	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	49	22	49	125	318	113
Future Vol, veh/h	49	22	49	125	318	113
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	0	0	0	0	1
Mvmt Flow	56	25	56	144	366	130

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	689	433	497	0	-	0
Stage 1	432	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.46	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	406	627	1077	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	382	626	1076	-	-	-
Mov Cap-2 Maneuver	382	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	776	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	15.2	2.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1076	-	434	-	-
HCM Lane V/C Ratio	0.052	-	0.188	-	-
HCM Control Delay (s)	8.5	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Year 2025 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	6	12	18	157	419	13
Future Volume (vph)	6	12	18	157	419	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.996	
Flt Protected	0.984			0.995		
Satd. Flow (prot)	1533	0	0	1798	1902	0
Flt Permitted	0.984			0.995		
Satd. Flow (perm)	1533	0	0	1798	1902	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	17%	0%	6%	0%	0%	0%
Adj. Flow (vph)	7	14	21	183	487	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	204	502	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

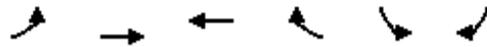
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	12	18	157	419	13
Future Vol, veh/h	6	12	18	157	419	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	17	0	6	0	0	0
Mvmt Flow	7	14	21	183	487	15
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	9.1	12.5
HCM LOS	A	A	B

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	10%	33%	0%
Vol Thru, %	90%	0%	97%
Vol Right, %	0%	67%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	175	18	432
LT Vol	18	6	0
Through Vol	157	0	419
RT Vol	0	12	13
Lane Flow Rate	203	21	502
Geometry Grp	1	1	1
Degree of Util (X)	0.258	0.031	0.568
Departure Headway (Hd)	4.56	5.357	4.071
Convergence, Y/N	Yes	Yes	Yes
Cap	792	671	874
Service Time	2.565	3.368	2.161
HCM Lane V/C Ratio	0.256	0.031	0.574
HCM Control Delay	9.1	8.5	12.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1	0.1	3.7

Year 2025 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	163	0	0	12	432
Future Volume (vph)	0	163	0	0	12	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.869	
Fl _t Protected					0.999	
Satd. Flow (prot)	0	1791	1900	0	1842	0
Fl _t Permitted					0.999	
Satd. Flow (perm)	0	1791	1900	0	1842	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%
Adj. Flow (vph)	0	192	0	0	14	508
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	192	0	0	522	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	163	0	0	12	432
Future Vol, veh/h	0	163	0	0	12	432
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	1	0	0	0	1
Mvmt Flow	0	192	0	0	14	508

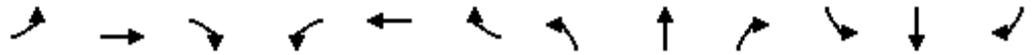
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	193
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	192
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	792
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	836
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	792
Mov Cap-2 Maneuver	-	-	-	-	792
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	836

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1076
HCM Lane V/C Ratio	-	-	-	-	0.485
HCM Control Delay (s)	0	-	-	-	11.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.7

Year 2025 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	46	3	30	0	208	0	26	37	103	2	0
Future Volume (vph)	126	46	3	30	0	208	0	26	37	103	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.992			0.882			0.921				
Fl _t Protected	0.950				0.994						0.953	
Satd. Flow (prot)	1805	1885	0	0	1878	0	0	1741	0	0	1847	0
Fl _t Permitted	0.950				0.994						0.953	
Satd. Flow (perm)	1805	1885	0	0	1878	0	0	1741	0	0	1847	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			777	
Travel Time (s)		11.1			2.8			9.8			17.7	
Confl. Peds. (#/hr)			1	1			1		1			
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	137	50	3	33	0	226	0	28	40	112	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	137	53	0	0	259	0	0	68	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↗			↖	
Traffic Vol, veh/h	126	46	3	30	0	208	0	26	37	103	2	0
Future Vol, veh/h	126	46	3	30	0	208	0	26	37	103	2	0
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	137	50	3	33	0	226	0	28	40	112	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.5	9.1	8.3	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	13%	98%
Vol Thru, %	41%	0%	94%	0%	2%
Vol Right, %	59%	0%	6%	87%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	126	49	238	105
LT Vol	0	126	0	30	103
Through Vol	26	0	46	0	2
RT Vol	37	0	3	208	0
Lane Flow Rate	68	137	53	259	114
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.09	0.216	0.076	0.302	0.165
Departure Headway (Hd)	4.74	5.668	5.121	4.208	5.211
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	751	631	697	851	685
Service Time	2.802	3.416	2.869	2.252	3.268
HCM Lane V/C Ratio	0.091	0.217	0.076	0.304	0.166
HCM Control Delay	8.3	10	8.3	9.1	9.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.8	0.2	1.3	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↘		↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	186	295	55	259	178	1410	353	241	1391	5
Future Volume (vph)	0	0	186	295	55	259	178	1410	353	241	1391	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.876				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1759	3333	1615	0	1796	5110	1560	1787	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1734	3315	1615	0	1795	5110	1560	1787	3574	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		174				263			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					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
Heavy Vehicles (%)	0%	0%	1%	4%	0%	1%	0%	1%	3%	1%	1%	0%
Adj. Flow (vph)	0	0	198	314	59	276	189	1500	376	256	1480	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	198	314	335	0	189	1500	376	256	1480	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.63	0.60	0.84		0.70	0.57	0.41	0.80	0.77	0.01
Control Delay			40.9	48.9	40.5		60.5	20.6	6.8	64.7	25.2	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.9	48.9	40.5		60.5	20.6	6.8	64.7	25.2	0.0
Queue Length 50th (ft)			92	110	116		129	259	41	178	423	0
Queue Length 95th (ft)			185	158	228		227	365	121	#359	646	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			365	899	1028		323	2757	962	321	1928	896
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			0.54	0.35	0.33		0.59	0.54	0.39	0.80	0.77	0.01

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 111.9

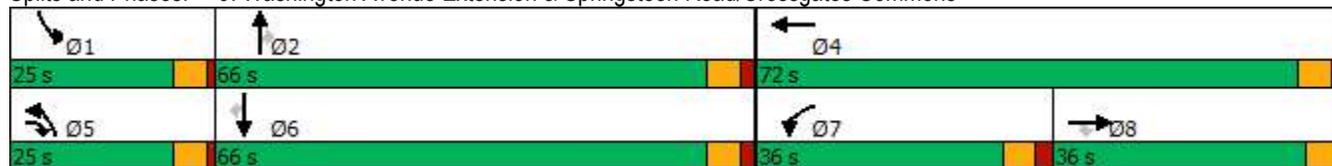
Natural Cycle: 80

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	186	295	55	259	178	1410	353	241	1391	5
Future Volume (veh/h)	0	0	186	295	55	259	178	1410	353	241	1391	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1976	1961	1817	1876	1876	1894	1879	1850	1885	1885	1900
Adj Flow Rate, veh/h	0	0	198	314	59	276	189	1500	376	256	1480	5
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	1	4	0	0	0	1	3	1	1	0
Cap, veh/h	0	243	404	383	82	385	218	2124	648	282	1615	725
Arrive On Green	0.00	0.00	0.12	0.11	0.29	0.29	0.12	0.41	0.41	0.16	0.45	0.45
Sat Flow, veh/h	0	1976	1653	3357	287	1343	1804	5130	1566	1795	3582	1608
Grp Volume(v), veh/h	0	0	198	314	0	335	189	1500	376	256	1480	5
Grp Sat Flow(s),veh/h/ln	0	1976	1653	1679	0	1630	1804	1710	1566	1795	1791	1608
Q Serve(g_s), s	0.0	0.0	12.3	11.0	0.0	22.1	12.3	29.0	22.2	16.8	46.4	0.2
Cycle Q Clear(g_c), s	0.0	0.0	12.3	11.0	0.0	22.1	12.3	29.0	22.2	16.8	46.4	0.2
Prop In Lane	0.00		1.00	1.00		0.82	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	243	404	383	0	467	218	2124	648	282	1615	725
V/C Ratio(X)	0.00	0.00	0.49	0.82	0.00	0.72	0.87	0.71	0.58	0.91	0.92	0.01
Avail Cap(c_a), veh/h	0	511	628	840	0	897	301	2567	783	299	1792	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	39.0	51.9	0.0	38.4	51.8	29.1	27.1	49.7	30.8	18.1
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.7	0.0	0.8	14.0	0.9	1.2	27.4	7.7	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	0.0	0.0	0.0	4.7	0.0	8.9	6.3	11.4	0.2	9.5	20.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	39.3	53.6	0.0	39.2	65.8	29.9	28.3	77.1	38.5	18.1
LnGrp LOS	A	A	D	D	A	D	E	C	C	E	D	B
Approach Vol, veh/h		198			649			2065			1741	
Approach Delay, s/veh		39.3			46.2			32.9			44.1	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.9	55.6		40.4	19.5	60.1	19.7	20.7				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	18.8	31.0		24.1	14.3	48.4	13.0	14.3				
Green Ext Time (p_c), s	0.1	10.4		0.8	0.1	5.7	0.7	0.4				

Intersection Summary

HCM 6th Ctrl Delay	39.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 								
Traffic Volume (vph)	558	520	152	0	517	651	232	0	0
Future Volume (vph)	558	520	152	0	517	651	232	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.928				0.850				
Flt Protected	0.975					0.950			
Satd. Flow (prot)	3336	0	1890	0	1660	1727	1699	0	0
Flt Permitted	0.975					0.417			
Satd. Flow (perm)	3336	0	1890	0	1660	758	1699	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	240				544				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	587	547	160	0	544	685	244	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1134	0	160	0	544	685	244	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

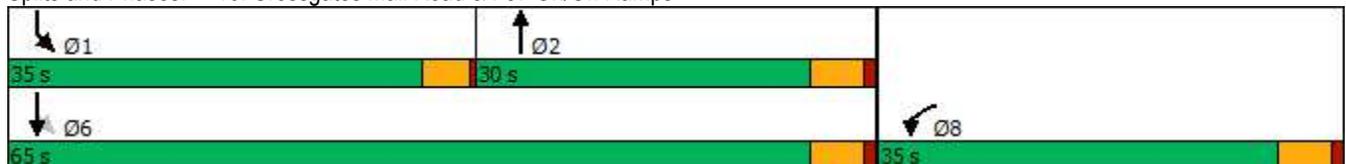


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.87		0.57		0.33	0.92	0.27		
Control Delay	29.8		42.8		0.5	34.4	11.4		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	29.8		42.8		0.5	34.4	11.4		
Queue Length 50th (ft)	242		84		0	260	67		
Queue Length 95th (ft)	#397		145		0	#470	110		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1359		569		1660	777	1228		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.83		0.28		0.33	0.88	0.20		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 84
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour

02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	558	520	152	0	517	651	232	0	0
Future Volume (veh/h)	558	520	152	0	517	651	232	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1970	1970	1876	1773		
Adj Flow Rate, veh/h	567	568	160	0	0	685	244		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0	7		
Cap, veh/h	662	612	218			761	917		
Arrive On Green	0.36	0.36	0.12	0.00	0.00	0.35	0.52		
Sat Flow, veh/h	1847	1709	1894	1669	1669	1787	1773		
Grp Volume(v), veh/h	567	568	160	0	0	685	244		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1669	1669	1787	1773		
Q Serve(g_s), s	22.9	25.7	6.6	0.0	0.0	25.4	6.2		
Cycle Q Clear(g_c), s	22.9	25.7	6.6	0.0	0.0	25.4	6.2		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	662	612	218			761	917		
V/C Ratio(X)	0.86	0.93	0.73			0.90	0.27		
Avail Cap(c_a), veh/h	689	637	588			819	1322		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	23.9	24.8	34.4	0.0	0.0	17.5	10.9		
Incr Delay (d2), s/veh	10.2	19.5	4.7	0.0	0.0	12.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	11.2	13.1	3.2	0.0	0.0	12.0	2.3		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	34.1	44.3	39.1	0.0	0.0	29.9	11.0		
LnGrp LOS	C	D	D			C	B		
Approach Vol, veh/h	1135		160	A	A		929		
Approach Delay, s/veh	39.2		39.1				25.0		
Approach LOS	D		D				C		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	32.4	14.3				46.6	33.8		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	27.4	8.6				8.2	27.7		
Green Ext Time (p_c), s	1.0	0.7				1.6	1.1		

Intersection Summary

HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	28	180	32	142	357	65	35	12	195	78	12	63
Future Volume (vph)	28	180	32	142	357	65	35	12	195	78	12	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.977			0.891				0.945
Flt Protected	0.950			0.950				0.993				0.975
Satd. Flow (prot)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Flt Permitted	0.950			0.950				0.993				0.975
Satd. Flow (perm)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		780			786			249				287
Travel Time (s)		17.7			17.9			5.7				6.5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	31	198	35	156	392	71	38	13	214	86	13	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	233	0	156	463	0	0	265	0	0	168	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	30.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	28	180	32	142	357	65	35	12	195	78	12	63
Future Vol, veh/h	28	180	32	142	357	65	35	12	195	78	12	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	2	2	0	0	2	2	2	1	2	28
Mvmt Flow	31	198	35	156	392	71	38	13	214	86	13	69

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	233	0	0	1059	1053	216	1131	1035	428
Stage 1	-	-	-	-	-	-	278	278	-	740	740	-
Stage 2	-	-	-	-	-	-	781	775	-	391	295	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.12	6.52	6.22	7.91	7.32	6.88
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.518	4.018	3.318	3.509	4.018	3.552
Pot Cap-1 Maneuver	1109	-	-	1335	-	-	202	226	824	141	184	548
Stage 1	-	-	-	-	-	-	728	680	-	348	359	-
Stage 2	-	-	-	-	-	-	388	408	-	583	626	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1109	-	-	1335	-	-	147	194	824	88	158	548
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	194	-	88	158	-
Stage 1	-	-	-	-	-	-	708	661	-	338	317	-
Stage 2	-	-	-	-	-	-	287	360	-	411	608	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1			2			23.8			195.1		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	451	1335	-	-	1109	-	142
HCM Lane V/C Ratio	0.59	0.117	-	-	0.028	-	1.184
HCM Control Delay (s)	23.8	8.1	-	-	8.3	-	195.1
HCM Lane LOS	C	A	-	-	A	-	F
HCM 95th %tile Q(veh)	3.7	0.4	-	-	0.1	-	9.7

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	47	403	3	7	503	296	1	0	7	202	2	59
Future Volume (vph)	47	403	3	7	503	296	1	0	7	202	2	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.999			0.945			0.882				0.855
Flt Protected		0.995						0.994		0.950		
Satd. Flow (prot)	0	3544	0	0	3304	0	0	1636	0	1787	1624	0
Flt Permitted		0.836			0.951			0.983		0.752		
Satd. Flow (perm)	0	2978	0	0	3143	0	0	1618	0	1403	1624	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			302			27				60
Link Speed (mph)		30			30			30				30
Link Distance (ft)		786			547			189				414
Travel Time (s)		17.9			12.4			4.3				9.4
Confl. Peds. (#/hr)									11	11		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	18%	1%	0%	0%	0%	6%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	48	411	3	7	513	302	1	0	7	206	2	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	462	0	0	822	0	0	8	0	206	62	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4				8
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.39			0.57			0.01		0.37	0.09	
Control Delay		9.7			7.5			1.5		10.9	3.4	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		9.7			7.5			1.5		10.9	3.4	
Queue Length 50th (ft)		35			41			0		30	0	
Queue Length 95th (ft)		61			76			3		67	14	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1192			1438			663		561	685	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.39			0.57			0.01		0.37	0.09	

Intersection Summary

Area Type: Other

Cycle Length: 40

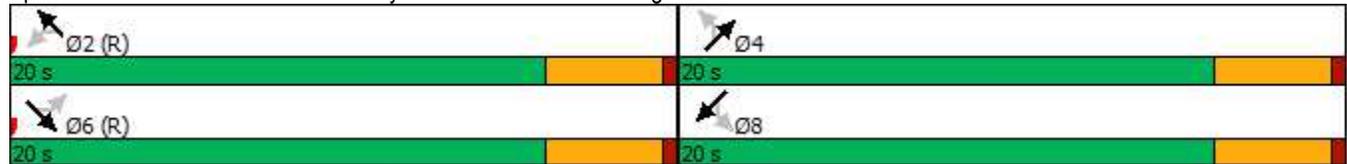
Actuated Cycle Length: 40

Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	47	403	3	7	503	296	1	0	7	202	2	59
Future Volume (veh/h)	47	403	3	7	503	296	1	0	7	202	2	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	48	411	3	7	513	302	1	0	7	206	2	60
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	172	1271	9	94	847	493	134	47	560	744	21	621
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40
Sat Flow, veh/h	157	3178	23	7	2116	1232	83	117	1400	1408	52	1553
Grp Volume(v), veh/h	227	0	235	458	0	364	8	0	0	206	0	62
Grp Sat Flow(s),veh/h/ln	1540	0	1819	1870	0	1486	1600	0	0	1408	0	1605
Q Serve(g_s), s	0.3	0.0	3.6	0.0	0.0	7.8	0.0	0.0	0.0	4.0	0.0	1.0
Cycle Q Clear(g_c), s	8.1	0.0	3.6	7.7	0.0	7.8	0.1	0.0	0.0	4.1	0.0	1.0
Prop In Lane	0.21		0.01	0.02		0.83	0.12		0.87	1.00		0.97
Lane Grp Cap(c), veh/h	725	0	727	839	0	594	741	0	0	744	0	642
V/C Ratio(X)	0.31	0.00	0.32	0.55	0.00	0.61	0.01	0.00	0.00	0.28	0.00	0.10
Avail Cap(c_a), veh/h	725	0	727	839	0	594	741	0	0	744	0	642
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	8.3	9.5	0.0	9.5	7.2	0.0	0.0	8.4	0.0	7.5
Incr Delay (d2), s/veh	1.1	0.0	1.2	2.5	0.0	4.7	0.0	0.0	0.0	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.3	2.9	0.0	2.6	0.0	0.0	0.0	1.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	0.0	9.4	12.1	0.0	14.2	7.3	0.0	0.0	9.3	0.0	7.8
LnGrp LOS	A	A	A	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		462			822			8				268
Approach Delay, s/veh		9.4			13.0			7.3				9.0
Approach LOS		A			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		9.8		2.1		10.1		6.1				
Green Ext Time (p_c), s		2.7		0.0		1.5		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				11.2								
HCM 6th LOS				B								

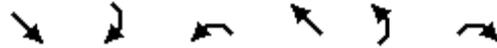
Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

						
Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	 				 	 
Traffic Volume (vph)	457	154	181	667	138	200
Future Volume (vph)	457	154	181	667	138	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3421	0	1762	1801	1787	1599
Flt Permitted			0.346		0.950	
Satd. Flow (perm)	3421	0	642	1801	1787	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51					217
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%
Adj. Flow (vph)	497	167	197	725	150	217
Shared Lane Traffic (%)						
Lane Group Flow (vph)	664	0	197	725	150	217
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

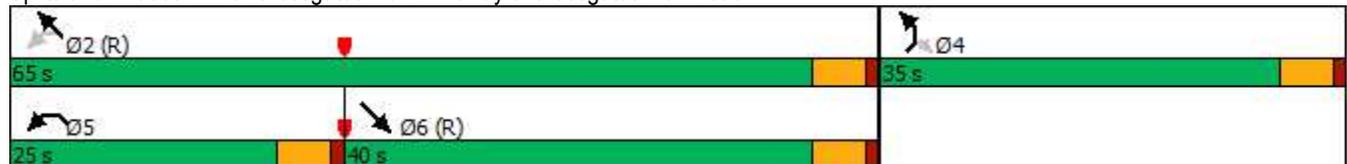


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.31		0.34	0.53	0.61	0.54
Control Delay	9.1		5.3	7.0	60.7	18.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.1		5.3	7.0	60.7	18.2
Queue Length 50th (ft)	85		27	149	97	26
Queue Length 95th (ft)	145		58	283	m133	m77
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2159		713	1373	536	622
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.31		0.28	0.53	0.28	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	457	154	181	667	138	200
Future Volume (veh/h)	457	154	181	667	138	200
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1879	1879	1979	1934	1885	1885
Adj Flow Rate, veh/h	497	167	197	725	150	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	0	3	1	1
Cap, veh/h	1655	553	625	1427	291	259
Arrive On Green	0.63	0.63	0.06	0.74	0.16	0.16
Sat Flow, veh/h	2722	878	1884	1934	1795	1598
Grp Volume(v), veh/h	337	327	197	725	150	217
Grp Sat Flow(s),veh/h/ln	1785	1721	1884	1934	1795	1598
Q Serve(g_s), s	8.6	8.7	3.4	15.7	7.6	13.2
Cycle Q Clear(g_c), s	8.6	8.7	3.4	15.7	7.6	13.2
Prop In Lane		0.51	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1124	1084	625	1427	291	259
V/C Ratio(X)	0.30	0.30	0.32	0.51	0.52	0.84
Avail Cap(c_a), veh/h	1124	1084	892	1427	539	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.56	0.56	1.00	1.00
Uniform Delay (d), s/veh	8.5	8.5	5.5	5.5	38.3	40.6
Incr Delay (d2), s/veh	0.6	0.7	0.2	0.7	1.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.2	1.2	5.4	3.5	11.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.1	9.1	5.7	6.2	39.7	47.7
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	664			922	367	
Approach Delay, s/veh	9.1			6.1	44.5	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.8		21.2	10.8	68.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		17.7		15.2	5.4	10.7
Green Ext Time (p_c), s		6.2		1.0	0.5	4.4
Intersection Summary						
HCM 6th Ctrl Delay			14.3			
HCM 6th LOS			B			

Year 2025 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak PM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	204	142	93	262	0	0
Future Volume (vph)	204	142	93	262	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.900			
Flt Protected		0.971				
Satd. Flow (prot)	0	1809	1710	0	0	1863
Flt Permitted		0.971				
Satd. Flow (perm)	0	1809	1710	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		777	412		531	
Travel Time (s)		17.7	9.4		12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	154	101	285	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	376	386	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↔			↗
Traffic Vol, veh/h	204	142	93	262	0	0
Future Vol, veh/h	204	142	93	262	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	222	154	101	285	0	0

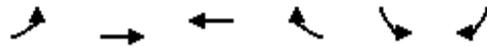
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	386	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1172	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1172	-	795
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	5.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1172	-	-	-
HCM Lane V/C Ratio	-	0.189	-	-	-
HCM Control Delay (s)	0	8.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	-

Year 2025 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	1069	2171	18	10	6
Future Volume (vph)	8	1069	2171	18	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t			0.999		0.949	
Fl _t Protected	0.950				0.970	
Satd. Flow (prot)	1805	3539	3536	0	1749	0
Fl _t Permitted	0.950				0.970	
Satd. Flow (perm)	1805	3539	3536	0	1749	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1058	
Travel Time (s)		15.5	6.5		24.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	8	1102	2238	19	10	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	1102	2257	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1069	2171	18	10	6
Future Vol, veh/h	8	1069	2171	18	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	1102	2238	19	10	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	2257	0	0 2815 1129
Stage 1	-	-	- 2248 -
Stage 2	-	-	- 567 -
Critical Hdwy	4.1	-	- 6.8 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.8 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	231	-	- 15 201
Stage 1	-	-	- 68 -
Stage 2	-	-	- 537 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	231	-	- 14 201
Mov Cap-2 Maneuver	-	-	- 14 -
Stage 1	-	-	- 66 -
Stage 2	-	-	- 537 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	\$ 354
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	231	-	-	-	22
HCM Lane V/C Ratio	0.036	-	-	-	0.75
HCM Control Delay (s)	21.2	-	-	-	\$ 354
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	2.2

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

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

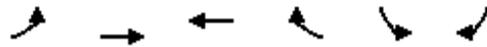
Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↖↖↖		↘↘	↘
Traffic Volume (vph)	0	1076	1248	528	469	49
Future Volume (vph)	0	1076	1248	528	469	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.955			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4648	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4648	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			272			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1170	1357	574	510	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1170	1931	0	510	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 02/17/2020

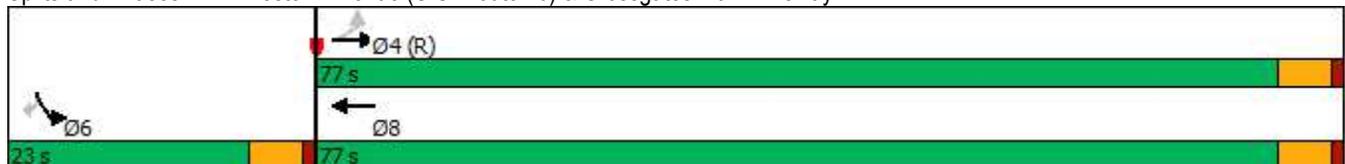


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.46	0.56		0.84	0.16
Control Delay		6.6	6.2		41.8	8.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.6	6.2		41.8	8.4
Queue Length 50th (ft)		141	152		145	2
Queue Length 95th (ft)		177	184		#241	m13
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3422		605	322
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.46	0.56		0.84	0.16

Intersection Summary

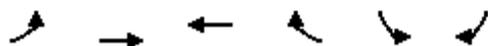
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 No-Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

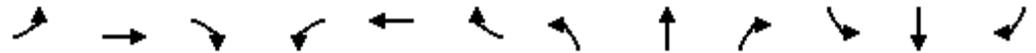
Saturday Peak Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑↑	↑↑↑		↔	↔
Traffic Volume (veh/h)	0	1076	1248	528	469	49
Future Volume (veh/h)	0	1076	1248	528	469	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1170	1357	574	510	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	2513	1048	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	230	3647	3657	1455	3282	1505
Grp Volume(v), veh/h	0	1170	1306	625	510	53
Grp Sat Flow(s),veh/h/ln	230	1777	1681	1585	1641	1505
Q Serve(g_s), s	0.0	13.7	17.8	18.2	15.1	3.0
Cycle Q Clear(g_c), s	0.0	13.7	17.8	18.2	15.1	3.0
Prop In Lane	1.00			0.92	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1141	591	271
V/C Ratio(X)	0.00	0.46	0.54	0.55	0.86	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1141	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.61	0.61
Uniform Delay (d), s/veh	0.0	5.8	6.4	6.5	39.8	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.6	10.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	4.8	4.7	6.8	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.4	6.7	7.0	49.9	35.8
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1170	1931		563	
Approach Delay, s/veh		6.4	6.8		48.6	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				15.7	17.1	20.2
Green Ext Time (p_c), s				10.9	0.2	22.9
Intersection Summary						
HCM 6th Ctrl Delay			13.1			
HCM 6th LOS			B			

Year 2025 No-Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Volume (vph)	0	1142	23	55	1195	43	27	0	55	0	0	123
Future Volume (vph)	0	1142	23	55	1195	43	27	0	55	0	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.995			0.909				0.865
Flt Protected				0.950				0.984				
Satd. Flow (prot)	1928	3497	0	1778	3387	0	0	1635	0	0	1652	0
Flt Permitted				0.950				0.984				
Satd. Flow (perm)	1928	3497	0	1778	3387	0	0	1635	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				394
Travel Time (s)		17.4			16.4			6.1				9.0
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
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1202	24	58	1258	45	28	0	58	0	0	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1226	0	58	1303	0	0	86	0	0	129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	12.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗			↕↗			↕↗	
Traffic Vol, veh/h	0	1142	23	55	1195	43	27	0	55	0	0	123
Future Vol, veh/h	0	1142	23	55	1195	43	27	0	55	0	0	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	0	1202	24	58	1258	45	28	0	58	0	0	129

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1303	0	0	1226	0	0	1959	2633	613	1998	2623	652
Stage 1	-	-	-	-	-	-	1214	1214	-	1397	1397	-
Stage 2	-	-	-	-	-	-	745	1419	-	601	1226	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.7	7	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	538	-	-	576	-	-	35	21	433	41	28	423
Stage 1	-	-	-	-	-	-	183	240	-	163	227	-
Stage 2	-	-	-	-	-	-	361	189	-	474	271	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	538	-	-	576	-	-	~ 22	19	433	33	25	423
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 22	19	-	33	25	-
Stage 1	-	-	-	-	-	-	183	240	-	163	204	-
Stage 2	-	-	-	-	-	-	225	170	-	411	271	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	\$ 372.6	17.2
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	61	538	-	-	576	-	-	423
HCM Lane V/C Ratio	1.415	-	-	-	0.101	-	-	0.306
HCM Control Delay (s)	\$ 372.6	0	-	-	11.9	-	-	17.2
HCM Lane LOS	F	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	7.5	0	-	-	0.3	-	-	1.3

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

Year 2025 No-Build Traffic Volumes

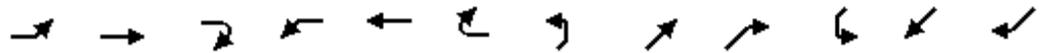
Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	294	943	95	79	1012	140	136	103	78	90	83	172
Future Volume (vph)	294	943	95	79	1012	140	136	103	78	90	83	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					0.99
Frt		0.986			0.982			0.990	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3527	0	1805	3489	0	1787	1787	1534	1680	1909	1607
Flt Permitted	0.100			0.138			0.690			0.540		
Satd. Flow (perm)	188	3527	0	262	3489	0	1296	1787	1534	955	1909	1585
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			2	77			115
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				735
Travel Time (s)		6.5			17.4			14.9				16.7
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	0%	0%	1%	6%	1%	0%	0%	8%	0%	1%
Adj. Flow (vph)	306	982	99	82	1054	146	142	107	81	94	86	179
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	306	1081	0	82	1200	0	142	115	73	94	86	179
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.76	0.70		0.18	0.78		0.43	0.46	0.12	0.53	0.51	0.35
Control Delay	51.4	30.6		14.3	32.7		46.0	55.8	5.9	56.3	69.5	16.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	30.6		14.3	32.7		46.0	55.8	5.9	56.3	69.5	16.0
Queue Length 50th (ft)	128	288		16	341		83	77	0	54	56	30
Queue Length 95th (ft)	330	566		49	636		188	182	32	131	150	117
Internal Link Dist (ft)		303			938			574			655	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	580	2816		460	2435		433	499	604	319	532	600
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	0.53	0.38		0.18	0.49		0.33	0.23	0.12	0.29	0.16	0.30

Intersection Summary

Area Type: Other

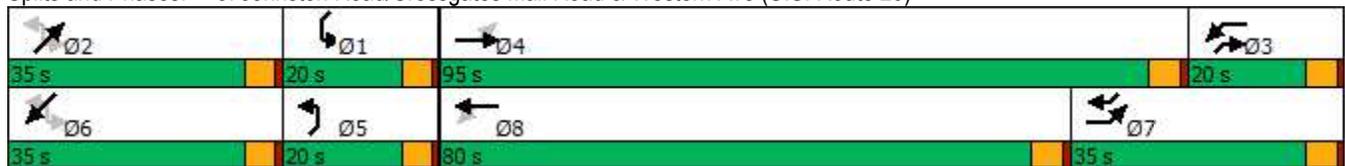
Cycle Length: 170

Actuated Cycle Length: 116.8

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2025 No-Build Traffic Volumes

Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	294	943	95	79	1012	140	136	103	78	90	83	172
Future Volume (veh/h)	294	943	95	79	1012	140	136	103	78	90	83	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1885	1885	1885	1900	1900	1819	1939	1924
Adj Flow Rate, veh/h	306	982	99	82	1054	146	142	107	81	94	86	179
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	1	1	1	0	0	8	0	1
Cap, veh/h	359	1381	139	461	1474	204	268	177	392	237	165	308
Arrive On Green	0.10	0.42	0.42	0.15	0.47	0.47	0.07	0.09	0.09	0.06	0.08	0.08
Sat Flow, veh/h	1795	3285	331	1810	3160	437	1795	1900	1605	1733	1939	1625
Grp Volume(v), veh/h	306	535	546	82	597	603	142	107	81	94	86	179
Grp Sat Flow(s),veh/h/ln	1795	1791	1826	1810	1791	1806	1795	1900	1605	1733	1939	1625
Q Serve(g_s), s	5.0	17.8	17.8	0.0	19.2	19.3	0.0	3.9	0.0	0.0	3.1	0.0
Cycle Q Clear(g_c), s	5.0	17.8	17.8	0.0	19.2	19.3	0.0	3.9	0.0	0.0	3.1	0.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	753	768	461	835	842	268	177	392	237	165	308
V/C Ratio(X)	0.85	0.71	0.71	0.18	0.71	0.72	0.53	0.60	0.21	0.40	0.52	0.58
Avail Cap(c_a), veh/h	918	2234	2277	566	1861	1878	521	790	909	496	806	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	17.3	17.3	19.8	15.4	15.4	30.9	31.4	21.7	31.5	31.6	26.6
Incr Delay (d2), s/veh	2.2	2.7	2.6	0.1	2.4	2.4	0.6	1.2	0.1	0.4	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.9	7.0	1.0	7.1	7.2	2.3	1.8	1.0	1.5	1.4	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	19.9	19.9	19.8	17.9	17.9	31.5	32.7	21.8	31.9	32.6	27.3
LnGrp LOS	C	B	B	B	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1387			1282			330				359
Approach Delay, s/veh		22.3			18.0			29.5				29.8
Approach LOS		C			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	11.7	15.8	35.3	9.9	11.1	12.5	38.6				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	5.9	2.0	19.8	2.0	5.1	7.0	21.3				
Green Ext Time (p_c), s	0.1	0.4	0.1	10.5	0.2	0.6	0.6	12.3				

Intersection Summary

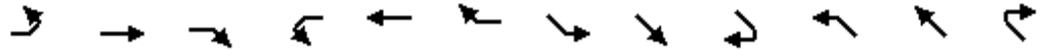
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

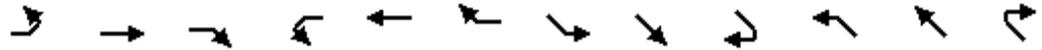
Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (vph)	106	196	195	108	223	31	15	56	151	143	90	129
Future Volume (vph)	106	196	195	108	223	31	15	56	151	143	90	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	13	12	12	12
Grade (%)		-2%			4%			0%				2%
Storage Length (ft)	0		0	0		0	0		150	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.987				0.850		0.912	
Flt Protected		0.983			0.985			0.989		0.950		
Satd. Flow (prot)	0	1860	1584	0	3614	0	0	1879	1669	1702	1629	0
Flt Permitted		0.745			0.733			0.917		0.567		
Satd. Flow (perm)	0	1410	1584	0	2690	0	0	1742	1669	1016	1629	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			205		17				159		120	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		467			504			921			780	
Travel Time (s)		10.6			11.5			20.9			17.7	
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
Heavy Vehicles (%)	4%	0%	3%	3%	1%	0%	0%	0%	0%	5%	0%	9%
Adj. Flow (vph)	112	206	205	114	235	33	16	59	159	151	95	136
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	318	205	0	382	0	0	75	159	151	231	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.00	1.00	0.96	1.01	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1	1	1	1	
Detector Template	Left			Left			Left					
Leading Detector (ft)	20	6	6	20	6		20	6	6	6	6	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	6		20	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4		4	8			6		6	2		
Detector Phase	4	4	4	8	8		6	6	6	5	2	
Switch Phase												

Year 2025 No-Build Traffic Volumes
 4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
 02/17/2020

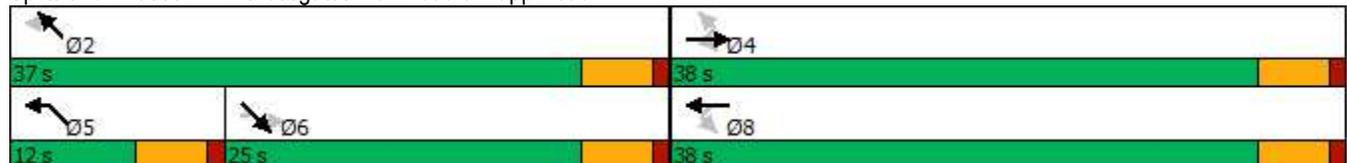


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		21.0	21.0	21.0	9.0	21.0	
Total Split (s)	38.0	38.0	38.0	38.0	38.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	50.7%	50.7%	50.7%	50.7%	50.7%		33.3%	33.3%	33.3%	16.0%	49.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0			5.0	5.0	5.0	5.0	
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	Max	Max	Max	Max	Max		Max	Max	Max	Max	Max	
v/c Ratio		0.51	0.25		0.32			0.16	0.28	0.30	0.30	
Control Delay		18.9	3.0		14.0			22.3	5.5	15.4	8.0	
Queue Delay		0.0	0.0		0.0			0.0	0.0	0.0	0.0	
Total Delay		18.9	3.0		14.0			22.3	5.5	15.4	8.0	
Queue Length 50th (ft)		103	0		55			27	0	43	31	
Queue Length 95th (ft)		176	34		86			59	42	80	74	
Internal Link Dist (ft)		387			424			841			700	
Turn Bay Length (ft)									150			
Base Capacity (vph)		620	811		1193			464	561	497	763	
Starvation Cap Reductn		0	0		0			0	0	0	0	
Spillback Cap Reductn		0	0		0			0	0	0	0	
Storage Cap Reductn		0	0		0			0	0	0	0	
Reduced v/c Ratio		0.51	0.25		0.32			0.16	0.28	0.30	0.30	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 No-Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕	↗		↕↔			↕	↗	↗	↗	↗
Traffic Volume (veh/h)	106	196	195	108	223	31	15	56	151	143	90	129
Future Volume (veh/h)	106	196	195	108	223	31	15	56	151	143	90	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1934	1863	1863	1863	1900	1900	1976	1802	1876	1876
Adj Flow Rate, veh/h	112	206	205	114	235	33	16	59	159	151	95	136
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	3	1	1	1	0	0	0	5	0	0
Cap, veh/h	265	465	721	293	737	112	122	404	447	521	298	426
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.27	0.27	0.27	0.09	0.43	0.43
Sat Flow, veh/h	455	1057	1639	482	1675	254	238	1513	1675	1717	698	999
Grp Volume(v), veh/h	318	0	205	168	0	214	75	0	159	151	0	231
Grp Sat Flow(s),veh/h/ln	1512	0	1639	761	0	1649	1751	0	1675	1717	0	1697
Q Serve(g_s), s	6.3	0.0	6.0	7.6	0.0	6.3	0.0	0.0	5.8	4.4	0.0	6.8
Cycle Q Clear(g_c), s	12.6	0.0	6.0	20.2	0.0	6.3	2.3	0.0	5.8	4.4	0.0	6.8
Prop In Lane	0.35		1.00	0.68		0.15	0.21		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	730	0	721	416	0	726	525	0	447	521	0	724
V/C Ratio(X)	0.44	0.00	0.28	0.40	0.00	0.30	0.14	0.00	0.36	0.29	0.00	0.32
Avail Cap(c_a), veh/h	730	0	721	416	0	726	525	0	447	521	0	724
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	13.4	20.4	0.0	13.5	21.0	0.0	22.3	15.6	0.0	14.3
Incr Delay (d2), s/veh	1.9	0.0	1.0	2.9	0.0	1.0	0.6	0.0	2.2	1.4	0.0	1.2
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	4.1	0.0	2.3	2.7	0.0	2.4	1.0	0.0	2.4	1.8	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	0.0	14.4	23.3	0.0	14.6	21.6	0.0	24.5	17.0	0.0	15.4
LnGrp LOS	B	A	B	C	A	B	C	A	C	B	A	B
Approach Vol, veh/h		523			382			234			382	
Approach Delay, s/veh		16.1			18.4			23.6			16.1	
Approach LOS		B			B			C			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		37.0		38.0	12.0	25.0		38.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		32.0		33.0	7.0	20.0		33.0				
Max Q Clear Time (g_c+I1), s		8.8		14.6	6.4	7.8		22.2				
Green Ext Time (p_c), s		0.6		1.4	0.0	0.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			17.8									
HCM 6th LOS			B									

Year 2025 No-Build Traffic Volumes
5: Rapp Road & Gipp Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	36	22	23	181	178	47
Future Volume (vph)	36	22	23	181	178	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949				0.972	
Flt Protected	0.970			0.994		
Satd. Flow (prot)	1749	0	0	1870	1794	0
Flt Permitted	0.970			0.994		
Satd. Flow (perm)	1749	0	0	1870	1794	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	3	2	2			3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	41	25	26	208	205	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	0	234	259	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	36	22	23	181	178	47
Future Vol, veh/h	36	22	23	181	178	47
Conflicting Peds, #/hr	3	2	2	0	0	3
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	25	26	208	205	54

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	498	237	262	0	0
Stage 1	235	-	-	-	-
Stage 2	263	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	535	807	1314	-	-
Stage 1	809	-	-	-	-
Stage 2	786	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	521	804	1311	-	-
Mov Cap-2 Maneuver	521	-	-	-	-
Stage 1	790	-	-	-	-
Stage 2	784	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.7	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1311	-	601	-	-
HCM Lane V/C Ratio	0.02	-	0.111	-	-
HCM Control Delay (s)	7.8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Year 2025 No-Build Traffic Volumes
6: Rapp Road & Pine Lane

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	13	18	200	212	15
Future Volume (vph)	13	13	18	200	212	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.991	
Flt Protected	0.976			0.996		
Satd. Flow (prot)	1531	0	0	1795	1893	0
Flt Permitted	0.976			0.996		
Satd. Flow (perm)	1531	0	0	1795	1893	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	0%	0%	1%	0%	0%
Adj. Flow (vph)	14	14	19	208	221	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	227	237	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

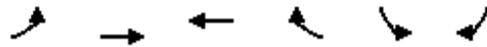
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	13	13	18	200	212	15
Future Vol, veh/h	13	13	18	200	212	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	15	0	0	1	0	0
Mvmt Flow	14	14	19	208	221	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	8.7	8.7
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	8%	50%	0%
Vol Thru, %	92%	0%	93%
Vol Right, %	0%	50%	7%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	218	26	227
LT Vol	18	13	0
Through Vol	200	0	212
RT Vol	0	13	15
Lane Flow Rate	227	27	236
Geometry Grp	1	1	1
Degree of Util (X)	0.261	0.037	0.268
Departure Headway (Hd)	4.141	4.941	4.078
Convergence, Y/N	Yes	Yes	Yes
Cap	856	729	870
Service Time	2.217	2.941	2.155
HCM Lane V/C Ratio	0.265	0.037	0.271
HCM Control Delay	8.7	8.1	8.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.1	1.1

Year 2025 No-Build Traffic Volumes
7: Rapp Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	213	0	0	0	227
Future Volume (vph)	0	213	0	0	0	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected						
Satd. Flow (prot)	0	1791	1900	0	1853	0
Fl _t Permitted						
Satd. Flow (perm)	0	1791	1900	0	1853	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	227	0	0	0	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	227	0	0	241	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	213	0	0	0	227
Future Vol, veh/h	0	213	0	0	0	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	227	0	0	0	241

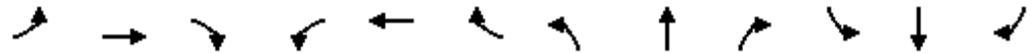
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	228
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	227
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	755
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	805
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	755
Mov Cap-2 Maneuver	-	-	-	-	755
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	805

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	-	-	-	-	0.222
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Year 2025 No-Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	39	6	15	0	111	0	6	21	25	2	0
Future Volume (vph)	168	39	6	15	0	111	0	6	21	25	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.881			0.896				
Flt Protected	0.950				0.994						0.956	
Satd. Flow (prot)	1787	1831	0	0	1876	0	0	1694	0	0	1853	0
Flt Permitted	0.950				0.994						0.956	
Satd. Flow (perm)	1787	1831	0	0	1876	0	0	1694	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			746	
Travel Time (s)		11.1			2.8			9.8			17.0	
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
Heavy Vehicles (%)	1%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	183	42	7	16	0	121	0	7	23	27	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	183	49	0	0	137	0	0	30	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↕			↘			↗	
Traffic Vol, veh/h	168	39	6	15	0	111	0	6	21	25	2	0
Future Vol, veh/h	168	39	6	15	0	111	0	6	21	25	2	0
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
Heavy Vehicles, %	1	0	11	0	0	0	0	0	0	0	0	0
Mvmt Flow	183	42	7	16	0	121	0	7	23	27	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.3	7.6	7.5	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	93%
Vol Thru, %	22%	0%	87%	0%	7%
Vol Right, %	78%	0%	13%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	168	45	126	27
LT Vol	0	168	0	15	25
Through Vol	6	0	39	0	2
RT Vol	21	0	6	111	0
Lane Flow Rate	29	183	49	137	29
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.035	0.263	0.062	0.148	0.04
Departure Headway (Hd)	4.317	5.19	4.579	3.896	4.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	832	688	776	924	723
Service Time	2.328	2.953	2.341	1.905	2.979
HCM Lane V/C Ratio	0.035	0.266	0.063	0.148	0.04
HCM Control Delay	7.5	9.8	7.6	7.6	8.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	1.1	0.2	0.5	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	84	415	53	367	72	557	469	401	598	5
Future Volume (vph)	0	0	84	415	53	367	72	557	469	401	598	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99								
Frt			0.850		0.869				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1777	3432	1620	0	1796	5060	1591	1805	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1752	3414	1620	0	1796	5060	1591	1805	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96			255			484			94
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		124			869			1287			1236	
Travel Time (s)		2.8			19.8			19.5			18.7	
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	0	0	87	428	55	378	74	574	484	413	616	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	87	428	433	0	74	574	484	413	616	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.34	0.64	0.83		0.43	0.31	0.55	0.95	0.34	0.01
Control Delay			11.1	35.3	27.5		44.2	20.5	4.9	67.2	14.2	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			11.1	35.3	27.5		44.2	20.5	4.9	67.2	14.2	0.0
Queue Length 50th (ft)			0	106	88		36	75	0	208	92	0
Queue Length 95th (ft)			37	151	200		83	122	68	#443	172	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			500	1237	1338		431	3649	1282	433	2577	1191
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			0.17	0.35	0.32		0.17	0.16	0.38	0.95	0.24	0.00

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 83.5

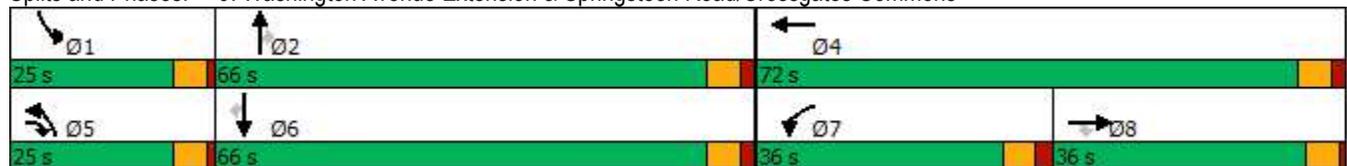
Natural Cycle: 90

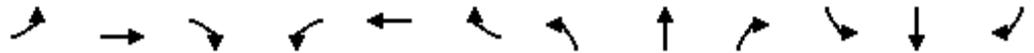
Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	84	415	53	367	72	557	469	401	598	5
Future Volume (veh/h)	0	0	84	415	53	367	72	557	469	401	598	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1976	1862	1876	1876	1894	1864	1879	1900	1885	1900
Adj Flow Rate, veh/h	0	0	87	428	55	378	74	574	484	413	616	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	0	0	0	2	1	0	1	0
Cap, veh/h	0	160	224	516	60	409	96	1776	556	354	1759	791
Arrive On Green	0.00	0.00	0.08	0.15	0.29	0.29	0.05	0.35	0.35	0.20	0.49	0.49
Sat Flow, veh/h	0	1976	1662	3440	206	1413	1804	5090	1593	1810	3582	1610
Grp Volume(v), veh/h	0	0	87	428	0	433	74	574	484	413	616	5
Grp Sat Flow(s),veh/h/ln	0	1976	1662	1720	0	1619	1804	1697	1593	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	4.9	12.4	0.0	26.6	4.1	8.5	29.1	20.0	10.8	0.2
Cycle Q Clear(g_c), s	0.0	0.0	4.9	12.4	0.0	26.6	4.1	8.5	29.1	20.0	10.8	0.2
Prop In Lane	0.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	160	224	516	0	469	96	1776	556	354	1759	791
V/C Ratio(X)	0.00	0.00	0.39	0.83	0.00	0.92	0.77	0.32	0.87	1.17	0.35	0.01
Avail Cap(c_a), veh/h	0	599	593	1008	0	1044	353	2984	934	354	2100	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	40.5	42.2	0.0	35.3	47.8	24.4	31.2	41.2	16.0	13.3
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.3	0.0	3.4	4.8	0.1	6.5	101.8	0.2	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	0.0	0.0	0.0	5.3	0.0	10.7	1.9	3.2	1.0	18.5	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	40.9	43.6	0.0	38.7	52.6	24.6	37.7	142.9	16.2	13.3
LnGrp LOS	A	A	D	D	A	D	D	C	D	F	B	B
Approach Vol, veh/h		87			861			1132			1034	
Approach Delay, s/veh		40.9			41.1			32.0			66.8	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	41.7		35.6	10.5	56.3	21.3	14.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	22.0	31.1		28.6	6.1	12.8	14.4	6.9				
Green Ext Time (p_c), s	0.0	4.6		1.1	0.1	2.7	1.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	660	689	275	0	700	534	281	0	0
Future Volume (vph)	660	689	275	0	700	534	281	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.923				0.850				
Flt Protected	0.976					0.950			
Satd. Flow (prot)	3320	0	1890	0	1644	1727	1783	0	0
Flt Permitted	0.976					0.200			
Satd. Flow (perm)	3320	0	1890	0	1644	364	1783	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	325				703				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	684		1590				534	427	
Travel Time (s)	15.5		36.1				12.1	9.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	688	718	286	0	729	556	293	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1406	0	286	0	729	556	293	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 No-Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

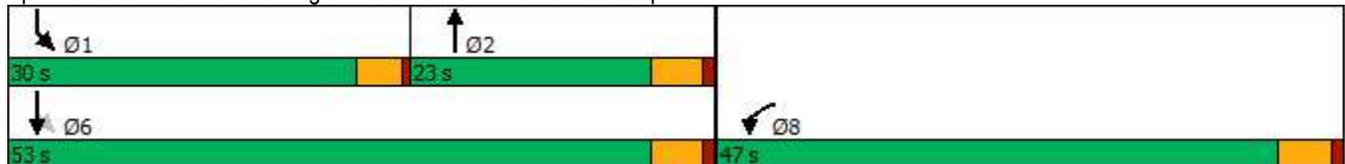


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	47.0		23.0			30.0	53.0		
Total Split (%)	47.0%		23.0%			30.0%	53.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.92		0.85		0.44	1.00	0.33		
Control Delay	31.5		62.8		0.9	65.5	16.8		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	31.5		62.8		0.9	65.5	16.8		
Queue Length 50th (ft)	337		178		0	~329	112		
Queue Length 95th (ft)	#454		#317		0	#539	174		
Internal Link Dist (ft)	604		1510				454	347	
Turn Bay Length (ft)									
Base Capacity (vph)	1644		357		1644	554	897		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.86		0.80		0.44	1.00	0.33		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 95.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 No-Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
02/17/2020



Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	660	689	275	0	700	534	281	0	0
Future Volume (veh/h)	660	689	275	0	700	534	281	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1954	1954	1876	1847		
Adj Flow Rate, veh/h	688	718	286	0	0	556	293		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	1	1	0	2		
Cap, veh/h	785	727	322			568	875		
Arrive On Green	0.43	0.43	0.17	0.00	0.00	0.26	0.47		
Sat Flow, veh/h	1847	1709	1894	1656	1656	1787	1847		
Grp Volume(v), veh/h	688	718	286	0	0	556	293		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1656	1656	1787	1847		
Q Serve(g_s), s	33.7	41.2	14.6	0.0	0.0	25.1	9.8		
Cycle Q Clear(g_c), s	33.7	41.2	14.6	0.0	0.0	25.1	9.8		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	785	727	322			568	875		
V/C Ratio(X)	0.88	0.99	0.89			0.98	0.33		
Avail Cap(c_a), veh/h	785	727	345			568	897		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	26.0	28.2	40.1	0.0	0.0	24.3	16.3		
Incr Delay (d2), s/veh	10.9	30.4	22.4	0.0	0.0	32.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	16.5	22.1	8.7	0.0	0.0	15.2	4.1		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	37.0	58.5	62.4	0.0	0.0	56.7	16.5		
LnGrp LOS	D	E	E			E	B		
Approach Vol, veh/h	1406		286	A	A		849		
Approach Delay, s/veh	48.0		62.4				42.8		
Approach LOS	D		E				D		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.0	21.8				51.8	47.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	26.0	18.0				48.0	42.0		
Max Q Clear Time (g_c+I1), s	27.1	16.6				11.8	43.2		
Green Ext Time (p_c), s	0.0	0.2				1.9	0.0		

Intersection Summary

HCM 6th Ctrl Delay			47.9						
HCM 6th LOS			D						

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	94	219	46	190	213	171	47	15	287	118	15	98
Future Volume (vph)	94	219	46	190	213	171	47	15	287	118	15	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	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 Factor												
Frt		0.974			0.933			0.889				0.942
Flt Protected	0.950			0.950				0.993				0.975
Satd. Flow (prot)	1745	1743	0	1752	1747	0	0	1644	0	0	1605	0
Flt Permitted	0.950			0.950				0.993				0.975
Satd. Flow (perm)	1745	1743	0	1752	1747	0	0	1644	0	0	1605	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		780			786			250				287
Travel Time (s)		17.7			17.9			5.7				6.5
Confl. Peds. (#/hr)						1				1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	102	238	50	207	232	186	51	16	312	128	16	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	288	0	207	418	0	0	379	0	0	251	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

Intersection												
Int Delay, s/veh	222											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	94	219	46	190	213	171	47	15	287	118	15	98
Future Vol, veh/h	94	219	46	190	213	171	47	15	287	118	15	98
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	4	2	2	0	1	2	2	2	0	2	15
Mvmt Flow	102	238	50	207	232	186	51	16	312	128	16	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	288	0	0	1268	1300	264	1372	1232	326
Stage 1	-	-	-	-	-	-	467	467	-	740	740	-
Stage 2	-	-	-	-	-	-	801	833	-	632	492	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.9	7.32	6.75
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.9	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.9	6.32	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.435
Pot Cap-1 Maneuver	1145	-	-	1274	-	-	145	161	775	~92	135	662
Stage 1	-	-	-	-	-	-	576	562	-	349	359	-
Stage 2	-	-	-	-	-	-	378	384	-	410	491	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1144	-	-	1274	-	-	88	123	774	~40	103	661
Mov Cap-2 Maneuver	-	-	-	-	-	-	88	123	-	~40	103	-
Stage 1	-	-	-	-	-	-	525	512	-	318	300	-
Stage 2	-	-	-	-	-	-	251	321	-	216	447	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	2.2	2.8	119	\$ 1263.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	340	1274	-	-	1144	-	71
HCM Lane V/C Ratio	1.116	0.162	-	-	0.089	-	3.536
HCM Control Delay (s)	119	8.4	-	-	8.5	-	\$ 1263.9
HCM Lane LOS	F	A	-	-	A	-	F
HCM 95th %tile Q(veh)	14.6	0.6	-	-	0.3	-	26.1

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

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	59	565	0	8	515	494	2	3	13	332	6	57
Future Volume (vph)	59	565	0	8	515	494	2	3	13	332	6	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.99		0.99	0.99	
Frt					0.927			0.901			0.863	
Flt Protected		0.995						0.995		0.950		
Satd. Flow (prot)	0	3573	0	0	3297	0	0	1681	0	1787	1621	0
Flt Permitted		0.738			0.949			0.984		0.745		
Satd. Flow (perm)	0	2650	0	0	3129	0	0	1662	0	1393	1621	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					526			14			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			189			414	
Travel Time (s)		17.9			12.4			4.3			9.4	
Confl. Peds. (#/hr)			3	3			1		8	8		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
Heavy Vehicles (%)	12%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	63	601	0	9	548	526	2	3	14	353	6	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	664	0	0	1083	0	0	19	0	353	67	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.63			0.69			0.03		0.63	0.10	
Control Delay		12.9			7.6			5.1		16.5	3.6	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

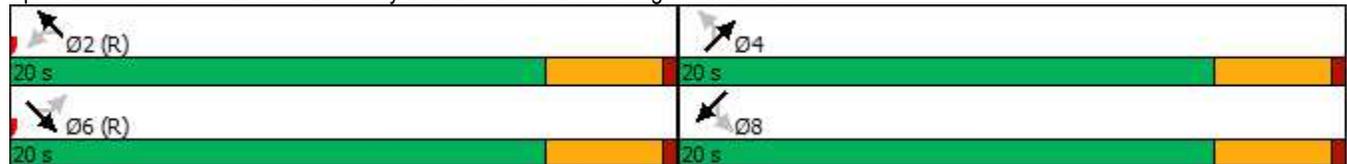


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		12.9			7.6			5.1		16.5	3.6	
Queue Length 50th (ft)		58			44			1		59	1	
Queue Length 95th (ft)		98			90			8		#134	16	
Internal Link Dist (ft)		706			467			109			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1060			1567			673		557	685	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.63			0.69			0.03		0.63	0.10	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕↕			↕↕			↕↕		↕	↕	
Traffic Volume (veh/h)	59	565	0	8	515	494	2	3	13	332	6	57
Future Volume (veh/h)	59	565	0	8	515	494	2	3	13	332	6	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	63	601	0	9	548	526	2	3	14	353	6	61
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, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	122	1056	0	95	743	577	125	148	485	742	58	591
Arrive On Green	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	36	2732	0	8	1857	1442	63	370	1214	1399	145	1478
Grp Volume(v), veh/h	319	345	0	557	0	526	19	0	0	353	0	67
Grp Sat Flow(s),veh/h/ln	945	1732	0	1866	0	1442	1647	0	0	1399	0	1623
Q Serve(g_s), s	2.2	6.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	7.7	0.0	1.0
Cycle Q Clear(g_c), s	16.0	6.0	0.0	10.1	0.0	13.8	0.3	0.0	0.0	8.0	0.0	1.0
Prop In Lane	0.20		0.00	0.02		1.00	0.11		0.74	1.00		0.91
Lane Grp Cap(c), veh/h	486	693	0	838	0	577	758	0	0	742	0	649
V/C Ratio(X)	0.66	0.50	0.00	0.66	0.00	0.91	0.03	0.00	0.00	0.48	0.00	0.10
Avail Cap(c_a), veh/h	486	693	0	838	0	577	758	0	0	742	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.5	9.0	0.0	10.2	0.0	11.3	7.3	0.0	0.0	9.6	0.0	7.5
Incr Delay (d2), s/veh	6.8	2.6	0.0	4.1	0.0	21.1	0.1	0.0	0.0	2.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.1	0.0	4.0	0.0	6.5	0.1	0.0	0.0	2.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	11.5	0.0	14.4	0.0	32.5	7.3	0.0	0.0	11.8	0.0	7.8
LnGrp LOS	B	B	A	B	A	C	A	A	A	B	A	A
Approach Vol, veh/h		664			1083			19			420	
Approach Delay, s/veh		13.8			23.2			7.3			11.1	
Approach LOS		B			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		15.8		2.3		18.0		10.0				
Green Ext Time (p_c), s		0.2		0.0		0.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				17.9								
HCM 6th LOS				B								

Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

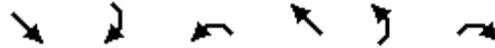
Saturday Peak Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	688	222	297	716	301	353
Future Volume (vph)	688	222	297	716	301	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.99
Frt	0.963					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3451	0	1762	1837	1805	1615
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	3451	0	293	1837	1805	1593
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	48					384
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%
Adj. Flow (vph)	748	241	323	778	327	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	989	0	323	778	327	384
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

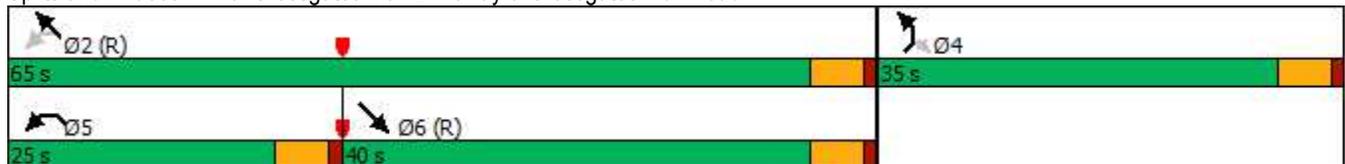


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.63		0.73	0.64	0.77	0.58
Control Delay	24.5		23.4	13.9	47.9	7.7
Queue Delay	0.1		0.0	0.0	0.0	0.0
Total Delay	24.7		23.4	13.9	47.9	7.7
Queue Length 50th (ft)	247		89	264	160	12
Queue Length 95th (ft)	364		202	463	205	63
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	1568		495	1222	541	746
Starvation Cap Reductn	78		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.66		0.65	0.64	0.60	0.51

Intersection Summary

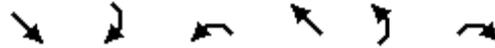
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	688	222	297	716	301	353
Future Volume (veh/h)	688	222	297	716	301	353
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1979	1964	1900	1900
Adj Flow Rate, veh/h	748	241	323	778	327	384
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	0
Cap, veh/h	1280	412	443	1250	476	424
Arrive On Green	0.48	0.48	0.11	0.64	0.26	0.26
Sat Flow, veh/h	2771	862	1884	1964	1810	1610
Grp Volume(v), veh/h	503	486	323	778	327	384
Grp Sat Flow(s),veh/h/ln	1799	1739	1884	1964	1810	1610
Q Serve(g_s), s	20.2	20.2	8.1	23.8	16.3	23.1
Cycle Q Clear(g_c), s	20.2	20.2	8.1	23.8	16.3	23.1
Prop In Lane		0.50	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	861	832	443	1250	476	424
V/C Ratio(X)	0.58	0.58	0.73	0.62	0.69	0.91
Avail Cap(c_a), veh/h	861	832	615	1250	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	18.9	18.9	14.7	10.9	33.1	35.6
Incr Delay (d2), s/veh	2.1	2.2	1.3	1.1	3.1	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	8.3	3.3	9.7	7.4	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.0	21.1	16.0	12.0	36.2	54.8
LnGrp LOS	C	C	B	B	D	D
Approach Vol, veh/h	989			1101	711	
Approach Delay, s/veh	21.1			13.2	46.2	
Approach LOS	C			B	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.7		31.3	15.8	52.8
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		25.8		25.1	10.1	22.2
Green Ext Time (p_c), s		6.7		1.2	0.7	5.3
Intersection Summary						
HCM 6th Ctrl Delay			24.4			
HCM 6th LOS			C			

Year 2025 No-Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Saturday Peak Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↕	↔			↗
Traffic Volume (vph)	79	165	12	116	0	0
Future Volume (vph)	79	165	12	116	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.878			
Flt Protected		0.984				
Satd. Flow (prot)	0	1833	1668	0	0	1900
Flt Permitted		0.984				
Satd. Flow (perm)	0	1833	1668	0	0	1900
Link Speed (mph)		30	30		30	
Link Distance (ft)		746	389		508	
Travel Time (s)		17.0	8.8		11.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Adj. Flow (vph)	85	177	13	125	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	262	138	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.6					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	79	165	12	116	0	0
Future Vol, veh/h	79	165	12	116	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	85	177	13	125	0	0

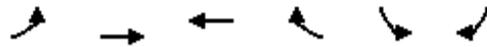
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	138	0	-	0	- 76
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.2
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.3
Pot Cap-1 Maneuver	1446	-	-	-	0 991
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1446	-	-	-	- 991
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	2.5	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1446	-	-	-
HCM Lane V/C Ratio	-	0.059	-	-	-
HCM Control Delay (s)	0	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	-

Year 2025 No-Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	1322	1316	4	9	13
Future Volume (vph)	12	1322	1316	4	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.918	
Fl _t Protected	0.950				0.981	
Satd. Flow (prot)	1805	3574	3574	0	1711	0
Fl _t Permitted	0.950				0.981	
Satd. Flow (perm)	1805	3574	3574	0	1711	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		1069	
Travel Time (s)		15.5	6.5		24.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	13	1377	1371	4	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1377	1375	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1322	1316	4	9	13
Future Vol, veh/h	12	1322	1316	4	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1377	1371	4	9	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1375	0	-	0	2088 688
Stage 1	-	-	-	-	1373 -
Stage 2	-	-	-	-	715 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	505	-	-	-	47 393
Stage 1	-	-	-	-	204 -
Stage 2	-	-	-	-	451 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	505	-	-	-	46 393
Mov Cap-2 Maneuver	-	-	-	-	46 -
Stage 1	-	-	-	-	199 -
Stage 2	-	-	-	-	451 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	53.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	505	-	-	-	96
HCM Lane V/C Ratio	0.025	-	-	-	0.239
HCM Control Delay (s)	12.3	-	-	-	53.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

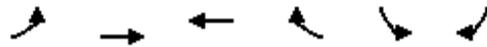
Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Traffic Volume (vph)	0	1568	939	108	70	19
Future Volume (vph)	0	1568	939	108	70	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.985			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1837	3438	4545	0	3432	1583
Flt Permitted					0.950	
Satd. Flow (perm)	1837	3438	4545	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			50			21
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	0	1704	1021	117	76	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1704	1138	0	76	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020

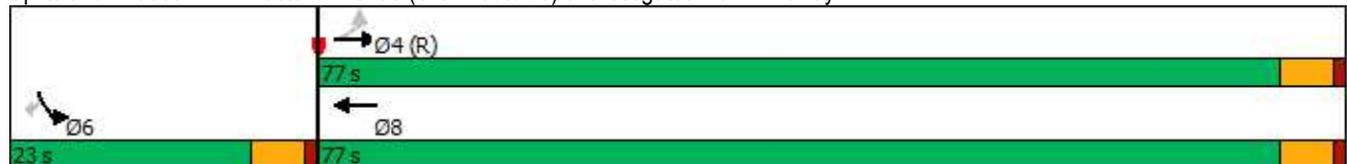


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.69	0.35		0.12	0.07
Control Delay		9.6	5.3		30.5	12.2
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		9.6	5.3		30.5	12.2
Queue Length 50th (ft)		272	80		21	2
Queue Length 95th (ft)		342	99		41	21
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2475	3286		617	302
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.69	0.35		0.12	0.07

Intersection Summary

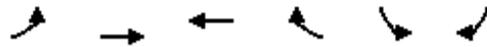
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶↷		↶↷	↷
Traffic Volume (veh/h)	0	1568	939	108	70	19
Future Volume (veh/h)	0	1568	939	108	70	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806
Adj Flow Rate, veh/h	0	1704	1021	117	76	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	5	8	8	0	0
Cap, veh/h	72	2498	3145	360	601	275
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	502	3561	4526	500	3336	1530
Grp Volume(v), veh/h	0	1704	747	391	76	21
Grp Sat Flow(s),veh/h/ln	502	1735	1600	1668	1668	1530
Q Serve(g_s), s	0.0	27.0	8.5	8.6	1.9	1.1
Cycle Q Clear(g_c), s	0.0	27.0	8.5	8.6	1.9	1.1
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	72	2498	2304	1201	601	275
V/C Ratio(X)	0.00	0.68	0.32	0.33	0.13	0.08
Avail Cap(c_a), veh/h	72	2498	2304	1201	601	275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.7	5.1	5.1	34.4	34.1
Incr Delay (d2), s/veh	0.0	1.5	0.1	0.2	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.9	2.2	2.3	0.8	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	9.2	5.2	5.3	34.8	34.6
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1704	1138		97	
Approach Delay, s/veh		9.2	5.2		34.8	
Approach LOS		A	A		C	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				29.0	3.9	10.6
Green Ext Time (p_c), s				19.4	0.2	9.4
Intersection Summary						
HCM 6th Ctrl Delay			8.5			
HCM 6th LOS			A			

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	1769	11	21	913	7	21	0	69	0	0	27
Future Volume (vph)	18	1769	11	21	913	7	21	0	69	0	0	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.999			0.896				0.865
Flt Protected	0.950			0.950				0.989				
Satd. Flow (prot)	1221	3403	0	1520	3181	0	0	1559	0	0	1652	0
Flt Permitted	0.950			0.950				0.989				
Satd. Flow (perm)	1221	3403	0	1520	3181	0	0	1559	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	50%	4%	0%	17%	8%	0%	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	19	1862	12	22	961	7	22	0	73	0	0	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	1874	0	22	968	0	0	95	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak AM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	20.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	18	1769	11	21	913	7	21	0	69	0	0	27
Future Vol, veh/h	18	1769	11	21	913	7	21	0	69	0	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	4	0	17	8	0	0	0	5	0	0	0
Mvmt Flow	19	1862	12	22	961	7	22	0	73	0	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	968	0	0	1874	0	0	2431	2918	937	1978	2921	484
Stage 1	-	-	-	-	-	-	1906	1906	-	1009	1009	-
Stage 2	-	-	-	-	-	-	525	1012	-	969	1912	-
Critical Hdwy	5.1	-	-	4.44	-	-	7.7	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.7	-	-	2.37	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	476	-	-	262	-	-	~ 15	13	254	42	18	541
Stage 1	-	-	-	-	-	-	65	106	-	276	339	-
Stage 2	-	-	-	-	-	-	494	302	-	291	130	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	476	-	-	262	-	-	~ 13	11	254	27	16	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 13	11	-	27	16	-
Stage 1	-	-	-	-	-	-	62	102	-	265	311	-
Stage 2	-	-	-	-	-	-	429	277	-	199	125	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	\$ 637.6	12
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	48	476	-	-	262	-	-	541
HCM Lane V/C Ratio	1.974	0.04	-	-	0.084	-	-	0.053
HCM Control Delay (s)	\$ 637.6	12.9	-	-	20	-	-	12
HCM Lane LOS	F	B	-	-	C	-	-	B
HCM 95th %tile Q(veh)	9.6	0.1	-	-	0.3	-	-	0.2

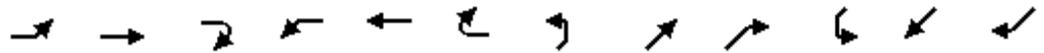
Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2025 Build Traffic Volumes

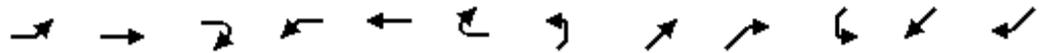
Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	267	1508	100	98	766	42	95	150	186	51	42	101
Future Volume (vph)	267	1508	100	98	766	42	95	150	186	51	42	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.991			0.992			0.975	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3452	0	1612	3332	0	1626	1720	1447	1440	1872	1623
Flt Permitted	0.136			0.080			0.726			0.588		
Satd. Flow (perm)	253	3452	0	136	3332	0	1243	1720	1405	882	1872	1623
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			4			5	123			115
Link Speed (mph)		40			40			30				30
Link Distance (ft)		383			1018			654				346
Travel Time (s)		6.5			17.4			14.9				7.9
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	3%	10%	12%	7%	14%	11%	1%	6%	26%	2%	0%
Adj. Flow (vph)	303	1714	114	111	870	48	108	170	211	58	48	115
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	303	1828	0	111	918	0	108	204	177	58	48	115
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.44	0.88		0.66	0.81		0.33	0.79	0.43	0.49	0.46	0.16
Control Delay	32.1	33.5		60.4	50.9		51.7	82.2	18.3	65.7	86.9	6.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	33.5		60.4	50.9		51.7	82.2	18.3	65.7	86.9	6.1
Queue Length 50th (ft)	119	775		56	437		89	203	44	47	47	0
Queue Length 95th (ft)	253	#1151		124	521		145	308	113	87	97	43
Internal Link Dist (ft)		303			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	690	2182		215	1756		334	366	441	192	394	731
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	0.44	0.84		0.52	0.52		0.32	0.56	0.40	0.30	0.12	0.16

Intersection Summary

Area Type: Other

Cycle Length: 170

Actuated Cycle Length: 146.2

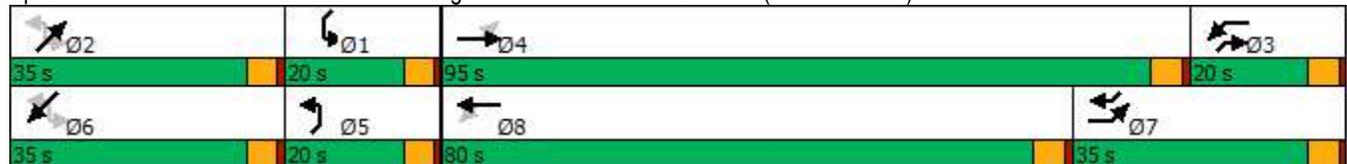
Natural Cycle: 90

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2025 Build Traffic Volumes

Weekday Peak AM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	267	1508	100	98	766	42	95	150	186	51	42	101
Future Volume (veh/h)	267	1508	100	98	766	42	95	150	186	51	42	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.98		0.98	1.00		0.97
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	1856	1856	1722	1796	1796	1737	1885	1811	1549	1909	1939
Adj Flow Rate, veh/h	303	1714	114	111	870	48	108	201	190	58	48	115
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	3	3	12	7	7	11	1	6	26	2	0
Cap, veh/h	684	2032	134	135	1058	58	273	292	306	107	188	701
Arrive On Green	0.33	0.61	0.61	0.05	0.32	0.32	0.09	0.15	0.15	0.03	0.10	0.10
Sat Flow, veh/h	1781	3356	221	1640	3288	181	1654	1885	1505	1475	1909	1593
Grp Volume(v), veh/h	303	893	935	111	452	466	108	201	190	58	48	115
Grp Sat Flow(s),veh/h/ln	1781	1763	1815	1640	1706	1763	1654	1885	1505	1475	1909	1593
Q Serve(g_s), s	9.3	51.3	53.2	4.1	30.9	30.9	0.0	12.8	8.4	0.0	2.9	0.0
Cycle Q Clear(g_c), s	9.3	51.3	53.2	4.1	30.9	30.9	0.0	12.8	8.4	0.0	2.9	0.0
Prop In Lane	1.00		0.12	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	684	1067	1099	135	549	567	273	292	306	107	188	701
V/C Ratio(X)	0.44	0.84	0.85	0.82	0.82	0.82	0.40	0.69	0.62	0.54	0.26	0.16
Avail Cap(c_a), veh/h	684	1252	1289	251	1010	1043	318	446	429	231	452	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	20.0	20.4	58.4	39.6	39.6	50.1	50.7	46.0	59.1	52.9	22.2
Incr Delay (d2), s/veh	0.2	5.6	6.1	4.7	6.5	6.3	0.3	1.1	0.8	1.6	0.3	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	6.7	20.8	22.2	3.6	13.6	14.0	3.2	6.1	2.9	1.9	1.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	25.6	26.4	63.0	46.1	45.9	50.4	51.7	46.8	60.7	53.1	22.2
LnGrp LOS	C	C	C	E	D	D	D	D	D	E	D	C
Approach Vol, veh/h		2131			1029			499			221	
Approach Delay, s/veh		26.5			47.9			49.6			39.0	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	24.6	11.0	81.7	16.5	17.4	47.0	45.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	14.8	6.1	55.2	2.0	4.9	11.3	32.9				
Green Ext Time (p_c), s	0.1	0.8	0.1	21.5	0.1	0.4	0.6	7.9				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕↔		↖	↔			↕	↗
Traffic Volume (vph)	94	93	241	45	42	3	81	54	42	0	88	102
Future Volume (vph)	94	93	241	45	42	3	81	54	42	0	88	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.996			0.934				0.850
Fl _t Protected		0.975			0.976		0.950					
Satd. Flow (prot)	0	1871	1631	0	3651	0	1702	1734	0	0	1900	1669
Fl _t Permitted		0.801			0.783		0.590					
Satd. Flow (perm)	0	1537	1631	0	2929	0	1057	1734	0	0	1900	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			274		3			48				116
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				915
Travel Time (s)		10.6			11.5			17.8				20.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	5%	0%	3%	0%	0%	0%
Adj. Flow (vph)	107	106	274	51	48	3	92	61	48	0	100	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	274	0	102	0	92	109	0	0	100	116
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA			NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		6	6	6
Switch Phase												

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak AM Hour
02/17/2020

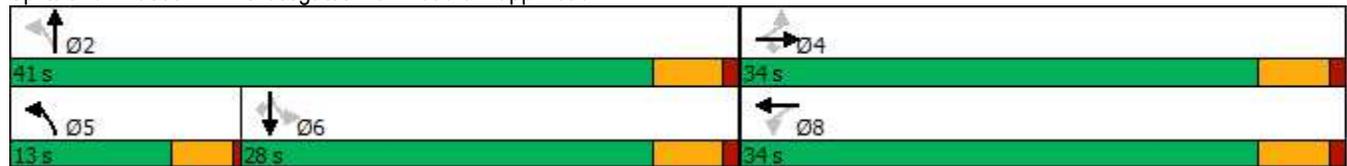


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		8.0	21.0		21.0	21.0	21.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0		13.0	41.0		28.0	28.0	28.0
Total Split (%)	45.3%	45.3%	45.3%	45.3%	45.3%		17.3%	54.7%		37.3%	37.3%	37.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.5	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		4.0	5.0			5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.36	0.34		0.09		0.15	0.13			0.17	0.20
Control Delay		18.6	3.5		14.5		11.0	7.0			20.1	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		18.6	3.5		14.5		11.0	7.0			20.1	5.2
Queue Length 50th (ft)		69	0		15		22	15			34	0
Queue Length 95th (ft)		118	40		29		44	38			67	32
Internal Link Dist (ft)		387			424			705			835	
Turn Bay Length (ft)												150
Base Capacity (vph)		594	798		1134		598	857			582	592
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.36	0.34		0.09		0.15	0.13			0.17	0.20

Intersection Summary

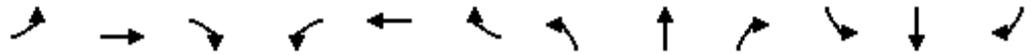
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

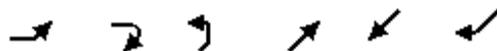
Weekday Peak AM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖↗		↖	↗			↖	↗
Traffic Volume (veh/h)	94	93	241	45	42	3	81	54	42	0	88	102
Future Volume (veh/h)	94	93	241	45	42	3	81	54	42	0	88	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	107	106	274	51	48	3	92	61	48	0	100	116
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	5	0	0	0	0	0
Cap, veh/h	373	350	648	398	610	38	603	467	368	0	583	514
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.12	0.48	0.48	0.00	0.31	0.31
Sat Flow, veh/h	777	905	1677	781	1579	99	1717	973	766	0	1900	1675
Grp Volume(v), veh/h	213	0	274	51	0	51	92	0	109	0	100	116
Grp Sat Flow(s),veh/h/ln	1682	0	1677	781	0	1677	1717	0	1739	0	1900	1675
Q Serve(g_s), s	4.4	0.0	9.0	2.8	0.0	1.4	2.3	0.0	2.6	0.0	2.9	3.9
Cycle Q Clear(g_c), s	6.3	0.0	9.0	9.2	0.0	1.4	2.3	0.0	2.6	0.0	2.9	3.9
Prop In Lane	0.50		1.00	1.00		0.06	1.00		0.44	0.00		1.00
Lane Grp Cap(c), veh/h	723	0	648	398	0	649	603	0	835	0	583	514
V/C Ratio(X)	0.29	0.00	0.42	0.13	0.00	0.08	0.15	0.00	0.13	0.00	0.17	0.23
Avail Cap(c_a), veh/h	723	0	648	398	0	649	603	0	835	0	583	514
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	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	16.9	19.2	0.0	14.5	12.0	0.0	10.8	0.0	19.0	19.4
Incr Delay (d2), s/veh	1.0	0.0	2.0	0.7	0.0	0.2	0.5	0.0	0.3	0.0	0.6	1.0
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	2.6	0.0	3.6	0.7	0.0	0.6	0.9	0.0	1.0	0.0	1.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	18.9	19.9	0.0	14.8	12.6	0.0	11.1	0.0	19.7	20.4
LnGrp LOS	B	A	B	B	A	B	B	A	B	A	B	C
Approach Vol, veh/h		487			102			201			216	
Approach Delay, s/veh		18.1			17.3			11.8			20.1	
Approach LOS		B			B			B			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		41.0		34.0	13.0	28.0		34.0				
Change Period (Y+Rc), s		5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s		36.0		29.0	9.0	23.0		29.0				
Max Q Clear Time (g_c+I1), s		4.6		11.0	4.3	5.9		11.2				
Green Ext Time (p_c), s		0.3		1.3	0.1	0.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				17.2								
HCM 6th LOS				B								

Year 2025 Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	98	41	7	148	102	21
Future Volume (vph)	98	41	7	148	102	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.960				0.977	
Flt Protected	0.966			0.998		
Satd. Flow (prot)	1722	0	0	1877	1745	0
Flt Permitted	0.966			0.998		
Satd. Flow (perm)	1722	0	0	1877	1745	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	2%	3%	0%	0%	2%	10%
Adj. Flow (vph)	114	48	8	172	119	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	0	0	180	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	98	41	7	148	102	21
Future Vol, veh/h	98	41	7	148	102	21
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	3	0	0	2	10
Mvmt Flow	114	48	8	172	119	24

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	321	133	144	0	0
Stage 1	132	-	-	-	-
Stage 2	189	-	-	-	-
Critical Hdwy	6.42	6.23	4.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.2	-	-
Pot Cap-1 Maneuver	673	913	1451	-	-
Stage 1	894	-	-	-	-
Stage 2	843	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	668	911	1450	-	-
Mov Cap-2 Maneuver	668	-	-	-	-
Stage 1	888	-	-	-	-
Stage 2	842	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1450	-	725	-	-
HCM Lane V/C Ratio	0.006	-	0.223	-	-
HCM Control Delay (s)	7.5	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Year 2025 Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	18	20	3	243	103	4
Future Volume (vph)	18	20	3	243	103	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928				0.994	
Flt Protected	0.977			0.999		
Satd. Flow (prot)	1640	0	0	1781	1812	0
Flt Permitted	0.977			0.999		
Satd. Flow (perm)	1640	0	0	1781	1812	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	2%	5%	0%
Adj. Flow (vph)	20	23	3	276	117	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	279	122	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

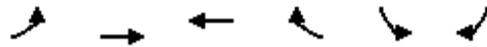
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	18	20	3	243	103	4
Future Vol, veh/h	18	20	3	243	103	4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	2	5	0
Mvmt Flow	20	23	3	276	117	5
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	9	8.1
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	1%	47%	0%
Vol Thru, %	99%	0%	96%
Vol Right, %	0%	53%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	246	38	107
LT Vol	3	18	0
Through Vol	243	0	103
RT Vol	0	20	4
Lane Flow Rate	280	43	122
Geometry Grp	1	1	1
Degree of Util (X)	0.316	0.054	0.143
Departure Headway (Hd)	4.069	4.543	4.248
Convergence, Y/N	Yes	Yes	Yes
Cap	875	793	832
Service Time	2.131	2.543	2.34
HCM Lane V/C Ratio	0.32	0.054	0.147
HCM Control Delay	9	7.8	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.2	0.5

Year 2025 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	261	0	0	6	107
Future Volume (vph)	0	261	0	0	6	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.872	
Fl _t Protected					0.997	
Satd. Flow (prot)	0	1791	1900	0	1795	0
Fl _t Permitted					0.997	
Satd. Flow (perm)	0	1791	1900	0	1795	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	0%	0%	0%	4%
Adj. Flow (vph)	0	293	0	0	7	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	293	0	0	127	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	261	0	0	6	107
Future Vol, veh/h	0	261	0	0	6	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	0	0	0	4
Mvmt Flow	0	293	0	0	7	120

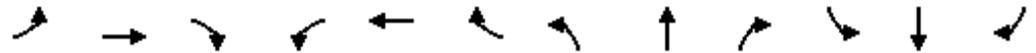
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	294
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	293
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	690
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	749
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1635	-	-	-	690
Mov Cap-2 Maneuver	-	-	-	-	690
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	749

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1047
HCM Lane V/C Ratio	-	-	-	-	0.121
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Year 2025 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	98	7	44	0	129	0	12	21	19	2	0
Future Volume (vph)	162	98	7	44	0	129	0	12	21	19	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.990			0.900			0.915				
Fl _t Protected	0.950				0.987						0.956	
Satd. Flow (prot)	1770	1864	0	0	1847	0	0	1583	0	0	1689	0
Fl _t Permitted	0.950				0.987						0.956	
Satd. Flow (perm)	1770	1864	0	0	1847	0	0	1583	0	0	1689	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			741	
Travel Time (s)		11.1			2.8			9.8			16.8	
Confl. Peds. (#/hr)			1	1			1		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	1%	0%	9%	0%	1%	0%	8%	10%	6%	50%	0%
Adj. Flow (vph)	186	113	8	51	0	148	0	14	24	22	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	121	0	0	199	0	0	38	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

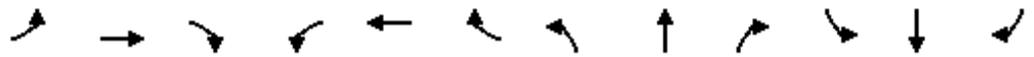
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

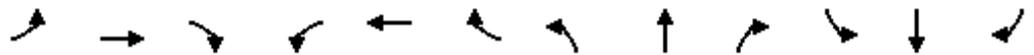
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	162	98	7	44	0	129	0	12	21	19	2	0
Future Vol, veh/h	162	98	7	44	0	129	0	12	21	19	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	1	0	9	0	1	0	8	10	6	50	0
Mvmt Flow	186	113	8	51	0	148	0	14	24	22	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.4	8.6	8.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	25%	90%
Vol Thru, %	36%	0%	93%	0%	10%
Vol Right, %	64%	0%	7%	75%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	162	105	173	21
LT Vol	0	162	0	44	19
Through Vol	12	0	98	0	2
RT Vol	21	0	7	129	0
Lane Flow Rate	38	186	121	199	24
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.051	0.277	0.157	0.234	0.036
Departure Headway (Hd)	4.818	5.347	4.681	4.245	5.367
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	743	676	754	847	667
Service Time	2.845	3.047	2.481	2.262	3.397
HCM Lane V/C Ratio	0.051	0.275	0.16	0.235	0.036
HCM Control Delay	8.1	10.1	8.4	8.6	8.6
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.2	1.1	0.6	0.9	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↖		↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	0	0	137	107	35	130	130	1160	135	129	1346	8
Future Volume (vph)	0	0	137	107	35	130	130	1160	135	129	1346	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.882				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1742	3240	1525	0	1761	4963	1435	1703	3505	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1717	3222	1525	0	1760	4963	1435	1703	3505	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166		137				122			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	2%	7%	6%	8%	2%	4%	12%	6%	3%	0%
Adj. Flow (vph)	0	0	147	115	38	140	140	1247	145	139	1447	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	147	115	178	0	140	1247	145	139	1447	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.41	0.39	0.68		0.64	0.41	0.16	0.65	0.67	0.01
Control Delay			8.3	46.6	26.7		55.3	11.2	3.2	55.4	15.6	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			8.3	46.6	26.7		55.3	11.2	3.2	55.4	15.6	0.0
Queue Length 50th (ft)			0	35	24		83	132	5	83	280	0
Queue Length 95th (ft)			43	65	96		154	216	36	153	468	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			487	992	1072		359	3040	926	347	2147	1004
Starvation Cap Reductn			0	0	0		0	0	0	0	0	0
Spillback Cap Reductn			0	0	0		0	0	0	0	0	0
Storage Cap Reductn			0	0	0		0	0	0	0	0	0
Reduced v/c Ratio			0.30	0.12	0.17		0.39	0.41	0.16	0.40	0.67	0.01

Intersection Summary

Area Type: Other

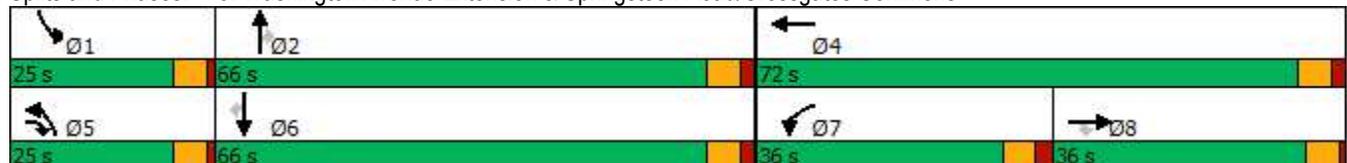
Cycle Length: 163

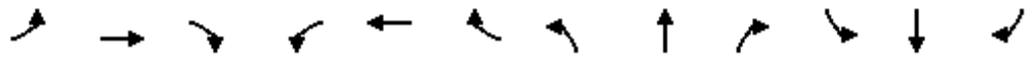
Actuated Cycle Length: 98.3

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	137	107	35	130	130	1160	135	129	1346	8
Future Volume (veh/h)	0	0	137	107	35	130	130	1160	135	129	1346	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1945	1773	1788	1788	1864	1835	1716	1811	1856	1900
Adj Flow Rate, veh/h	0	0	147	115	38	140	140	1247	145	139	1447	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	7	6	6	2	4	12	6	3	0
Cap, veh/h	0	207	334	184	77	282	175	2385	692	172	1684	768
Arrive On Green	0.00	0.00	0.10	0.06	0.23	0.23	0.10	0.48	0.48	0.10	0.48	0.48
Sat Flow, veh/h	0	1976	1639	3275	333	1228	1776	5009	1453	1725	3526	1608
Grp Volume(v), veh/h	0	0	147	115	0	178	140	1247	145	139	1447	9
Grp Sat Flow(s),veh/h/ln	0	1976	1639	1638	0	1561	1776	1670	1453	1725	1763	1608
Q Serve(g_s), s	0.0	0.0	6.9	3.0	0.0	8.7	6.8	15.2	5.1	6.9	31.8	0.3
Cycle Q Clear(g_c), s	0.0	0.0	6.9	3.0	0.0	8.7	6.8	15.2	5.1	6.9	31.8	0.3
Prop In Lane	0.00		1.00	1.00		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	207	334	184	0	358	175	2385	692	172	1684	768
V/C Ratio(X)	0.00	0.00	0.44	0.62	0.00	0.50	0.80	0.52	0.21	0.81	0.86	0.01
Avail Cap(c_a), veh/h	0	700	743	1123	0	1177	406	3435	996	394	2418	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	30.5	40.4	0.0	29.3	38.6	16.0	13.3	38.5	20.2	12.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.3	0.0	0.4	3.2	0.3	0.2	3.4	2.8	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	0.0	0.0	6.4	1.2	0.0	3.2	2.9	5.1	5.4	2.9	11.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	30.9	41.7	0.0	29.7	41.8	16.2	13.5	41.9	23.0	12.0
LnGrp LOS	A	A	C	D	A	C	D	B	B	D	C	B
Approach Vol, veh/h		147			293			1532			1595	
Approach Delay, s/veh		30.9			34.4			18.3			24.6	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	47.7		26.1	13.6	47.8	10.9	15.2				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	8.9	17.2		10.7	8.8	33.8	5.0	8.9				
Green Ext Time (p_c), s	0.2	7.5		0.4	0.2	8.0	0.2	0.3				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour

02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	261	511	73	0	699	139	50	0	0
Future Volume (vph)	261	511	73	0	699	139	50	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.850				
Flt Protected	0.983					0.950			
Satd. Flow (prot)	3185	0	1818	0	1644	1529	1541	0	0
Flt Permitted	0.983					0.469			
Satd. Flow (perm)	3185	0	1818	0	1644	755	1541	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	504				752				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	281	549	78	0	752	149	54	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	830	0	78	0	752	149	54	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

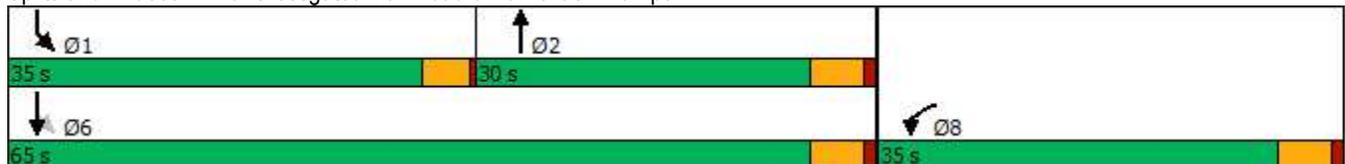


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.65		0.22		0.46	0.29	0.08		
Control Delay	7.9		18.4		0.9	8.1	7.1		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	7.9		18.4		0.9	8.1	7.1		
Queue Length 50th (ft)	30		16		0	16	6		
Queue Length 95th (ft)	81		52		0	51	23		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	2515		1197		1644	1174	1541		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.33		0.07		0.46	0.13	0.04		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 40
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
02/17/2020



Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (veh/h)	261	511	73	0	699	139	50	0	0
Future Volume (veh/h)	261	511	73	0	699	139	50	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1864	2017	1835	1954	1954	1684	1610		
Adj Flow Rate, veh/h	281	549	78	0	0	149	54		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	5	0	4	1	1	13	18		
Cap, veh/h	728	701	196			448	520		
Arrive On Green	0.41	0.41	0.11	0.00	0.00	0.11	0.32		
Sat Flow, veh/h	1776	1709	1835	1656	1656	1604	1610		
Grp Volume(v), veh/h	281	549	78	0	0	149	54		
Grp Sat Flow(s),veh/h/ln	1776	1709	1835	1656	1656	1604	1610		
Q Serve(g_s), s	4.2	10.5	1.5	0.0	0.0	2.8	0.9		
Cycle Q Clear(g_c), s	4.2	10.5	1.5	0.0	0.0	2.8	0.9		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	728	701	196			448	520		
V/C Ratio(X)	0.39	0.78	0.40			0.33	0.10		
Avail Cap(c_a), veh/h	1422	1369	1225			1599	2578		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	7.7	9.6	15.6	0.0	0.0	11.2	8.9		
Incr Delay (d2), s/veh	0.3	2.0	1.3	0.0	0.0	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.2	3.0	0.6	0.0	0.0	0.8	0.2		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	8.1	11.6	16.9	0.0	0.0	11.6	9.0		
LnGrp LOS	A	B	B			B	A		
Approach Vol, veh/h	830		78	A	A		203		
Approach Delay, s/veh	10.4		16.9				10.9		
Approach LOS	B		B				B		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	8.1	9.0				17.1	20.4		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	4.8	3.5				2.9	12.5		
Green Ext Time (p_c), s	0.4	0.3				0.3	2.9		

Intersection Summary

HCM 6th Ctrl Delay			10.9						
HCM 6th LOS			B						

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	324	38	71	130	5	23	0	65	8	0	20
Future Volume (vph)	12	324	38	71	130	5	23	0	65	8	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.995			0.900				0.904
Flt Protected	0.950			0.950				0.987				0.986
Satd. Flow (prot)	1762	1760	0	1752	1872	0	0	1655	0	0	1381	0
Flt Permitted	0.950			0.950				0.987				0.986
Satd. Flow (perm)	1762	1760	0	1752	1872	0	0	1655	0	0	1381	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	13	356	41	77	143	5	25	0	71	9	0	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	397	0	77	148	0	0	96	0	0	31	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 3.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	12	324	38	71	130	5	23	0	65	8	0	20
Future Vol, veh/h	12	324	38	71	130	5	23	0	65	8	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	91	91	92	92	91	91	92	92	92	91	92	91
Heavy Vehicles, %	0	4	2	2	0	0	2	2	2	1	2	28
Mvmt Flow	13	356	41	77	143	5	25	0	71	9	0	22

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	148	0	0	397
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.1	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.2	-	-	2.218
Pot Cap-1 Maneuver	1446	-	-	1162
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1446	-	-	1162
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.2	2.8	13.5	12.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	520	1162	-	-	1446	-	485
HCM Lane V/C Ratio	0.184	0.066	-	-	0.009	-	0.063
HCM Control Delay (s)	13.5	8.3	-	-	7.5	-	12.9
HCM Lane LOS	B	A	-	-	A	-	B
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0	-	0.2

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	10	364	23	45	189	46	12	10	76	21	1	5
Future Volume (vph)	10	364	23	45	189	46	12	10	76	21	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.98		0.99		
Frt		0.991			0.975			0.896			0.875	
Flt Protected		0.999			0.992			0.994		0.950		
Satd. Flow (prot)	0	3385	0	0	3153	0	0	1464	0	1641	1662	0
Flt Permitted		0.946			0.858			0.978		0.689		
Satd. Flow (perm)	0	3205	0	0	2727	0	0	1441	0	1182	1662	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			49			81			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			394			414	
Travel Time (s)		17.9			12.4			9.0			9.4	
Confl. Peds. (#/hr)									11	11		
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
Heavy Vehicles (%)	30%	2%	80%	25%	1%	30%	0%	80%	7%	10%	0%	0%
Adj. Flow (vph)	11	387	24	48	201	49	13	11	81	22	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	0	0	298	0	0	105	0	22	6	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.33			0.27			0.17		0.05	0.01	
Control Delay		8.8			7.5			4.2		7.8	5.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

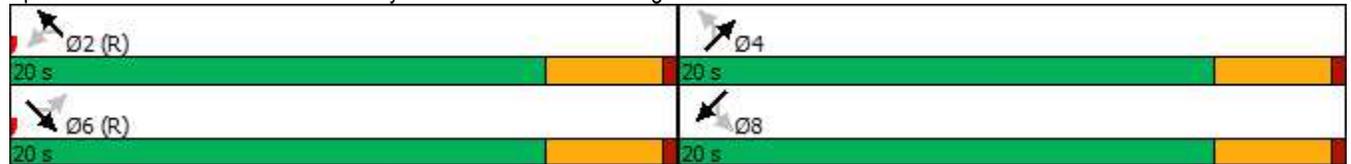


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		8.8			7.5			4.2		7.8	5.5	
Queue Length 50th (ft)		30			17			3		3	0	
Queue Length 95th (ft)		53			36			22		12	5	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1292			1120			625		472	667	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.33			0.27			0.17		0.05	0.01	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	10	364	23	45	189	46	12	10	76	21	1	5
Future Volume (veh/h)	10	364	23	45	189	46	12	10	76	21	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	1988	1988	1988	1862	1862	1862	714	714	714	1752	1900	1900
Adj Flow Rate, veh/h	11	387	24	48	201	49	13	11	81	22	1	5
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	1	1	1	80	80	80	10	0	0
Cap, veh/h	106	1399	85	250	911	219	114	44	189	678	109	547
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	29	3498	213	330	2277	546	31	109	474	1214	273	1367
Grp Volume(v), veh/h	222	0	200	155	0	143	105	0	0	22	0	6
Grp Sat Flow(s),veh/h/ln	1969	0	1771	1558	0	1596	614	0	0	1214	0	1641
Q Serve(g_s), s	0.0	0.0	3.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	3.0	0.0	3.0	2.2	0.0	2.4	4.9	0.0	0.0	0.4	0.0	0.1
Prop In Lane	0.05		0.12	0.31		0.34	0.12		0.77	1.00		0.83
Lane Grp Cap(c), veh/h	882	0	708	741	0	638	347	0	0	678	0	656
V/C Ratio(X)	0.25	0.00	0.28	0.21	0.00	0.22	0.30	0.00	0.00	0.03	0.00	0.01
Avail Cap(c_a), veh/h	882	0	708	741	0	638	347	0	0	678	0	656
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	8.1	7.9	0.0	7.9	8.7	0.0	0.0	7.3	0.0	7.2
Incr Delay (d2), s/veh	0.7	0.0	1.0	0.6	0.0	0.8	2.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.0	0.8	0.0	0.7	0.7	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.0	9.1	8.5	0.0	8.7	10.9	0.0	0.0	7.4	0.0	7.3
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		422			298			105				28
Approach Delay, s/veh		8.9			8.6			10.9				7.4
Approach LOS		A			A			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		4.4		6.9		5.0		2.4				
Green Ext Time (p_c), s		1.4		0.3		1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									

Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

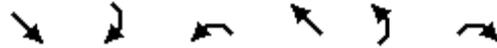
Weekday Peak AM Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↗
Traffic Volume (vph)	420	42	46	255	26	373
Future Volume (vph)	420	42	46	255	26	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.986					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3478	0	1762	1671	1805	1615
Flt Permitted			0.428		0.950	
Satd. Flow (perm)	3478	0	794	1671	1805	1584
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	12					419
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	0%	0%	11%	0%	0%
Adj. Flow (vph)	472	47	52	287	29	419
Shared Lane Traffic (%)						
Lane Group Flow (vph)	519	0	52	287	29	419
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

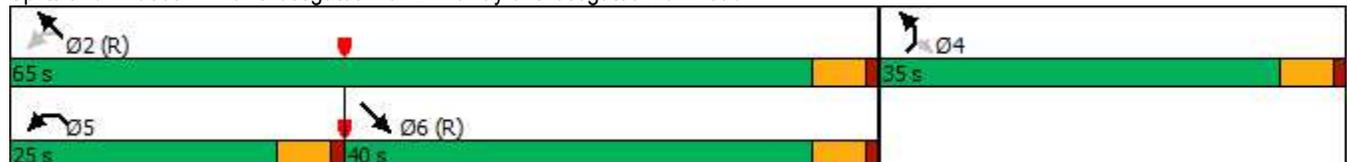


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.21		0.07	0.21	0.17	0.79
Control Delay	6.1		3.1	3.3	44.8	18.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	6.1		3.1	3.3	44.8	18.4
Queue Length 50th (ft)	47		4	27	18	21
Queue Length 95th (ft)	102		18	84	39	71
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2482		831	1342	541	768
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.21		0.06	0.21	0.05	0.55

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↙	↑	↘	↗
Traffic Volume (veh/h)	420	42	46	255	26	373
Future Volume (veh/h)	420	42	46	255	26	373
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1864	1864	1979	1814	1900	1900
Adj Flow Rate, veh/h	472	47	52	287	29	419
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	11	0	0
Cap, veh/h	1761	175	562	1127	504	448
Arrive On Green	0.54	0.54	0.03	0.62	0.28	0.28
Sat Flow, veh/h	3348	323	1884	1814	1810	1610
Grp Volume(v), veh/h	256	263	52	287	29	419
Grp Sat Flow(s),veh/h/ln	1771	1806	1884	1814	1810	1610
Q Serve(g_s), s	7.8	7.8	1.2	7.1	1.2	25.4
Cycle Q Clear(g_c), s	7.8	7.8	1.2	7.1	1.2	25.4
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	977	562	1127	504	448
V/C Ratio(X)	0.27	0.27	0.09	0.25	0.06	0.93
Avail Cap(c_a), veh/h	958	977	881	1127	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.76	0.76	1.00	1.00
Uniform Delay (d), s/veh	12.3	12.3	9.1	8.5	26.5	35.2
Incr Delay (d2), s/veh	0.7	0.6	0.1	0.4	0.0	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.2	0.5	2.7	0.5	23.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.0	13.0	9.1	8.9	26.5	59.8
LnGrp LOS	B	B	A	A	C	E
Approach Vol, veh/h				339	448	
Approach Delay, s/veh				9.0	57.7	
Approach LOS				A	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.1		32.9	8.1	59.1
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		9.1		27.4	3.2	9.8
Green Ext Time (p_c), s		1.9		0.5	0.1	3.3
Intersection Summary						
HCM 6th Ctrl Delay			27.3			
HCM 6th LOS			C			

Year 2025 Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Weekday Peak AM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	42	288	22	75	0	0
Future Volume (vph)	42	288	22	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.895			
Flt Protected		0.994				
Satd. Flow (prot)	0	1852	1700	0	0	1863
Flt Permitted		0.994				
Satd. Flow (perm)	0	1852	1700	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		741	433		503	
Travel Time (s)		16.8	9.8		11.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	303	23	79	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	347	102	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.8					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	42	288	22	75	0	0
Future Vol, veh/h	42	288	22	75	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	303	23	79	0	0

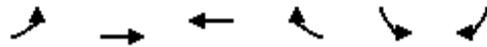
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	102	0	-	0	- 63
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.318
Pot Cap-1 Maneuver	1490	-	-	-	0 1002
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1490	-	-	-	- 1002
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1490	-	-	-
HCM Lane V/C Ratio	-	0.03	-	-	-
HCM Control Delay (s)	0	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-	-

Year 2025 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1850	997	2	4	2
Future Volume (vph)	1	1850	997	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.955	
Fl _t Protected	0.950				0.968	
Satd. Flow (prot)	1805	3471	3374	0	1756	0
Fl _t Permitted	0.950				0.968	
Satd. Flow (perm)	1805	3471	3374	0	1756	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		911	383		970	
Travel Time (s)		15.5	6.5		22.0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	7%	0%	0%	0%
Adj. Flow (vph)	1	2033	1096	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	2033	1098	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1850	997	2	4	2
Future Vol, veh/h	1	1850	997	2	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	4	7	0	0	0
Mvmt Flow	1	2033	1096	2	4	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1098	0	0 2116 549
Stage 1	-	-	- 1097 -
Stage 2	-	-	- 1019 -
Critical Hdwy	4.1	-	- 6.8 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.8 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	643	-	- 45 485
Stage 1	-	-	- 286 -
Stage 2	-	-	- 314 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	643	-	- 45 485
Mov Cap-2 Maneuver	-	-	- 45 -
Stage 1	-	-	- 285 -
Stage 2	-	-	- 314 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	66.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	643	-	-	-	65
HCM Lane V/C Ratio	0.002	-	-	-	0.101
HCM Control Delay (s)	10.6	-	-	-	66.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Year 2025 Build Traffic Volumes
17: Rapp Road & Site 1 Driveway

Weekday Peak AM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	22	55	17	134	136	7
Future Volume (vph)	22	55	17	134	136	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.993	
Flt Protected	0.986			0.995		
Satd. Flow (prot)	1660	0	0	1844	1850	0
Flt Permitted	0.986			0.995		
Satd. Flow (perm)	1660	0	0	1844	1850	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	369			915	439	
Travel Time (s)	8.4			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	60	18	146	148	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	0	164	156	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		
Traffic Vol, veh/h	22	55	17	134	136	7
Future Vol, veh/h	22	55	17	134	136	7
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	60	18	146	148	8

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	334	152	156	0	0
Stage 1	152	-	-	-	-
Stage 2	182	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	661	894	1424	-	-
Stage 1	876	-	-	-	-
Stage 2	849	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	652	894	1424	-	-
Mov Cap-2 Maneuver	652	-	-	-	-
Stage 1	864	-	-	-	-
Stage 2	849	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	10	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1424	-	808	-	-
HCM Lane V/C Ratio	0.013	-	0.104	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Year 2025 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	393	15	44	182
Future Volume (vph)	0	35	393	15	44	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.995			
Flt Protected						0.990
Satd. Flow (prot)	0	1611	3625	0	0	3521
Flt Permitted						0.990
Satd. Flow (perm)	0	1611	3625	0	0	3521
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	38	427	16	48	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	38	443	0	0	246
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	35	393	15	44	182
Future Vol, veh/h	0	35	393	15	44	182
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	38	427	16	48	198

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	222	0 0 443 0
Stage 1	-	-	- - - -
Stage 2	-	-	- - - -
Critical Hdwy	-	6.94	- - 4.14 -
Critical Hdwy Stg 1	-	-	- - - -
Critical Hdwy Stg 2	-	-	- - - -
Follow-up Hdwy	-	3.32	- - 2.22 -
Pot Cap-1 Maneuver	0	782	- - 1113 -
Stage 1	0	-	- - - -
Stage 2	0	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	-	782	- - 1113 -
Mov Cap-2 Maneuver	-	-	- - - -
Stage 1	-	-	- - - -
Stage 2	-	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	782 1113	-
HCM Lane V/C Ratio	-	-	0.049 0.043	-
HCM Control Delay (s)	-	-	9.8 8.4	0.1
HCM Lane LOS	-	-	A A	A
HCM 95th %tile Q(veh)	-	-	0.2 0.1	-

Year 2025 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	408	15	0	182
Future Volume (vph)	0	0	408	15	0	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1863	3625	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3625	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	443	16	0	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	459	0	0	198
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Weekday Peak AM Hour
 02/17/2020

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	408	15	0	182
Future Vol, veh/h	0	0	408	15	0	182
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	0	443	16	0	198

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	230	0	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	772	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	772	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2025 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	17	7	18	10	66
Future Volume (vph)	64	17	7	18	10	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.972				0.883	
Flt Protected	0.962			0.986		
Satd. Flow (prot)	1742	0	0	1837	1653	0
Flt Permitted	0.962			0.986		
Satd. Flow (perm)	1742	0	0	1837	1653	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	18	8	20	11	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	0	28	83	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	64	17	7	18	10	66
Future Vol, veh/h	64	17	7	18	10	66
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	18	8	20	11	72

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	83	47	83	0	0
Stage 1	47	-	-	-	-
Stage 2	36	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	919	1022	1514	-	-
Stage 1	975	-	-	-	-
Stage 2	986	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	914	1022	1514	-	-
Mov Cap-2 Maneuver	914	-	-	-	-
Stage 1	970	-	-	-	-
Stage 2	986	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1514	-	935	-	-
HCM Lane V/C Ratio	0.005	-	0.094	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Year 2025 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Weekday Peak AM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	23	64	18	43	66
Future Volume (vph)	10	23	64	18	43	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.906		0.970			
Flt Protected	0.985					0.981
Satd. Flow (prot)	1662	0	1807	0	0	1836
Flt Permitted	0.985					0.981
Satd. Flow (perm)	1662	0	1807	0	0	1836
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	25	70	20	47	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	90	0	0	119
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	23	64	18	43	66
Future Vol, veh/h	10	23	64	18	43	66
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	25	70	20	47	72

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	246	80	0	0	90
Stage 1	80	-	-	-	-
Stage 2	166	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	742	980	-	-	1505
Stage 1	943	-	-	-	-
Stage 2	863	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	718	980	-	-	1505
Mov Cap-2 Maneuver	718	-	-	-	-
Stage 1	943	-	-	-	-
Stage 2	835	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	1505
HCM Lane V/C Ratio	-	-	0.041	0.031
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Year 2025 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	0	12	0	0	49
Future Volume (vph)	34	0	12	0	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected	0.950			0.950		
Satd. Flow (prot)	1770	0	0	1770	0	1611
Fl _t Permitted	0.950			0.950		
Satd. Flow (perm)	1770	0	0	1770	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	0	13	0	0	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	0	13	0	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	34	0	12	0	0	49
Future Vol, veh/h	34	0	12	0	0	49
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	0	13	0	0	53

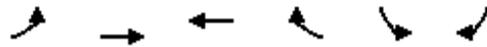
Major/Minor	Minor2	Major1	
Conflicting Flow All	26	-	0
Stage 1	0	-	-
Stage 2	26	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	989	0	-
Stage 1	-	0	-
Stage 2	997	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	989	-	-
Mov Cap-2 Maneuver	989	-	-
Stage 1	-	-	-
Stage 2	997	-	-

Approach	EB	NB
HCM Control Delay, s	8.8	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	989
HCM Lane V/C Ratio	-	-	0.037
HCM Control Delay (s)	-	-	8.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1118	2013	237	322	49
Future Volume (vph)	0	1118	2013	237	322	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4789	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4789	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			52			17
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1215	2188	258	350	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1215	2446	0	350	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020

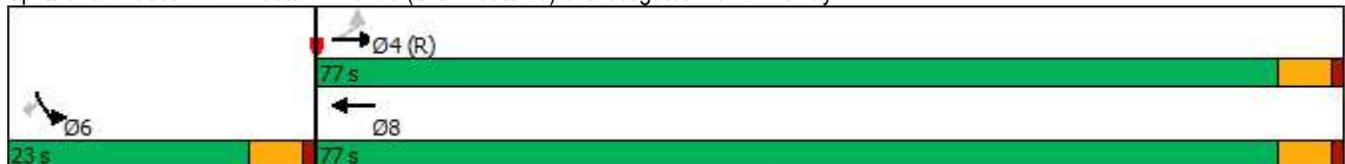


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.48	0.71		0.58	0.18
Control Delay		6.7	9.2		35.1	20.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.7	9.2		35.1	20.4
Queue Length 50th (ft)		148	272		106	19
Queue Length 95th (ft)		186	321		153	53
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3462		605	293
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.48	0.71		0.58	0.18

Intersection Summary

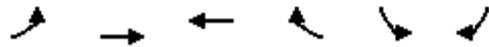
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↶↶	↶↶↶		↶↶	↶
Traffic Volume (veh/h)	0	1118	2013	237	322	49
Future Volume (veh/h)	0	1118	2013	237	322	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1215	2188	258	350	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	3299	382	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	139	3647	4748	531	3282	1505
Grp Volume(v), veh/h	0	1215	1595	851	350	53
Grp Sat Flow(s),veh/h/ln	139	1777	1681	1751	1641	1505
Q Serve(g_s), s	0.0	14.5	25.3	26.5	9.8	3.0
Cycle Q Clear(g_c), s	0.0	14.5	25.3	26.5	9.8	3.0
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1261	591	271
V/C Ratio(X)	0.00	0.47	0.66	0.67	0.59	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1261	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	0.0	6.0	7.5	7.6	37.6	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.7	1.4	4.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	7.0	7.8	4.2	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.6	8.1	9.1	41.7	36.3
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		1215	2446		403	
Approach Delay, s/veh		6.6	8.5		41.0	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				16.5	11.8	28.5
Green Ext Time (p_c), s				11.5	0.8	29.5
Intersection Summary						
HCM 6th Ctrl Delay			11.1			
HCM 6th LOS			B			

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1169	30	71	1898	37	18	0	48	0	0	156
Future Volume (vph)	37	1169	30	71	1898	37	18	0	48	0	0	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.902				0.865
Flt Protected	0.950			0.950				0.987				
Satd. Flow (prot)	1832	3443	0	1778	3361	0	0	1503	0	0	1652	0
Flt Permitted	0.950			0.950				0.987				
Satd. Flow (perm)	1832	3443	0	1778	3361	0	0	1503	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	0%	2%	20%	0%	2%	0%	17%	0%	5%	0%	0%	0%
Adj. Flow (vph)	39	1244	32	76	2019	39	19	0	51	0	0	166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	1276	0	76	2058	0	0	70	0	0	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Weekday Peak PM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	99.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	37	1169	30	71	1898	37	18	0	48	0	0	156
Future Vol, veh/h	37	1169	30	71	1898	37	18	0	48	0	0	156
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	2	20	0	2	0	17	0	5	0	0	0
Mvmt Flow	39	1244	32	76	2019	39	19	0	51	0	0	166

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2058	0	0	1276	0	0	2500	3548	638	2891	3545	1029
Stage 1	-	-	-	-	-	-	1338	1338	-	2191	2191	-
Stage 2	-	-	-	-	-	-	1162	2210	-	700	1354	-
Critical Hdwy	4.1	-	-	4.1	-	-	8.04	6.7	7.1	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.04	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.67	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	276	-	-	551	-	-	~ 10	5	405	9	7	241
Stage 1	-	-	-	-	-	-	131	208	-	54	95	-
Stage 2	-	-	-	-	-	-	173	73	-	417	237	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	276	-	-	551	-	-	~ 2	4	405	6	5	241
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 2	4	-	6	5	-
Stage 1	-	-	-	-	-	-	113	179	-	46	82	-
Stage 2	-	-	-	-	-	-	46	63	-	313	204	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.4	\$ 5090.7	47.5
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	7	276	-	-	551	-	-	241
HCM Lane V/C Ratio	10.03	0.143	-	-	0.137	-	-	0.689
HCM Control Delay (s)	\$ 5090.7	20.2	-	-	12.6	-	-	47.5
HCM Lane LOS	F	C	-	-	B	-	-	E
HCM 95th %tile Q(veh)	10.4	0.5	-	-	0.5	-	-	4.5

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

Year 2025 Build Traffic Volumes

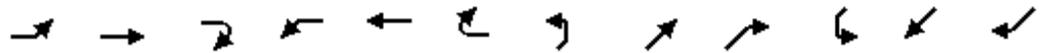
Weekday Peak PM Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	227	987	101	136	1563	76	133	77	97	104	203	330
Future Volume (vph)	227	987	101	136	1563	76	133	77	97	104	203	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%			-1%	
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.97	0.99		
Frt		0.986			0.993			0.974	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3517	0	1805	3492	0	1770	1749	1534	1634	1909	1607
Flt Permitted	0.064			0.091			0.237			0.576		
Satd. Flow (perm)	119	3517	0	173	3492	0	441	1749	1489	977	1909	1607
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			4			5	87			49
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		383			1018			654			346	
Travel Time (s)		6.5			17.4			14.9			7.9	
Confl. Peds. (#/hr)	4		4	4		4			10	10		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	1%	0%	0%	2%	14%	2%	0%	0%	11%	0%	1%
Adj. Flow (vph)	244	1061	109	146	1681	82	143	83	104	112	218	355
Shared Lane Traffic (%)									16%			
Lane Group Flow (vph)	244	1170	0	146	1763	0	143	100	87	112	218	355
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7

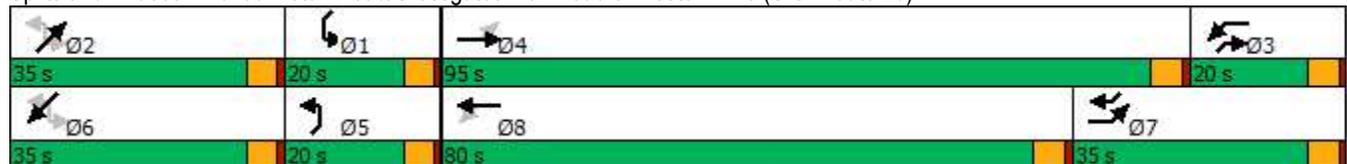


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.71	0.81		0.27	1.02		0.83	0.51	0.14	0.39	0.83	0.62
Control Delay	61.0	44.6		32.9	66.6		98.6	69.6	6.9	54.8	90.6	40.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	44.6		32.9	66.6		98.6	69.6	6.9	54.8	90.6	40.7
Queue Length 50th (ft)	181	563		47	~1044		122	102	0	94	222	261
Queue Length 95th (ft)	290	605		134	#1336		190	165	44	153	327	376
Internal Link Dist (ft)		303			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	396	2082		531	1721		222	348	608	306	375	569
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	0.62	0.56		0.27	1.02		0.64	0.29	0.14	0.37	0.58	0.62

Intersection Summary

Area Type: Other
 Cycle Length: 170
 Actuated Cycle Length: 153.4
 Natural Cycle: 100
 Control Type: Semi Act-Uncoord
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	227	987	101	136	1563	76	133	77	97	104	203	330
Future Volume (veh/h)	227	987	101	136	1563	76	133	77	97	104	203	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.97	0.98		0.98
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	1885	1885	1900	1870	1870	1870	1900	1900	1774	1939	1924
Adj Flow Rate, veh/h	244	1061	109	146	1681	82	143	99	94	112	218	355
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	1	1	0	2	2	2	0	0	11	0	1
Cap, veh/h	270	1272	131	549	1789	87	167	212	583	284	299	447
Arrive On Green	0.12	0.39	0.39	0.25	0.52	0.52	0.06	0.11	0.11	0.11	0.15	0.15
Sat Flow, veh/h	1781	3277	336	1810	3449	167	1781	1900	1567	1690	1939	1599
Grp Volume(v), veh/h	244	579	591	146	861	902	143	99	94	112	218	355
Grp Sat Flow(s),veh/h/ln	1781	1791	1823	1810	1777	1840	1781	1900	1567	1690	1939	1599
Q Serve(g_s), s	15.1	41.6	41.7	1.6	64.4	65.8	6.9	6.9	0.0	0.0	15.2	11.4
Cycle Q Clear(g_c), s	15.1	41.6	41.7	1.6	64.4	65.8	6.9	6.9	0.0	0.0	15.2	11.4
Prop In Lane	1.00		0.18	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	695	708	549	922	954	167	212	583	284	299	447
V/C Ratio(X)	0.90	0.83	0.83	0.27	0.93	0.94	0.86	0.47	0.16	0.39	0.73	0.79
Avail Cap(c_a), veh/h	426	1133	1153	549	937	970	242	401	739	284	409	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	39.4	39.4	38.2	32.0	32.3	64.3	59.2	30.5	55.1	57.3	47.5
Incr Delay (d2), s/veh	10.8	5.7	5.7	0.1	16.4	17.5	13.1	0.6	0.0	0.3	2.2	5.5
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	9.3	19.0	19.3	3.9	30.4	32.3	5.7	3.4	2.2	3.7	7.7	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.6	45.1	45.1	38.3	48.4	49.8	77.4	59.8	30.5	55.5	59.5	53.0
LnGrp LOS	E	D	D	D	D	D	E	E	C	E	E	D
Approach Vol, veh/h		1414			1909			336			685	
Approach Delay, s/veh		49.5			48.3			59.1			55.5	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.1	20.9	41.1	60.2	14.0	27.0	22.5	78.8				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	8.9	3.6	43.7	8.9	17.2	17.1	67.8				
Green Ext Time (p_c), s	0.2	0.4	0.2	11.5	0.1	1.2	0.4	6.0				

Intersection Summary

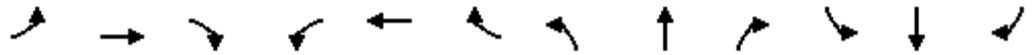
HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕↔		↖	↔			↕	↗
Traffic Volume (vph)	89	110	108	101	237	20	274	129	134	10	89	270
Future Volume (vph)	89	110	108	101	237	20	274	129	134	10	89	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%				0%
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.924				0.850
Flt Protected		0.978			0.986		0.950				0.995	
Satd. Flow (prot)	0	1877	1631	0	3667	0	1702	1712	0	0	1890	1669
Flt Permitted		0.682			0.759		0.548				0.957	
Satd. Flow (perm)	0	1309	1631	0	2823	0	982	1712	0	0	1818	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		9			103				307
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				915
Travel Time (s)		10.6			11.5			17.8				20.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	5%	0%	3%	0%	0%	0%
Adj. Flow (vph)	101	125	123	115	269	23	311	147	152	11	101	307
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	123	0	407	0	311	299	0	0	112	307
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2				6
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		6	6	6
Switch Phase												

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020

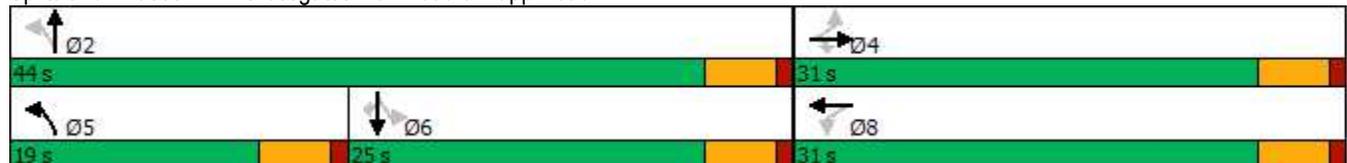


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0		9.0	21.0		21.0	21.0	21.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0		19.0	44.0		25.0	25.0	25.0
Total Split (%)	41.3%	41.3%	41.3%	41.3%	41.3%		25.3%	58.7%		33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0			5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.50	0.19		0.41		0.48	0.32			0.23	0.46
Control Delay		24.0	4.5		19.8		13.5	7.6			23.1	5.4
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		24.0	4.5		19.8		13.5	7.6			23.1	5.4
Queue Length 50th (ft)		82	0		72		79	46			41	0
Queue Length 95th (ft)		142	31		107		128	87			79	52
Internal Link Dist (ft)		387			424			705			835	
Turn Bay Length (ft)												150
Base Capacity (vph)		453	645		984		645	939			484	670
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.50	0.19		0.41		0.48	0.32			0.23	0.46

Intersection Summary

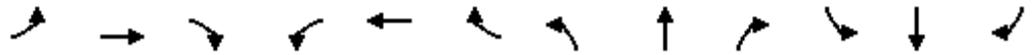
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Weekday Peak PM Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖↗		↖	↗			↖	↗
Traffic Volume (veh/h)	89	110	108	101	237	20	274	129	134	10	89	270
Future Volume (veh/h)	89	110	108	101	237	20	274	129	134	10	89	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1979	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	101	125	123	115	269	23	311	147	152	11	101	307
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	5	0	0	0	0	0
Cap, veh/h	234	269	581	213	628	60	624	439	454	72	474	447
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.19	0.52	0.52	0.27	0.27	0.27
Sat Flow, veh/h	474	775	1677	388	1812	172	1717	845	874	71	1777	1675
Grp Volume(v), veh/h	226	0	123	184	0	223	311	0	299	112	0	307
Grp Sat Flow(s),veh/h/ln	1249	0	1677	709	0	1664	1717	0	1719	1848	0	1675
Q Serve(g_s), s	6.2	0.0	3.9	8.2	0.0	7.6	8.6	0.0	7.6	0.0	0.0	12.3
Cycle Q Clear(g_c), s	13.8	0.0	3.9	22.0	0.0	7.6	8.6	0.0	7.6	3.4	0.0	12.3
Prop In Lane	0.45		1.00	0.62		0.10	1.00		0.51	0.10		1.00
Lane Grp Cap(c), veh/h	503	0	581	324	0	577	624	0	894	546	0	447
V/C Ratio(X)	0.45	0.00	0.21	0.57	0.00	0.39	0.50	0.00	0.33	0.21	0.00	0.69
Avail Cap(c_a), veh/h	503	0	581	324	0	577	624	0	894	546	0	447
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	17.3	26.9	0.0	18.5	12.7	0.0	10.5	21.4	0.0	24.7
Incr Delay (d2), s/veh	2.9	0.0	0.8	7.1	0.0	1.9	2.8	0.0	1.0	0.9	0.0	8.4
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	3.6	0.0	1.6	3.6	0.0	3.1	3.5	0.0	2.8	1.6	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	18.1	34.0	0.0	20.4	15.5	0.0	11.5	22.3	0.0	33.1
LnGrp LOS	C	A	B	C	A	C	B	A	B	C	A	C
Approach Vol, veh/h		349			407			610				419
Approach Delay, s/veh		21.8			26.6			13.5				30.2
Approach LOS		C			C			B				C
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.0		31.0	19.0	25.0		31.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		39.0		26.0	14.0	20.0		26.0				
Max Q Clear Time (g_c+I1), s		9.6		15.8	10.6	14.3		24.0				
Green Ext Time (p_c), s		0.8		0.8	0.3	0.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				22.0								
HCM 6th LOS				C								

Year 2025 Build Traffic Volumes
5: Rapp Road & Gipp Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	49	22	49	147	337	113
Future Volume (vph)	49	22	49	147	337	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.958				0.966	
Flt Protected	0.967			0.988		
Satd. Flow (prot)	1690	0	0	1858	1779	0
Flt Permitted	0.967			0.988		
Satd. Flow (perm)	1690	0	0	1858	1779	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	0%	0%	0%	0%	1%
Adj. Flow (vph)	56	25	56	169	387	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	81	0	0	225	517	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	49	22	49	147	337	113
Future Vol, veh/h	49	22	49	147	337	113
Conflicting Peds, #/hr	1	1	1	0	0	1
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	6	0	0	0	0	1
Mvmt Flow	56	25	56	169	387	130

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	735	454	518	0	-	0
Stage 1	453	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.46	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	381	610	1058	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	609	1057	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	15.9	2.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1057	-	410	-	-
HCM Lane V/C Ratio	0.053	-	0.199	-	-
HCM Control Delay (s)	8.6	0	15.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Year 2025 Build Traffic Volumes
6: Rapp Road & Pine Lane

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	6	12	18	178	438	13
Future Volume (vph)	6	12	18	178	438	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.910				0.996	
Flt Protected	0.984			0.995		
Satd. Flow (prot)	1533	0	0	1799	1902	0
Flt Permitted	0.984			0.995		
Satd. Flow (perm)	1533	0	0	1799	1902	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	17%	0%	6%	0%	0%	0%
Adj. Flow (vph)	7	14	21	207	509	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	228	524	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

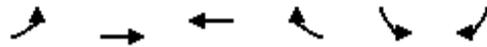
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	6	12	18	178	438	13
Future Vol, veh/h	6	12	18	178	438	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	17	0	6	0	0	0
Mvmt Flow	7	14	21	207	509	15
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.5	13.2
HCM LOS	A	A	B

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	9%	33%	0%
Vol Thru, %	91%	0%	97%
Vol Right, %	0%	67%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	196	18	451
LT Vol	18	6	0
Through Vol	178	0	438
RT Vol	0	12	13
Lane Flow Rate	228	21	524
Geometry Grp	1	1	1
Degree of Util (X)	0.29	0.032	0.596
Departure Headway (Hd)	4.584	5.455	4.091
Convergence, Y/N	Yes	Yes	Yes
Cap	789	659	865
Service Time	2.588	3.467	2.191
HCM Lane V/C Ratio	0.289	0.032	0.606
HCM Control Delay	9.5	8.6	13.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.2	0.1	4

Year 2025 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	0	185	0	0	12	451
Future Volume (vph)	0	185	0	0	12	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.868	
Fl _t Protected					0.999	
Satd. Flow (prot)	0	1791	1900	0	1840	0
Fl _t Permitted					0.999	
Satd. Flow (perm)	0	1791	1900	0	1840	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	0%	1%
Adj. Flow (vph)	0	218	0	0	14	531
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	218	0	0	545	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	185	0	0	12	451
Future Vol, veh/h	0	185	0	0	12	451
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	1	0	0	0	1
Mvmt Flow	0	218	0	0	14	531

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	219 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	218 -
Critical Hdwy	4.1	-	-	-	6.6 6.31
Critical Hdwy Stg 1	-	-	-	-	5.6 -
Critical Hdwy Stg 2	-	-	-	-	5.6 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.309
Pot Cap-1 Maneuver	1635	-	-	-	764 1087
Stage 1	-	-	-	-	1027 -
Stage 2	-	-	-	-	813 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	764 1087
Mov Cap-2 Maneuver	-	-	-	-	764 -
Stage 1	-	-	-	-	1027 -
Stage 2	-	-	-	-	813 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1075
HCM Lane V/C Ratio	-	-	-	-	0.507
HCM Control Delay (s)	0	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	3

Year 2025 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	46	3	30	0	208	0	26	37	103	2	0
Future Volume (vph)	148	46	3	30	0	208	0	26	37	103	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	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 Factor												
Fr _t		0.992			0.882			0.921				
Fl _t Protected	0.950				0.994						0.953	
Satd. Flow (prot)	1805	1885	0	0	1878	0	0	1741	0	0	1847	0
Fl _t Permitted	0.950				0.994						0.953	
Satd. Flow (perm)	1805	1885	0	0	1878	0	0	1741	0	0	1847	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			741	
Travel Time (s)		11.1			2.8			9.8			16.8	
Confl. Peds. (#/hr)			1	1			1		1			
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	161	50	3	33	0	226	0	28	40	112	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	161	53	0	0	259	0	0	68	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	148	46	3	30	0	208	0	26	37	103	2	0
Future Vol, veh/h	148	46	3	30	0	208	0	26	37	103	2	0
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
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	161	50	3	33	0	226	0	28	40	112	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.9	9.2	8.4	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	13%	98%
Vol Thru, %	41%	0%	94%	0%	2%
Vol Right, %	59%	0%	6%	87%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	148	49	238	105
LT Vol	0	148	0	30	103
Through Vol	26	0	46	0	2
RT Vol	37	0	3	208	0
Lane Flow Rate	68	161	53	259	114
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.091	0.253	0.076	0.305	0.167
Departure Headway (Hd)	4.805	5.672	5.126	4.244	5.274
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	740	631	696	843	677
Service Time	2.873	3.425	2.878	2.291	3.336
HCM Lane V/C Ratio	0.092	0.255	0.076	0.307	0.168
HCM Control Delay	8.4	10.4	8.3	9.2	9.4
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.3	1	0.2	1.3	0.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	0	0	186	295	55	259	178	1419	353	241	1398	5
Future Volume (vph)	0	0	186	295	55	259	178	1419	353	241	1398	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99	0.99		1.00					0.98
Frt			0.850		0.876				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1759	3333	1615	0	1796	5110	1560	1787	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1734	3315	1615	0	1795	5110	1560	1787	3574	1581
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		174				261			94
Link Speed (mph)		30			30			45				45
Link Distance (ft)		124			869			1287				1236
Travel Time (s)		2.8			19.8			19.5				18.7
Confl. Peds. (#/hr)	3		2	2		3	1					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
Heavy Vehicles (%)	0%	0%	1%	4%	0%	1%	0%	1%	3%	1%	1%	0%
Adj. Flow (vph)	0	0	198	314	59	276	189	1510	376	256	1487	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	198	314	335	0	189	1510	376	256	1487	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.63	0.60	0.84		0.70	0.58	0.41	0.80	0.77	0.01
Control Delay			40.9	48.9	40.5		60.5	20.7	6.9	64.7	25.4	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.9	48.9	40.5		60.5	20.7	6.9	64.7	25.4	0.0
Queue Length 50th (ft)			92	110	116		129	261	41	178	426	0
Queue Length 95th (ft)			185	158	228		227	368	122	#359	652	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			365	899	1028		323	2757	961	321	1928	896
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			0.54	0.35	0.33		0.59	0.55	0.39	0.80	0.77	0.01

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 111.9

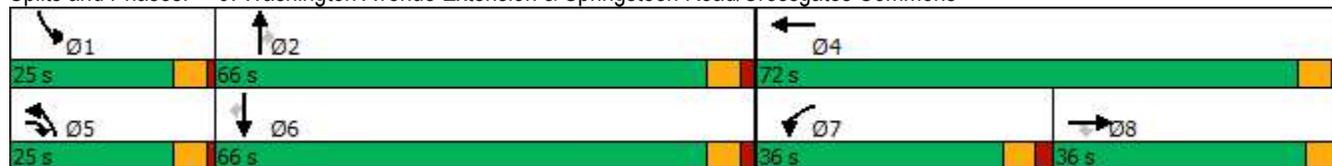
Natural Cycle: 80

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	186	295	55	259	178	1419	353	241	1398	5
Future Volume (veh/h)	0	0	186	295	55	259	178	1419	353	241	1398	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1976	1961	1817	1876	1876	1894	1879	1850	1885	1885	1900
Adj Flow Rate, veh/h	0	0	198	314	59	276	189	1510	376	256	1487	5
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	1	4	0	0	0	1	3	1	1	0
Cap, veh/h	0	243	403	382	82	385	217	2130	650	282	1618	727
Arrive On Green	0.00	0.00	0.12	0.11	0.29	0.29	0.12	0.42	0.42	0.16	0.45	0.45
Sat Flow, veh/h	0	1976	1653	3357	287	1343	1804	5130	1566	1795	3582	1608
Grp Volume(v), veh/h	0	0	198	314	0	335	189	1510	376	256	1487	5
Grp Sat Flow(s),veh/h/ln	0	1976	1653	1679	0	1630	1804	1710	1566	1795	1791	1608
Q Serve(g_s), s	0.0	0.0	12.4	11.0	0.0	22.2	12.4	29.4	22.3	16.9	46.9	0.2
Cycle Q Clear(g_c), s	0.0	0.0	12.4	11.0	0.0	22.2	12.4	29.4	22.3	16.9	46.9	0.2
Prop In Lane	0.00		1.00	1.00		0.82	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	243	403	382	0	467	217	2130	650	282	1618	727
V/C Ratio(X)	0.00	0.00	0.49	0.82	0.00	0.72	0.87	0.71	0.58	0.91	0.92	0.01
Avail Cap(c_a), veh/h	0	509	626	836	0	893	300	2556	780	298	1784	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	39.2	52.2	0.0	38.6	52.0	29.2	27.1	49.9	30.9	18.2
Incr Delay (d2), s/veh	0.0	0.0	0.3	1.7	0.0	0.8	14.2	0.9	1.2	27.7	8.0	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	0.0	0.0	0.0	4.7	0.0	9.0	6.3	11.6	0.2	9.5	20.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	39.5	53.9	0.0	39.4	66.2	30.1	28.3	77.6	38.9	18.2
LnGrp LOS	A	A	D	D	A	D	E	C	C	E	D	B
Approach Vol, veh/h		198			649			2075			1748	
Approach Delay, s/veh		39.5			46.4			33.0			44.5	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.9	56.0		40.5	19.5	60.4	19.7	20.8				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	18.9	31.4		24.2	14.4	48.9	13.0	14.4				
Green Ext Time (p_c), s	0.1	10.4		0.8	0.1	5.6	0.7	0.4				

Intersection Summary

HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (vph)	620	520	152	0	595	651	232	0	0
Future Volume (vph)	620	520	152	0	595	651	232	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.850				
Flt Protected	0.974					0.950			
Satd. Flow (prot)	3348	0	1890	0	1660	1727	1699	0	0
Flt Permitted	0.974					0.414			
Satd. Flow (perm)	3348	0	1890	0	1660	753	1699	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	216				564				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	653	547	160	0	626	685	244	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1200	0	160	0	626	685	244	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

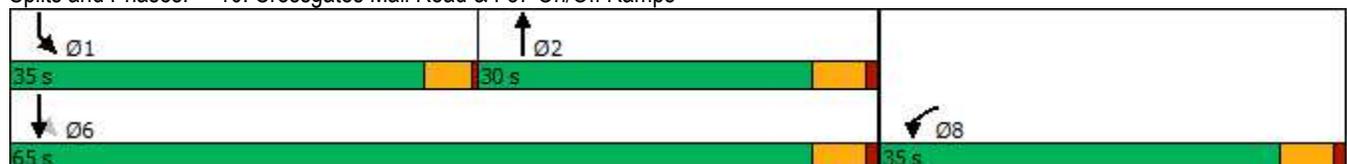


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	35.0		30.0			35.0	65.0		
Total Split (%)	35.0%		30.0%			35.0%	65.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.91		0.58		0.38	0.94	0.27		
Control Delay	33.8		43.3		0.7	37.4	11.7		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	33.8		43.3		0.7	37.4	11.7		
Queue Length 50th (ft)	276		84		0	260	67		
Queue Length 95th (ft)	#452		145		0	#472	110		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	1325		557		1660	762	1203		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.91		0.29		0.38	0.90	0.20		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 85.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (veh/h)	620	520	152	0	595	651	232	0	0
Future Volume (veh/h)	620	520	152	0	595	651	232	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1970	1970	1876	1773		
Adj Flow Rate, veh/h	600	604	160	0	0	685	244		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0	7		
Cap, veh/h	673	623	217			756	912		
Arrive On Green	0.36	0.36	0.11	0.00	0.00	0.35	0.51		
Sat Flow, veh/h	1847	1709	1894	1669	1669	1787	1773		
Grp Volume(v), veh/h	600	604	160	0	0	685	244		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1669	1669	1787	1773		
Q Serve(g_s), s	25.2	28.6	6.7	0.0	0.0	26.1	6.4		
Cycle Q Clear(g_c), s	25.2	28.6	6.7	0.0	0.0	26.1	6.4		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	673	623	217			756	912		
V/C Ratio(X)	0.89	0.97	0.74			0.91	0.27		
Avail Cap(c_a), veh/h	673	623	575			800	1291		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	24.7	25.7	35.3	0.0	0.0	18.1	11.3		
Incr Delay (d2), s/veh	14.2	28.6	4.8	0.0	0.0	13.5	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	13.0	15.8	3.3	0.0	0.0	12.5	2.4		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	38.8	54.4	40.1	0.0	0.0	31.6	11.4		
LnGrp LOS	D	D	D			C	B		
Approach Vol, veh/h	1204		160	A	A		929		
Approach Delay, s/veh	46.6		40.1				26.3		
Approach LOS	D		D				C		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	32.9	14.4				47.4	35.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	31.0	25.0				60.0	30.0		
Max Q Clear Time (g_c+I1), s	28.1	8.7				8.4	30.6		
Green Ext Time (p_c), s	0.8	0.7				1.6	0.0		

Intersection Summary

HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 Build Traffic Volumes
11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	28	195	76	155	384	65	87	19	234	78	19	63
Future Volume (vph)	28	195	76	155	384	65	87	19	234	78	19	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.978			0.907				0.947
Flt Protected	0.950			0.950				0.987				0.976
Satd. Flow (prot)	1762	1718	0	1752	1840	0	0	1668	0	0	1541	0
Flt Permitted	0.950			0.950				0.987				0.976
Satd. Flow (perm)	1762	1718	0	1752	1840	0	0	1668	0	0	1541	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	31	214	83	168	422	71	95	21	254	86	21	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	297	0	168	493	0	0	370	0	0	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

Intersection												
Int Delay, s/veh	92.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	28	195	76	155	384	65	87	19	234	78	19	63
Future Vol, veh/h	28	195	76	155	384	65	87	19	234	78	19	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	91	91	92	92	91	91	92	92	92	91	92	91
Heavy Vehicles, %	0	4	2	2	0	0	2	2	2	1	2	28
Mvmt Flow	31	214	83	168	422	71	95	21	254	86	21	69

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	493	0	0	297	0	0	1157	1147	256	1249	1153	458
Stage 1	-	-	-	-	-	-	318	318	-	794	794	-
Stage 2	-	-	-	-	-	-	839	829	-	455	359	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.12	6.52	6.22	7.91	7.32	6.88
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.91	6.32	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.518	4.018	3.318	3.509	4.018	3.552
Pot Cap-1 Maneuver	1081	-	-	1264	-	-	173	199	783	114	153	525
Stage 1	-	-	-	-	-	-	693	654	-	321	335	-
Stage 2	-	-	-	-	-	-	360	385	-	530	579	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1081	-	-	1264	-	-	116	168	783	~ 61	129	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	116	168	-	~ 61	129	-
Stage 1	-	-	-	-	-	-	673	635	-	312	290	-
Stage 2	-	-	-	-	-	-	252	334	-	336	562	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.8	2.1	178.2	\$ 426.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	293	1264	-	-	1081	-	103
HCM Lane V/C Ratio	1.261	0.133	-	-	0.028	-	1.705
HCM Control Delay (s)	178.2	8.3	-	-	8.4	-	\$ 426.5
HCM Lane LOS	F	A	-	-	A	-	F
HCM 95th %tile Q(veh)	17.5	0.5	-	-	0.1	-	13.8

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

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	
Traffic Volume (vph)	47	443	16	59	519	296	25	7	86	202	9	59
Future Volume (vph)	47	443	16	59	519	296	25	7	86	202	9	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								0.99		0.99		
Frt		0.995			0.949			0.902			0.870	
Flt Protected		0.995			0.997			0.989		0.950		
Satd. Flow (prot)	0	3537	0	0	3314	0	0	1670	0	1787	1653	0
Flt Permitted		0.836			0.892			0.946		0.679		
Satd. Flow (perm)	0	2972	0	0	2965	0	0	1598	0	1268	1653	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			271			88			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			394			414	
Travel Time (s)		17.9			12.4			9.0			9.4	
Confl. Peds. (#/hr)									11	11		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	18%	1%	0%	0%	0%	6%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	48	452	16	60	530	302	26	7	88	206	9	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	516	0	0	892	0	0	121	0	206	69	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.43			0.66			0.17		0.41	0.10	
Control Delay		10.0			9.5			4.2		11.7	3.7	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		10.0			9.5			4.2		11.7	3.7	
Queue Length 50th (ft)		40			51			4		31	1	
Queue Length 95th (ft)		68			96			25		70	16	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1194			1348			692		507	697	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.43			0.66			0.17		0.41	0.10	

Intersection Summary

Area Type: Other

Cycle Length: 40

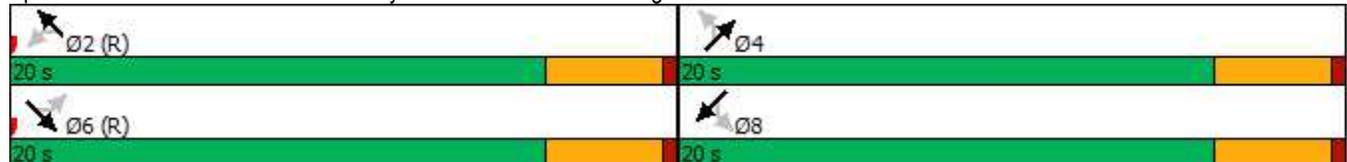
Actuated Cycle Length: 40

Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	47	443	16	59	519	296	25	7	86	202	9	59
Future Volume (veh/h)	47	443	16	59	519	296	25	7	86	202	9	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	48	452	16	60	530	302	26	7	88	206	9	60
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	156	1241	44	151	807	445	190	93	464	723	85	567
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	123	3103	111	126	2017	1113	203	233	1160	1302	213	1418
Grp Volume(v), veh/h	256	0	260	483	0	409	121	0	0	206	0	69
Grp Sat Flow(s),veh/h/ln	1535	0	1803	1748	0	1507	1596	0	0	1302	0	1631
Q Serve(g_s), s	0.4	0.0	4.1	2.4	0.0	8.9	0.0	0.0	0.0	1.8	0.0	1.1
Cycle Q Clear(g_c), s	9.3	0.0	4.1	8.7	0.0	8.9	1.9	0.0	0.0	3.7	0.0	1.1
Prop In Lane	0.19		0.06	0.12		0.74	0.21		0.73	1.00		0.87
Lane Grp Cap(c), veh/h	721	0	721	800	0	603	748	0	0	723	0	652
V/C Ratio(X)	0.35	0.00	0.36	0.60	0.00	0.68	0.16	0.00	0.00	0.28	0.00	0.11
Avail Cap(c_a), veh/h	721	0	721	800	0	603	748	0	0	723	0	652
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	0.0	8.4	9.7	0.0	9.9	7.8	0.0	0.0	8.2	0.0	7.5
Incr Delay (d2), s/veh	1.4	0.0	1.4	3.4	0.0	6.1	0.5	0.0	0.0	1.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.4	3.2	0.0	3.1	0.6	0.0	0.0	1.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	0.0	9.8	13.1	0.0	15.9	8.2	0.0	0.0	9.2	0.0	7.8
LnGrp LOS	A	A	A	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		516			892			121				275
Approach Delay, s/veh		9.7			14.4			8.2				8.9
Approach LOS		A			B			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		10.9		3.9		11.3		5.7				
Green Ext Time (p_c), s		2.6		0.5		1.4		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				11.8								
HCM 6th LOS				B								

Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↵	↑	↵	↵
Traffic Volume (vph)	542	189	181	736	138	200
Future Volume (vph)	542	189	181	736	138	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98
Frt	0.961					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3418	0	1762	1801	1787	1599
Flt Permitted			0.293		0.950	
Satd. Flow (perm)	3418	0	544	1801	1787	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	53					217
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	0%	3%	1%	1%
Adj. Flow (vph)	589	205	197	800	150	217
Shared Lane Traffic (%)						
Lane Group Flow (vph)	794	0	197	800	150	217
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

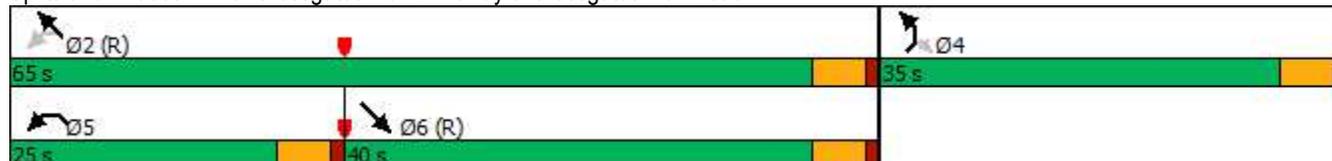


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.37		0.38	0.58	0.61	0.54
Control Delay	9.8		5.8	7.8	60.6	18.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	9.8		5.8	7.8	60.6	18.2
Queue Length 50th (ft)	108		27	177	97	26
Queue Length 95th (ft)	182		58	338	m132	m77
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	2158		658	1373	536	622
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.37		0.30	0.58	0.28	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	542	189	181	736	138	200
Future Volume (veh/h)	542	189	181	736	138	200
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1879	1879	1979	1934	1885	1885
Adj Flow Rate, veh/h	589	205	197	800	150	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	0	3	1	1
Cap, veh/h	1637	569	559	1427	291	259
Arrive On Green	0.63	0.63	0.06	0.74	0.16	0.16
Sat Flow, veh/h	2693	903	1884	1934	1795	1598
Grp Volume(v), veh/h	404	390	197	800	150	217
Grp Sat Flow(s),veh/h/ln	1785	1717	1884	1934	1795	1598
Q Serve(g_s), s	10.8	10.9	3.4	18.5	7.6	13.2
Cycle Q Clear(g_c), s	10.8	10.9	3.4	18.5	7.6	13.2
Prop In Lane		0.53	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1124	1081	559	1427	291	259
V/C Ratio(X)	0.36	0.36	0.35	0.56	0.52	0.84
Avail Cap(c_a), veh/h	1124	1081	826	1427	539	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	8.9	8.9	5.9	5.9	38.3	40.6
Incr Delay (d2), s/veh	0.8	0.9	0.2	0.8	1.4	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	4.0	1.2	6.3	3.5	11.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.7	9.7	6.1	6.7	39.7	47.7
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h	794			997	367	
Approach Delay, s/veh	9.7			6.5	44.5	
Approach LOS	A			A	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.8		21.2	10.8	68.0
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		20.5		15.2	5.4	12.9
Green Ext Time (p_c), s		7.2		1.0	0.5	5.3
Intersection Summary						
HCM 6th Ctrl Delay			14.2			
HCM 6th LOS			B			

Year 2025 Build Traffic Volumes
15: S. Frontage Road

Weekday Peak PM Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	204	164	93	281	0	0
Future Volume (vph)	204	164	93	281	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.899			
Flt Protected		0.973				
Satd. Flow (prot)	0	1812	1708	0	0	1863
Flt Permitted		0.973				
Satd. Flow (perm)	0	1812	1708	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		741	433		503	
Travel Time (s)		16.8	9.8		11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	178	101	305	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	400	406	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↶	↷			↶
Traffic Vol, veh/h	204	164	93	281	0	0
Future Vol, veh/h	204	164	93	281	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	222	178	101	305	0	0

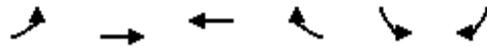
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	406	0	-	0	254
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	3.318
Pot Cap-1 Maneuver	1153	-	-	0	785
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1153	-	-	-	785
Mov Cap-2 Maneuver		-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	4.9	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1153	-	-	-
HCM Lane V/C Ratio	-	0.192	-	-	-
HCM Control Delay (s)	0	8.9	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	-

Year 2025 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	1091	2200	18	10	6
Future Volume (vph)	8	1091	2200	18	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t			0.999		0.949	
Fl _t Protected	0.950				0.970	
Satd. Flow (prot)	1805	3539	3536	0	1749	0
Fl _t Permitted	0.950				0.970	
Satd. Flow (perm)	1805	3539	3536	0	1749	0
Link Speed (mph)		40	30		30	
Link Distance (ft)		911	383		970	
Travel Time (s)		15.5	8.7		22.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	8	1125	2268	19	10	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	1125	2287	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	8	1091	2200	18	10	6
Future Vol, veh/h	8	1091	2200	18	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	1125	2268	19	10	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	2287	0	-	0	2857 1144
Stage 1	-	-	-	-	2278 -
Stage 2	-	-	-	-	579 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	225	-	-	-	14 197
Stage 1	-	-	-	-	65 -
Stage 2	-	-	-	-	529 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	225	-	-	-	13 197
Mov Cap-2 Maneuver	-	-	-	-	13 -
Stage 1	-	-	-	-	63 -
Stage 2	-	-	-	-	529 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	\$ 407
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	225	-	-	-	20
HCM Lane V/C Ratio	0.037	-	-	-	0.825
HCM Control Delay (s)	21.6	-	-	-	\$ 407
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	2.3

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

Year 2025 Build Traffic Volumes
17: Rapp Road & Site 1 Driveway

Weekday Peak PM Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	33	55	183	337	22
Future Volume (vph)	13	33	55	183	337	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.903				0.992	
Flt Protected	0.986			0.989		
Satd. Flow (prot)	1659	0	0	1833	1848	0
Flt Permitted	0.986			0.989		
Satd. Flow (perm)	1659	0	0	1833	1848	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	369			915	439	
Travel Time (s)	8.4			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	36	60	199	366	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	259	390	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	13	33	55	183	337	22
Future Vol, veh/h	13	33	55	183	337	22
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	36	60	199	366	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	697	378	390	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	319	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	407	669	1169	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	383	669	1169	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	12.2	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1169	-	552	-	-
HCM Lane V/C Ratio	0.051	-	0.091	-	-
HCM Control Delay (s)	8.2	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Year 2025 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	87	221	56	96	685
Future Volume (vph)	0	87	221	56	96	685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.970			
Flt Protected						0.994
Satd. Flow (prot)	0	1611	3522	0	0	3536
Flt Permitted						0.994
Satd. Flow (perm)	0	1611	3522	0	0	3536
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	95	240	61	104	745
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	95	301	0	0	849
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	87	221	56	96	685
Future Vol, veh/h	0	87	221	56	96	685
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	95	240	61	104	745

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	151	0	0	301
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	2.22
Pot Cap-1 Maneuver	0	868	-	-	1257
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	-	868	-	-	1257
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	868	1257
HCM Lane V/C Ratio	-	-	0.109	0.083
HCM Control Delay (s)	-	-	9.7	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3

Year 2025 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	277	56	0	685
Future Volume (vph)	0	0	277	56	0	685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.975			
Flt Protected						
Satd. Flow (prot)	0	1863	3543	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3543	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	301	61	0	745
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	362	0	0	745
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	277	56	0	685
Future Vol, veh/h	0	0	277	56	0	685
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	0	0	301	61	0	745

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	181	0	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	831	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	831	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2025 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	268	101	36	37	55	212
Future Volume (vph)	268	101	36	37	55	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.963				0.893	
Flt Protected	0.965			0.976		
Satd. Flow (prot)	1731	0	0	1818	1672	0
Flt Permitted	0.965			0.976		
Satd. Flow (perm)	1731	0	0	1818	1672	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	110	39	40	60	230
Shared Lane Traffic (%)						
Lane Group Flow (vph)	401	0	0	79	290	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	268	101	36	37	55	212
Future Vol, veh/h	268	101	36	37	55	212
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	291	110	39	40	60	230

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	293	175	290	0	0
Stage 1	175	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	698	868	1272	-	-
Stage 1	855	-	-	-	-
Stage 2	907	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	676	868	1272	-	-
Mov Cap-2 Maneuver	676	-	-	-	-
Stage 1	828	-	-	-	-
Stage 2	907	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	3.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1272	-	720	-	-
HCM Lane V/C Ratio	0.031	-	0.557	-	-
HCM Control Delay (s)	7.9	0	16.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.5	-	-

Year 2025 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Weekday Peak PM Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	81	98	242	63	64	186
Future Volume (vph)	81	98	242	63	64	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.972			
Flt Protected	0.978					0.987
Satd. Flow (prot)	1687	0	1811	0	0	1848
Flt Permitted	0.978					0.987
Satd. Flow (perm)	1687	0	1811	0	0	1848
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	107	263	68	70	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	195	0	331	0	0	272
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	81	98	242	63	64	186
Future Vol, veh/h	81	98	242	63	64	186
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	107	263	68	70	202

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	639	297	0	0	331
Stage 1	297	-	-	-	-
Stage 2	342	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	440	742	-	-	1228
Stage 1	754	-	-	-	-
Stage 2	719	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	412	742	-	-	1228
Mov Cap-2 Maneuver	412	-	-	-	-
Stage 1	754	-	-	-	-
Stage 2	673	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	2.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	545	1228
HCM Lane V/C Ratio	-	-	0.357	0.057
HCM Control Delay (s)	-	-	15.2	8.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.6	0.2

Year 2025 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	110	0	41	0	0	72
Future Volume (vph)	110	0	41	0	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected	0.950			0.950		
Satd. Flow (prot)	1770	0	0	1770	0	1611
Fl _t Permitted	0.950			0.950		
Satd. Flow (perm)	1770	0	0	1770	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	0	45	0	0	78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	0	45	0	78
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	110	0	41	0	0	72
Future Vol, veh/h	110	0	41	0	0	72
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	0	45	0	0	78

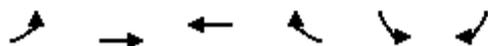
Major/Minor	Minor2	Major1	
Conflicting Flow All	90	-	0
Stage 1	0	-	-
Stage 2	90	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	910	0	-
Stage 1	-	0	-
Stage 2	934	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	910	-	-
Mov Cap-2 Maneuver	910	-	-
Stage 1	-	-	-
Stage 2	934	-	-

Approach	EB	NB
HCM Control Delay, s	9.6	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	910
HCM Lane V/C Ratio	-	-	0.131
HCM Control Delay (s)	-	-	9.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.5

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

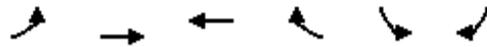
Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1053	1269	528	511	49
Future Volume (vph)	0	1053	1269	528	511	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.956			0.850
Flt Protected					0.950	
Satd. Flow (prot)	1801	3539	4652	0	3364	1552
Flt Permitted					0.950	
Satd. Flow (perm)	1801	3539	4652	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			268			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1145	1379	574	555	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1145	1953	0	555	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA		Prot	Perm

Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 02/17/2020

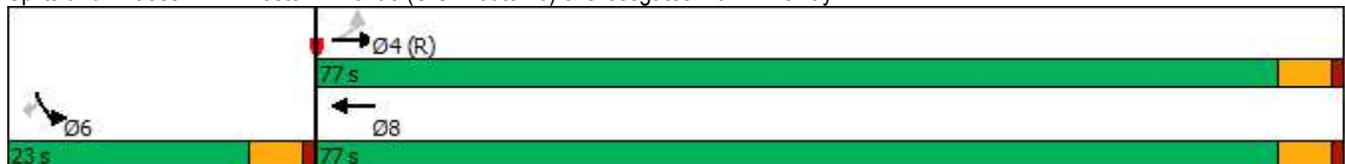


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	26.5	26.5	26.5		21.0	21.0
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio		0.45	0.57		0.92	0.16
Control Delay		6.5	6.3		48.5	8.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		6.5	6.3		48.5	8.6
Queue Length 50th (ft)		136	155		160	4
Queue Length 95th (ft)		171	188		#275	m11
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)						
Base Capacity (vph)		2548	3424		605	322
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.45	0.57		0.92	0.16

Intersection Summary

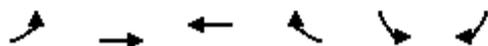
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 37 (37%), Referenced to phase 4:EBTL and 7:, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

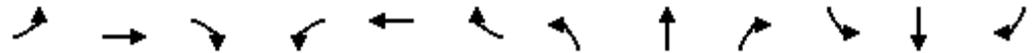
Saturday Peak Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↶↶	↶↶↶		↶↶	↶
Traffic Volume (veh/h)	0	1053	1269	528	511	49
Future Volume (veh/h)	0	1053	1269	528	511	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776
Adj Flow Rate, veh/h	0	1145	1379	574	555	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	72	2559	2527	1036	591	271
Arrive On Green	0.00	0.72	0.72	0.72	0.18	0.18
Sat Flow, veh/h	225	3647	3677	1439	3282	1505
Grp Volume(v), veh/h	0	1145	1320	633	555	53
Grp Sat Flow(s),veh/h/ln	225	1777	1681	1588	1641	1505
Q Serve(g_s), s	0.0	13.3	18.1	18.6	16.7	3.0
Cycle Q Clear(g_c), s	0.0	13.3	18.1	18.6	16.7	3.0
Prop In Lane	1.00			0.91	1.00	1.00
Lane Grp Cap(c), veh/h	72	2559	2420	1143	591	271
V/C Ratio(X)	0.00	0.45	0.55	0.55	0.94	0.20
Avail Cap(c_a), veh/h	72	2559	2420	1143	591	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.50	0.50
Uniform Delay (d), s/veh	0.0	5.8	6.5	6.5	40.5	34.8
Incr Delay (d2), s/veh	0.0	0.6	0.3	0.6	15.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	4.9	4.9	7.9	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	6.4	6.7	7.1	55.7	35.7
LnGrp LOS	A	A	A	A	E	D
Approach Vol, veh/h		1145	1953		608	
Approach Delay, s/veh		6.4	6.8		53.9	
Approach LOS		A	A		D	
Timer - Assigned Phs				4	6	8
Phs Duration (G+Y+Rc), s				77.0	23.0	77.0
Change Period (Y+Rc), s				5.0	5.0	5.0
Max Green Setting (Gmax), s				72.0	18.0	72.0
Max Q Clear Time (g_c+I1), s				15.3	18.7	20.6
Green Ext Time (p_c), s				10.5	0.0	23.3
Intersection Summary						
HCM 6th Ctrl Delay			14.4			
HCM 6th LOS			B			

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1119	23	55	1172	43	27	0	55	0	0	173
Future Volume (vph)	53	1119	23	55	1172	43	27	0	55	0	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	14	12	11	14	11	11	11	12	12	12
Grade (%)		-3%			3%			1%				-1%
Storage Length (ft)	75		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	86			86			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.995			0.909				0.865
Flt Protected	0.950			0.950				0.984				
Satd. Flow (prot)	1832	3497	0	1778	3387	0	0	1635	0	0	1652	0
Flt Permitted	0.950			0.950				0.984				
Satd. Flow (perm)	1832	3497	0	1778	3387	0	0	1635	0	0	1652	0
Link Speed (mph)		40			40			30				30
Link Distance (ft)		1018			964			269				295
Travel Time (s)		17.4			16.4			6.1				6.7
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
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	56	1178	24	58	1234	45	28	0	58	0	0	182
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	1202	0	58	1279	0	0	86	0	0	182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	0.98	1.02	0.90	1.02	1.07	0.94	1.05	1.05	1.05	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop				Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 2: Gabriel Terrace & Western Ave (U.S. Route 20)

Saturday Peak Hour
 02/17/2020

Intersection												
Int Delay, s/veh	21.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	53	1119	23	55	1172	43	27	0	55	0	0	173
Future Vol, veh/h	53	1119	23	55	1172	43	27	0	55	0	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	75	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-3	-	-	3	-	-	1	-	-	-1	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	56	1178	24	58	1234	45	28	0	58	0	0	182

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1279	0	0	1202	0	0	2035	2697	601	2074	2687	640
Stage 1	-	-	-	-	-	-	1302	1302	-	1373	1373	-
Stage 2	-	-	-	-	-	-	733	1395	-	701	1314	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.7	7	7.3	6.3	6.8
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.7	-	6.3	5.3	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	550	-	-	588	-	-	30	19	441	36	26	430
Stage 1	-	-	-	-	-	-	161	217	-	169	232	-
Stage 2	-	-	-	-	-	-	368	195	-	416	247	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	550	-	-	588	-	-	~ 15	15	441	27	21	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	15	-	27	21	-
Stage 1	-	-	-	-	-	-	145	195	-	152	209	-
Stage 2	-	-	-	-	-	-	191	176	-	325	222	-

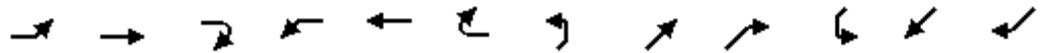
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.5	\$ 671.7	19.4
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	43	550	-	-	588	-	-	430
HCM Lane V/C Ratio	2.007	0.101	-	-	0.098	-	-	0.424
HCM Control Delay (s)	\$ 671.7	12.3	-	-	11.8	-	-	19.4
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	9	0.3	-	-	0.3	-	-	2.1

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	297	970	95	79	1036	143	136	103	78	93	83	175
Future Volume (vph)	297	970	95	79	1036	143	136	103	78	93	83	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			0%				-1%
Storage Length (ft)	100		0	100		0	100		110	75		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor							1.00					0.99
Frt		0.987			0.982			0.990	0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3531	0	1805	3489	0	1787	1787	1534	1680	1909	1607
Flt Permitted	0.093			0.130			0.684			0.529		
Satd. Flow (perm)	175	3531	0	247	3489	0	1285	1787	1534	935	1909	1585
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			2	77			111
Link Speed (mph)		40			40			30				30
Link Distance (ft)		374			1018			654				346
Travel Time (s)		6.4			17.4			14.9				7.9
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	0%	0%	1%	6%	1%	0%	0%	8%	0%	1%
Adj. Flow (vph)	309	1010	99	82	1079	149	142	107	81	97	86	182
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	309	1109	0	82	1228	0	142	115	73	97	86	182
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	46	7		46	7		46	46	46	46	46	46
Trailing Detector (ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Position(ft)	6	6		6	6		6	6	6	6	6	6
Detector 1 Size(ft)	40	1		40	1		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	20.0		10.0	20.0		10.0	10.0	10.0	10.0	10.0	21.0
Total Split (s)	35.0	95.0		20.0	80.0		20.0	35.0	20.0	20.0	35.0	35.0
Total Split (%)	20.6%	55.9%		11.8%	47.1%		11.8%	20.6%	11.8%	11.8%	20.6%	20.6%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
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	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None	None	None	None	None
v/c Ratio	0.77	0.71		0.18	0.79		0.43	0.47	0.12	0.55	0.51	0.35
Control Delay	52.8	31.3		14.9	33.8		47.2	57.3	5.9	59.1	71.2	17.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	31.3		14.9	33.8		47.2	57.3	5.9	59.1	71.2	17.1
Queue Length 50th (ft)	139	308		16	365		87	80	0	58	58	35
Queue Length 95th (ft)	345	587		49	661		189	184	32	136	150	124
Internal Link Dist (ft)		294			938			574			266	
Turn Bay Length (ft)	100			100			100		110	75		
Base Capacity (vph)	562	2765		455	2372		424	486	600	310	518	591
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	0.55	0.40		0.18	0.52		0.33	0.24	0.12	0.31	0.17	0.31

Intersection Summary

Area Type: Other

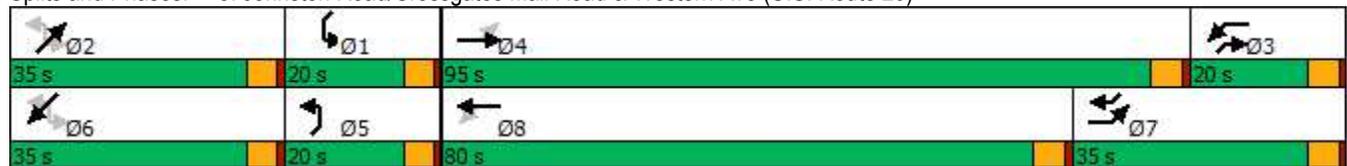
Cycle Length: 170

Actuated Cycle Length: 119.5

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Splits and Phases: 3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)



Year 2025 Build Traffic Volumes

Saturday Peak Hour

3: Johnston Road/Crossgates Mall Road & Western Ave (U.S. Route 20)

02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	297	970	95	79	1036	143	136	103	78	93	83	175
Future Volume (veh/h)	297	970	95	79	1036	143	136	103	78	93	83	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1885	1885	1885	1900	1900	1819	1939	1924
Adj Flow Rate, veh/h	309	1010	99	82	1079	149	142	107	81	97	86	182
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	1	1	1	0	0	8	0	1
Cap, veh/h	360	1408	138	461	1495	206	263	176	395	232	163	312
Arrive On Green	0.11	0.43	0.43	0.15	0.47	0.47	0.07	0.09	0.09	0.06	0.08	0.08
Sat Flow, veh/h	1795	3295	323	1810	3162	436	1795	1900	1605	1733	1939	1625
Grp Volume(v), veh/h	309	549	560	82	610	618	142	107	81	97	86	182
Grp Sat Flow(s),veh/h/ln	1795	1791	1827	1810	1791	1807	1795	1900	1605	1733	1939	1625
Q Serve(g_s), s	5.4	18.8	18.8	0.0	20.3	20.4	0.0	4.0	0.0	0.0	3.2	0.0
Cycle Q Clear(g_c), s	5.4	18.8	18.8	0.0	20.3	20.4	0.0	4.0	0.0	0.0	3.2	0.0
Prop In Lane	1.00		0.18	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	765	781	461	847	854	263	176	395	232	163	312
V/C Ratio(X)	0.86	0.72	0.72	0.18	0.72	0.72	0.54	0.61	0.21	0.42	0.53	0.58
Avail Cap(c_a), veh/h	891	2167	2211	549	1806	1822	505	766	894	481	782	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	17.6	17.6	20.3	15.7	15.7	31.9	32.5	22.3	32.6	32.7	27.4
Incr Delay (d2), s/veh	2.3	2.7	2.7	0.1	2.5	2.5	0.6	1.3	0.1	0.4	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	7.3	7.4	1.0	7.6	7.7	2.4	1.9	1.1	1.6	1.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	20.3	20.2	20.4	18.2	18.2	32.5	33.7	22.4	33.0	33.6	28.0
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1418			1310			330				365
Approach Delay, s/veh		22.7			18.3			30.4				30.7
Approach LOS		C			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	11.9	16.4	36.8	10.0	11.2	13.0	40.2				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	15.0	30.0	15.0	90.0	15.0	30.0	30.0	75.0				
Max Q Clear Time (g_c+I1), s	2.0	6.0	2.0	20.8	2.0	5.2	7.4	22.4				
Green Ext Time (p_c), s	0.1	0.4	0.1	11.0	0.2	0.6	0.6	12.8				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

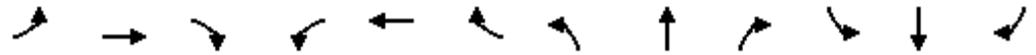
Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕↗		↖	↖			↕	↗
Traffic Volume (vph)	112	196	195	159	223	31	143	115	176	15	84	157
Future Volume (vph)	112	196	195	159	223	31	143	115	176	15	84	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	14	14	14	12	12	12	12	12	13
Grade (%)		-2%			4%			2%				0%
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.989			0.909				0.850
Flt Protected		0.982			0.981		0.950				0.992	
Satd. Flow (prot)	0	1857	1584	0	3600	0	1702	1622	0	0	1885	1669
Flt Permitted		0.716			0.676		0.557				0.929	
Satd. Flow (perm)	0	1354	1584	0	2481	0	998	1622	0	0	1765	1669
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			205		14			128				165
Link Speed (mph)		30			30			30				30
Link Distance (ft)		467			504			785				913
Travel Time (s)		10.6			11.5			17.8				20.8
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
Heavy Vehicles (%)	4%	0%	3%	3%	1%	0%	5%	0%	9%	0%	0%	0%
Adj. Flow (vph)	118	206	205	167	235	33	151	121	185	16	88	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	324	205	0	435	0	151	306	0	0	104	165
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.94	0.94	0.94	1.01	1.01	1.01	1.00	1.00	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	1
Detector Template	Left			Left						Left		
Leading Detector (ft)	20	6	6	20	6		6	6		20	6	6
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	6	20	6		6	6		20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		6			6
Detector Phase	4	4	4	8	8		5	2	6	6	6	
Switch Phase												

Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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)	21.0	21.0	21.0	21.0	21.0		9.0	21.0		21.0	21.0	21.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0		11.0	37.0		26.0	26.0	26.0
Total Split (%)	50.7%	50.7%	50.7%	50.7%	50.7%		14.7%	49.3%		34.7%	34.7%	34.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max		Max	Max		Max	Max	Max
v/c Ratio		0.54	0.25		0.40		0.31	0.40			0.21	0.28
Control Delay		19.7	3.0		15.1		15.6	10.1			22.1	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		19.7	3.0		15.1		15.6	10.1			22.1	5.2
Queue Length 50th (ft)		107	0		66		43	52			37	0
Queue Length 95th (ft)		184	34		102		80	110			74	41
Internal Link Dist (ft)		387			424			705			833	
Turn Bay Length (ft)												150
Base Capacity (vph)		595	811		1099		482	765			494	586
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		0.54	0.25		0.40		0.31	0.40			0.21	0.28

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord

Splits and Phases: 4: Crossgates Mall Road & Rapp Road



Year 2025 Build Traffic Volumes
4: Crossgates Mall Road & Rapp Road

Saturday Peak Hour
02/17/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖↗		↖	↗			↖	↗
Traffic Volume (veh/h)	112	196	195	159	223	31	143	115	176	15	84	157
Future Volume (veh/h)	112	196	195	159	223	31	143	115	176	15	84	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1979	1934	1863	1863	1863	1802	1876	1876	1900	1900	1976
Adj Flow Rate, veh/h	118	206	205	167	235	33	151	121	185	16	88	165
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	3	1	1	1	5	0	0	0	0	0
Cap, veh/h	261	434	721	316	660	95	492	286	437	97	459	469
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.08	0.43	0.43	0.28	0.28	0.28
Sat Flow, veh/h	445	987	1639	510	1499	217	1717	669	1023	149	1641	1675
Grp Volume(v), veh/h	324	0	205	183	0	252	151	0	306	104	0	165
Grp Sat Flow(s),veh/h/ln	1432	0	1639	570	0	1656	1717	0	1692	1790	0	1675
Q Serve(g_s), s	7.3	0.0	6.0	12.1	0.0	7.5	4.4	0.0	9.5	0.0	0.0	5.9
Cycle Q Clear(g_c), s	14.8	0.0	6.0	26.9	0.0	7.5	4.4	0.0	9.5	3.1	0.0	5.9
Prop In Lane	0.36		1.00	0.91		0.13	1.00		0.60	0.15		1.00
Lane Grp Cap(c), veh/h	696	0	721	343	0	729	492	0	722	556	0	469
V/C Ratio(X)	0.47	0.00	0.28	0.53	0.00	0.35	0.31	0.00	0.42	0.19	0.00	0.35
Avail Cap(c_a), veh/h	696	0	721	343	0	729	492	0	722	556	0	469
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	13.4	25.5	0.0	13.9	15.7	0.0	15.0	20.6	0.0	21.6
Incr Delay (d2), s/veh	2.2	0.0	1.0	5.9	0.0	1.3	1.6	0.0	1.8	0.7	0.0	2.1
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	4.4	0.0	2.3	3.4	0.0	2.9	1.9	0.0	3.7	1.4	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	14.4	31.4	0.0	15.2	17.3	0.0	16.9	21.3	0.0	23.6
LnGrp LOS	B	A	B	C	A	B	B	A	B	C	A	C
Approach Vol, veh/h		529			435			457				269
Approach Delay, s/veh		16.8			22.0			17.0				22.7
Approach LOS		B			C			B				C
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		37.0		38.0	11.0	26.0		38.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		32.0		33.0	6.0	21.0		33.0				
Max Q Clear Time (g_c+I1), s		11.5		16.8	6.4	7.9		28.9				
Green Ext Time (p_c), s		0.8		1.4	0.0	0.6		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				19.1								
HCM 6th LOS				B								

Year 2025 Build Traffic Volumes
5: Rapp Road & Gipp Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	36	22	23	203	202	47
Future Volume (vph)	36	22	23	203	202	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11
Grade (%)	0%			2%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949				0.975	
Flt Protected	0.970			0.995		
Satd. Flow (prot)	1749	0	0	1872	1800	0
Flt Permitted	0.970			0.995		
Satd. Flow (perm)	1749	0	0	1872	1800	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	719			439	212	
Travel Time (s)	16.3			10.0	4.8	
Confl. Peds. (#/hr)	3	2	2			3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	41	25	26	233	232	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	0	259	286	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	36	22	23	203	202	47
Future Vol, veh/h	36	22	23	203	202	47
Conflicting Peds, #/hr	3	2	2	0	0	3
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	-	-	2	-1	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	25	26	233	232	54

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	550	264	289	0	0
Stage 1	262	-	-	-	-
Stage 2	288	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	500	780	1284	-	-
Stage 1	786	-	-	-	-
Stage 2	766	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	487	777	1281	-	-
Mov Cap-2 Maneuver	487	-	-	-	-
Stage 1	766	-	-	-	-
Stage 2	764	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	12.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1281	-	567	-	-
HCM Lane V/C Ratio	0.021	-	0.118	-	-
HCM Control Delay (s)	7.9	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Year 2025 Build Traffic Volumes
6: Rapp Road & Pine Lane

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	13	13	18	221	236	15
Future Volume (vph)	13	13	18	221	236	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-4%			2%	-8%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.992	
Flt Protected	0.976			0.996		
Satd. Flow (prot)	1531	0	0	1794	1895	0
Flt Permitted	0.976			0.996		
Satd. Flow (perm)	1531	0	0	1794	1895	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	414			212	318	
Travel Time (s)	9.4			4.8	7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	0%	0%	1%	0%	0%
Adj. Flow (vph)	14	14	19	230	246	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	249	262	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.06	1.06	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

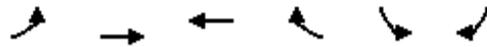
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	13	13	18	221	236	15
Future Vol, veh/h	13	13	18	221	236	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	15	0	0	1	0	0
Mvmt Flow	14	14	19	230	246	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	SW	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NE		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.2	9	8.9
HCM LOS	A	A	A

Lane	NELn1	EBLn1	SWLn1
Vol Left, %	8%	50%	0%
Vol Thru, %	92%	0%	94%
Vol Right, %	0%	50%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	239	26	251
LT Vol	18	13	0
Through Vol	221	0	236
RT Vol	0	13	15
Lane Flow Rate	249	27	261
Geometry Grp	1	1	1
Degree of Util (X)	0.288	0.038	0.298
Departure Headway (Hd)	4.158	5.041	4.098
Convergence, Y/N	Yes	Yes	Yes
Cap	851	714	865
Service Time	2.243	3.041	2.183
HCM Lane V/C Ratio	0.293	0.038	0.302
HCM Control Delay	9	8.2	8.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.1	1.3

Year 2025 Build Traffic Volumes
7: Rapp Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	0	235	0	0	0	252
Future Volume (vph)	0	235	0	0	0	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	16	16
Grade (%)		3%	0%		1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected						
Satd. Flow (prot)	0	1791	1900	0	1853	0
Fl _t Permitted						
Satd. Flow (perm)	0	1791	1900	0	1853	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		651	487		335	
Travel Time (s)		14.8	11.1		7.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	250	0	0	0	268
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	250	0	0	268	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	235	0	0	0	252
Future Vol, veh/h	0	235	0	0	0	252
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	3	0	-	1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	0	0	0	0
Mvmt Flow	0	250	0	0	0	268

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	251
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	250
Critical Hdwy	4.1	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.6
Critical Hdwy Stg 2	-	-	-	-	5.6
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1635	-	-	-	732
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	785
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1635	-	-	-	732
Mov Cap-2 Maneuver	-	-	-	-	732
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	785

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	-	-	-	-	0.246
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	1

Year 2025 Build Traffic Volumes
8: S. Frontage Road & Springsteen Road

Saturday Peak Hour
02/17/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	189	39	6	15	0	111	0	6	21	25	2	0
Future Volume (vph)	189	39	6	15	0	111	0	6	21	25	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	12	12
Grade (%)		0%			1%			1%				-4%
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.881			0.896				
Flt Protected	0.950				0.994						0.956	
Satd. Flow (prot)	1787	1831	0	0	1876	0	0	1694	0	0	1853	0
Flt Permitted	0.950				0.994						0.956	
Satd. Flow (perm)	1787	1831	0	0	1876	0	0	1694	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		487			124			431			755	
Travel Time (s)		11.1			2.8			9.8			17.2	
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
Heavy Vehicles (%)	1%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	205	42	7	16	0	121	0	7	23	27	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	205	49	0	0	137	0	0	30	0	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.01	0.85	1.01	1.01	1.01	1.01	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↔			↘			↗	
Traffic Vol, veh/h	189	39	6	15	0	111	0	6	21	25	2	0
Future Vol, veh/h	189	39	6	15	0	111	0	6	21	25	2	0
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
Heavy Vehicles, %	1	0	11	0	0	0	0	0	0	0	0	0
Mvmt Flow	205	42	7	16	0	121	0	7	23	27	2	0
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	9.7	7.6	7.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	12%	93%
Vol Thru, %	22%	0%	87%	0%	7%
Vol Right, %	78%	0%	13%	88%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	189	45	126	27
LT Vol	0	189	0	15	25
Through Vol	6	0	39	0	2
RT Vol	21	0	6	111	0
Lane Flow Rate	29	205	49	137	29
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.036	0.296	0.062	0.149	0.041
Departure Headway (Hd)	4.377	5.19	4.579	3.925	5.027
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	821	688	776	916	715
Service Time	2.388	2.958	2.346	1.935	3.039
HCM Lane V/C Ratio	0.035	0.298	0.063	0.15	0.041
HCM Control Delay	7.6	10.2	7.7	7.6	8.3
HCM Lane LOS	A	B	A	A	A
HCM 95th-tile Q	0.1	1.2	0.2	0.5	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↖		↖	↑↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	0	0	84	415	53	367	72	565	469	401	607	5
Future Volume (vph)	0	0	84	415	53	367	72	565	469	401	607	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	12	12	12	12	12	12	12	12	12
Grade (%)		0%			2%			1%			0%	
Storage Length (ft)	0		0	155		130	170		250	380		250
Storage Lanes	0		1	2		0	1		1	1		1
Taper Length (ft)	25			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99	0.99								
Frt			0.850		0.869				0.850			0.850
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	2090	1777	3432	1620	0	1796	5060	1591	1805	3574	1615
Flt Permitted				0.950			0.950			0.950		
Satd. Flow (perm)	0	2090	1752	3414	1620	0	1796	5060	1591	1805	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			93		255				484			94
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		124			869			1287			1236	
Travel Time (s)		2.8			19.8			19.5			18.7	
Confl. Peds. (#/hr)			2	2								
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	0	0	87	428	55	378	74	582	484	413	626	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	87	428	433	0	74	582	484	413	626	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	0.88	0.88	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1	1	1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)		1	40	40	40		40	1	1	40	1	1
Trailing Detector (ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)		1	40	40	40		40	1	1	40	1	1
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type			pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8	5	7	4		5	2		1	6	
Permitted Phases			8						2			6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	5	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)		10.0	10.0	11.0	11.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (s)		36.0	25.0	36.0	72.0		25.0	66.0	66.0	25.0	66.0	66.0
Total Split (%)		22.1%	15.3%	22.1%	44.2%		15.3%	40.5%	40.5%	15.3%	40.5%	40.5%
Yellow Time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.0	1.0	2.0	2.0		1.0	2.0	2.0	1.0	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	5.0	6.0	6.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag		Lag	Lead	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None	None	None		None	Min	Min	None	Min	Min
v/c Ratio			0.34	0.64	0.83		0.43	0.32	0.55	0.95	0.35	0.01
Control Delay			11.7	35.3	27.4		44.1	20.6	4.9	67.4	14.3	0.0
Queue Delay			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			11.7	35.3	27.4		44.1	20.6	4.9	67.4	14.3	0.0
Queue Length 50th (ft)			0	106	88		36	76	0	208	94	0
Queue Length 95th (ft)			39	151	200		83	124	68	#444	176	0
Internal Link Dist (ft)		44			789			1207			1156	
Turn Bay Length (ft)				155			170		250	380		250
Base Capacity (vph)			497	1237	1337		431	3647	1281	433	2576	1190
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			0.18	0.35	0.32		0.17	0.16	0.38	0.95	0.24	0.00

Intersection Summary

Area Type: Other

Cycle Length: 163

Actuated Cycle Length: 83.5

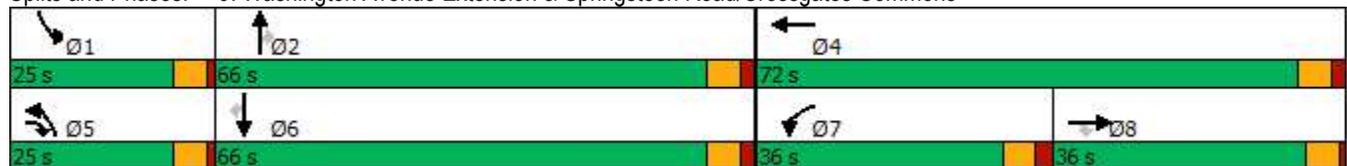
Natural Cycle: 90

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Washington Avenue Extension & Springsteen Road/Crossgates Commons





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↖	↗	↘	↑↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	0	0	84	415	53	367	72	565	469	401	607	5
Future Volume (veh/h)	0	0	84	415	53	367	72	565	469	401	607	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1976	1976	1862	1876	1876	1894	1864	1879	1900	1885	1900
Adj Flow Rate, veh/h	0	0	87	428	55	378	74	582	484	413	626	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	1	0	0	0	2	1	0	1	0
Cap, veh/h	0	160	224	516	60	409	96	1778	556	353	1759	791
Arrive On Green	0.00	0.00	0.08	0.15	0.29	0.29	0.05	0.35	0.35	0.20	0.49	0.49
Sat Flow, veh/h	0	1976	1662	3440	206	1413	1804	5090	1593	1810	3582	1610
Grp Volume(v), veh/h	0	0	87	428	0	433	74	582	484	413	626	5
Grp Sat Flow(s),veh/h/ln	0	1976	1662	1720	0	1619	1804	1697	1593	1810	1791	1610
Q Serve(g_s), s	0.0	0.0	4.9	12.4	0.0	26.6	4.1	8.6	29.1	20.0	11.0	0.2
Cycle Q Clear(g_c), s	0.0	0.0	4.9	12.4	0.0	26.6	4.1	8.6	29.1	20.0	11.0	0.2
Prop In Lane	0.00		1.00	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	160	224	516	0	469	96	1778	556	353	1759	791
V/C Ratio(X)	0.00	0.00	0.39	0.83	0.00	0.92	0.77	0.33	0.87	1.17	0.36	0.01
Avail Cap(c_a), veh/h	0	598	592	1008	0	1043	352	2982	933	353	2099	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	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	0.0	0.0	40.5	42.3	0.0	35.3	47.9	24.5	31.2	41.2	16.1	13.3
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.3	0.0	3.4	4.8	0.2	6.5	102.1	0.2	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	0.0	0.0	0.0	5.3	0.0	10.7	1.9	3.3	1.0	18.5	4.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	40.9	43.6	0.0	38.7	52.6	24.6	37.7	143.3	16.2	13.3
LnGrp LOS	A	A	D	D	A	D	D	C	D	F	B	B
Approach Vol, veh/h		87			861			1140			1044	
Approach Delay, s/veh		40.9			41.1			32.0			66.5	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	41.8		35.6	10.5	56.3	21.4	14.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0	6.0	* 6				
Max Green Setting (Gmax), s	20.0	60.0		66.0	20.0	60.0	30.0	* 31				
Max Q Clear Time (g_c+I1), s	22.0	31.1		28.6	6.1	13.0	14.4	6.9				
Green Ext Time (p_c), s	0.0	4.7		1.1	0.1	2.8	1.0	0.2				

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 								
Traffic Volume (vph)	741	689	275	0	771	534	281	0	0
Future Volume (vph)	741	689	275	0	771	534	281	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	150		0		0		0	0
Storage Lanes	2	1		1		1		0	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.928				0.850				
Flt Protected	0.975					0.950			
Satd. Flow (prot)	3336	0	1890	0	1644	1727	1783	0	0
Flt Permitted	0.975					0.192			
Satd. Flow (perm)	3336	0	1890	0	1644	349	1783	0	0
Right Turn on Red		Yes			Yes				
Satd. Flow (RTOR)	289				705				
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	772	718	286	0	803	556	293	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	1490	0	286	0	803	556	293	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	24		11				11	0	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Number of Detectors	1		2		1	1	2		
Detector Template	Left		Thru		Right	Left	Thru		
Leading Detector (ft)	20		100		20	20	100		
Trailing Detector (ft)	0		0		0	0	0		
Detector 1 Position(ft)	0		0		0	0	0		
Detector 1 Size(ft)	20		6		20	20	6		
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0		
Detector 2 Position(ft)			94				94		
Detector 2 Size(ft)			6				6		
Detector 2 Type			Cl+Ex				Cl+Ex		
Detector 2 Channel									
Detector 2 Extend (s)			0.0				0.0		

Year 2025 Build Traffic Volumes
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

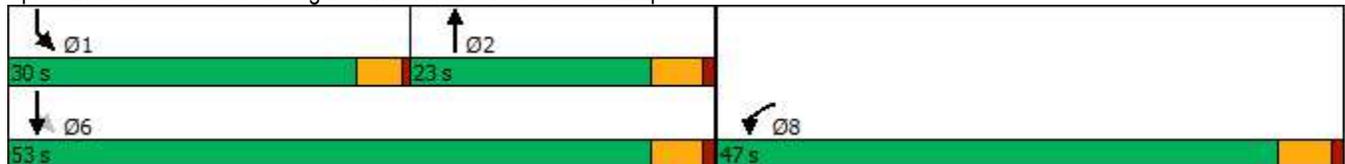


Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Turn Type	Prot		NA		Free	pm+pt	NA		
Protected Phases	8		2			1	6		
Permitted Phases					Free	6			
Detector Phase	8		2			1	6		
Switch Phase									
Minimum Initial (s)	4.0		4.0			4.0	4.0		
Minimum Split (s)	21.0		21.0			8.0	21.0		
Total Split (s)	47.0		23.0			30.0	53.0		
Total Split (%)	47.0%		23.0%			30.0%	53.0%		
Yellow Time (s)	4.0		4.0			3.5	4.0		
All-Red Time (s)	1.0		1.0			0.5	1.0		
Lost Time Adjust (s)	0.0		0.0			0.0	0.0		
Total Lost Time (s)	5.0		5.0			4.0	5.0		
Lead/Lag			Lag			Lead			
Lead-Lag Optimize?			Yes			Yes			
Recall Mode	None		Min			None	Min		
v/c Ratio	0.96		0.86		0.49	1.03	0.34		
Control Delay	37.9		65.2		1.0	74.8	17.4		
Queue Delay	0.0		0.0		0.0	0.0	0.0		
Total Delay	37.9		65.2		1.0	74.8	17.4		
Queue Length 50th (ft)	393		178		0	~334	112		
Queue Length 95th (ft)	#560		#317		0	#543	174		
Internal Link Dist (ft)	627		1510				454	361	
Turn Bay Length (ft)									
Base Capacity (vph)	1597		348		1644	538	874		
Starvation Cap Reductn	0		0		0	0	0		
Spillback Cap Reductn	0		0		0	0	0		
Storage Cap Reductn	0		0		0	0	0		
Reduced v/c Ratio	0.93		0.82		0.49	1.03	0.34		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 98
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Crossgates Mall Road & I-87 On/Off Ramps



Year 2025 Build Traffic Volumes
10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
02/17/2020

									
Movement	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations	 				 	 			
Traffic Volume (veh/h)	741	689	275	0	771	534	281	0	0
Future Volume (veh/h)	741	689	275	0	771	534	281	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	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		
Work Zone On Approach	No		No				No		
Adj Sat Flow, veh/h/ln	1939	2017	1894	1954	1954	1876	1847		
Adj Flow Rate, veh/h	745	747	286	0	0	556	293		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	1	1	0	2		
Cap, veh/h	785	727	322			568	875		
Arrive On Green	0.43	0.43	0.17	0.00	0.00	0.26	0.47		
Sat Flow, veh/h	1847	1709	1894	1656	1656	1787	1847		
Grp Volume(v), veh/h	745	747	286	0	0	556	293		
Grp Sat Flow(s),veh/h/ln	1847	1709	1894	1656	1656	1787	1847		
Q Serve(g_s), s	38.4	42.0	14.6	0.0	0.0	25.1	9.8		
Cycle Q Clear(g_c), s	38.4	42.0	14.6	0.0	0.0	25.1	9.8		
Prop In Lane	1.00	1.00		1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	785	727	322			568	875		
V/C Ratio(X)	0.95	1.03	0.89			0.98	0.33		
Avail Cap(c_a), veh/h	785	727	345			568	897		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	27.4	28.4	40.1	0.0	0.0	24.3	16.3		
Incr Delay (d2), s/veh	20.7	40.8	22.4	0.0	0.0	32.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	20.6	24.5	8.7	0.0	0.0	15.2	4.1		
Unsig. Movement Delay, s/veh									
LnGrp Delay(d),s/veh	48.0	69.2	62.4	0.0	0.0	56.7	16.5		
LnGrp LOS	D	F	E			E	B		
Approach Vol, veh/h	1492		286	A	A		849		
Approach Delay, s/veh	58.6		62.4				42.8		
Approach LOS	E		E				D		
Timer - Assigned Phs	1	2				6	8		
Phs Duration (G+Y+Rc), s	30.0	21.8				51.8	47.0		
Change Period (Y+Rc), s	4.0	5.0				5.0	5.0		
Max Green Setting (Gmax), s	26.0	18.0				48.0	42.0		
Max Q Clear Time (g_c+I1), s	27.1	16.6				11.8	44.0		
Green Ext Time (p_c), s	0.0	0.2				1.9	0.0		

Intersection Summary

HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [NBR2] is excluded from calculations of the approach delay and intersection delay.

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	94	240	104	208	238	171	93	22	335	118	22	98
Future Volume (vph)	94	240	104	208	238	171	93	22	335	118	22	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%			4%	
Lane Util. Factor	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 Factor												
Frt		0.955			0.937			0.900			0.944	
Flt Protected	0.950			0.950				0.990			0.976	
Satd. Flow (prot)	1745	1713	0	1752	1755	0	0	1660	0	0	1613	0
Flt Permitted	0.950			0.950				0.990			0.976	
Satd. Flow (perm)	1745	1713	0	1752	1755	0	0	1660	0	0	1613	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		785			786			351			287	
Travel Time (s)		17.8			17.9			8.0			6.5	
Confl. Peds. (#/hr)	1		1	1		1			1	1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	102	261	113	226	259	186	101	24	364	128	24	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	374	0	226	445	0	0	489	0	0	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

Intersection

Int Delay, s/veh 510.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	94	240	104	208	238	171	93	22	335	118	22	98
Future Vol, veh/h	94	240	104	208	238	171	93	22	335	118	22	98
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	2	-	-	0	-	-	4	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	4	2	2	0	1	2	2	2	0	2	15
Mvmt Flow	102	261	113	226	259	186	101	24	364	128	24	107

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	446	0	0	375
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.11	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.209	-	-	2.218
Pot Cap-1 Maneuver	1120	-	-	1183
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1119	-	-	1182
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	1.8	3	\$ 680.6	\$ 2442.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	204	1182	-	-	1119	-	43
HCM Lane V/C Ratio	2.398	0.191	-	-	0.091	-	6.016
HCM Control Delay (s)	\$ 680.6	8.8	-	-	8.5	-	\$ 2442.3
HCM Lane LOS	F	A	-	-	A	-	F
HCM 95th %tile Q(veh)	40.2	0.7	-	-	0.3	-	30.2

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

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (vph)	59	616	18	75	536	494	24	10	82	332	13	57
Future Volume (vph)	59	616	18	75	536	494	24	10	82	332	13	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			2%			0%				0%
Storage Length (ft)	0		0	0		0	0		0	55		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99		0.99	0.99	
Frt		0.996			0.933			0.905			0.878	
Flt Protected		0.996			0.997			0.990		0.950		
Satd. Flow (prot)	0	3564	0	0	3310	0	0	1681	0	1787	1651	0
Flt Permitted		0.710			0.856			0.946		0.677		
Satd. Flow (perm)	0	2541	0	0	2841	0	0	1606	0	1267	1651	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			526			87			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			547			394			414	
Travel Time (s)		17.9			12.4			9.0			9.4	
Confl. Peds. (#/hr)			3	3			1		8	8		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
Heavy Vehicles (%)	12%	1%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	63	655	19	80	570	526	26	11	87	353	14	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	737	0	0	1176	0	0	124	0	353	75	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.98	0.98	0.98	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0			4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.72			0.81			0.18		0.70	0.11	
Control Delay		15.4			12.0			4.3		20.5	3.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	

Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

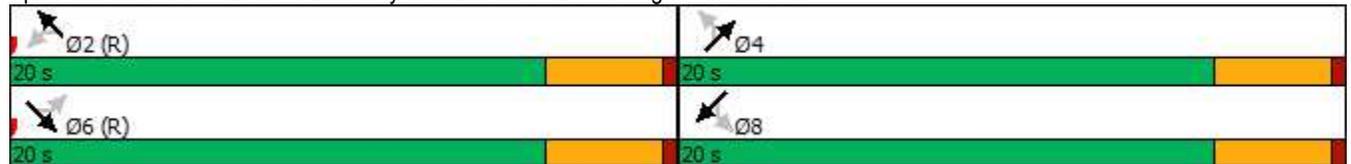


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Total Delay		15.4			12.0			4.3		20.5	3.9	
Queue Length 50th (ft)		67			55			5		61	2	
Queue Length 95th (ft)		#121			#169			26		#164	17	
Internal Link Dist (ft)		706			467			314			334	
Turn Bay Length (ft)										55		
Base Capacity (vph)		1021			1452			694		506	697	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.72			0.81			0.18		0.70	0.11	

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 40
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 12: Hotel Driveway/Mall Entrance #2 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↔		↔	↔	↔
Traffic Volume (veh/h)	59	616	18	75	536	494	24	10	82	332	13	57
Future Volume (veh/h)	59	616	18	75	536	494	24	10	82	332	13	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.99
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	2003	2003	2003	1876	1876	1876	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	63	655	19	80	570	526	26	11	87	353	14	61
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, %	1	1	1	0	0	0	0	0	0	1	0	0
Cap, veh/h	117	1039	35	148	583	563	187	113	451	724	123	536
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	26	2597	88	118	1457	1408	196	283	1127	1301	308	1341
Grp Volume(v), veh/h	349	0	388	635	0	541	124	0	0	353	0	75
Grp Sat Flow(s),veh/h/ln	905	0	1806	1535	0	1448	1607	0	0	1301	0	1649
Q Serve(g_s), s	1.7	0.0	6.6	9.4	0.0	14.3	0.0	0.0	0.0	6.0	0.0	1.1
Cycle Q Clear(g_c), s	16.0	0.0	6.6	16.0	0.0	14.3	1.9	0.0	0.0	8.0	0.0	1.1
Prop In Lane	0.18		0.05	0.13		0.97	0.21		0.70	1.00		0.81
Lane Grp Cap(c), veh/h	468	0	723	715	0	579	752	0	0	724	0	660
V/C Ratio(X)	0.75	0.00	0.54	0.89	0.00	0.93	0.16	0.00	0.00	0.49	0.00	0.11
Avail Cap(c_a), veh/h	468	0	723	715	0	579	752	0	0	724	0	660
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	0.0	9.2	12.1	0.0	11.5	7.8	0.0	0.0	9.4	0.0	7.5
Incr Delay (d2), s/veh	10.3	0.0	2.9	15.3	0.0	24.2	0.5	0.0	0.0	2.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	2.4	7.2	0.0	7.1	0.6	0.0	0.0	2.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	12.0	27.4	0.0	35.7	8.2	0.0	0.0	11.7	0.0	7.9
LnGrp LOS	C	A	B	C	A	D	A	A	A	B	A	A
Approach Vol, veh/h		737			1176			124			428	
Approach Delay, s/veh		15.9			31.2			8.2			11.1	
Approach LOS		B			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		20.0		20.0		20.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		18.0		3.9		18.0		10.0				
Green Ext Time (p_c), s		0.0		0.5		0.0		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				22.0								
HCM 6th LOS				C								

Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

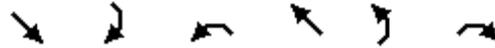
Saturday Peak Hour
 02/17/2020



Lane Group	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↖	↖
Traffic Volume (vph)	766	264	297	804	301	353
Future Volume (vph)	766	264	297	804	301	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	1%			-2%	0%	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor						0.99
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3447	0	1762	1837	1805	1615
Flt Permitted			0.116		0.950	
Satd. Flow (perm)	3447	0	215	1837	1805	1593
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	53					384
Link Speed (mph)	30			30	30	
Link Distance (ft)	547			1590	615	
Travel Time (s)	12.4			36.1	14.0	
Confl. Peds. (#/hr)						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	1%	0%	0%
Adj. Flow (vph)	833	287	323	874	327	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1120	0	323	874	327	384
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			11	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.03	1.03	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		pm+pt	NA	Prot	Perm

Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

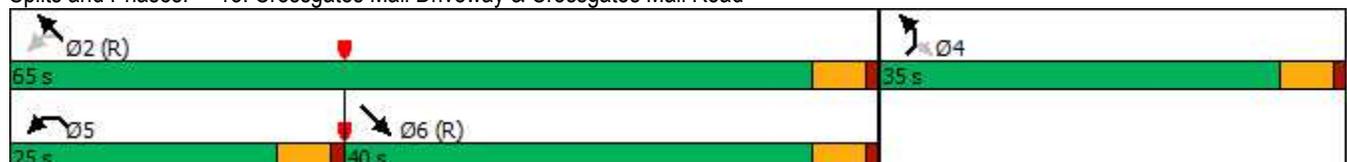


Lane Group	SET	SER	NWL	NWT	NEL	NER
Protected Phases	6		5	2	4	
Permitted Phases			2			4
Detector Phase	6		5	2	4	4
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	21.0		9.0	21.0	21.0	21.0
Total Split (s)	40.0		25.0	65.0	35.0	35.0
Total Split (%)	40.0%		25.0%	65.0%	35.0%	35.0%
Yellow Time (s)	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
v/c Ratio	0.71		0.80	0.72	0.77	0.58
Control Delay	26.9		34.2	16.2	48.2	7.8
Queue Delay	0.2		0.0	0.0	0.0	0.0
Total Delay	27.1		34.2	16.2	48.2	7.8
Queue Length 50th (ft)	296		121	326	161	13
Queue Length 95th (ft)	#468		#249	578	206	65
Internal Link Dist (ft)	467			1510	535	
Turn Bay Length (ft)						
Base Capacity (vph)	1569		459	1222	541	746
Starvation Cap Reductn	74		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.75		0.70	0.72	0.60	0.51

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 13: Crossgates Mall Driveway & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 13: Crossgates Mall Driveway & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑↑		↖	↑	↗	↗
Traffic Volume (veh/h)	766	264	297	804	301	353
Future Volume (veh/h)	766	264	297	804	301	353
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1894	1894	1979	1964	1900	1900
Adj Flow Rate, veh/h	833	287	323	874	327	384
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	0	0
Cap, veh/h	1257	432	402	1250	476	424
Arrive On Green	0.48	0.48	0.11	0.64	0.26	0.26
Sat Flow, veh/h	2722	904	1884	1964	1810	1610
Grp Volume(v), veh/h	570	550	323	874	327	384
Grp Sat Flow(s),veh/h/ln	1799	1731	1884	1964	1810	1610
Q Serve(g_s), s	24.2	24.3	8.1	29.1	16.3	23.1
Cycle Q Clear(g_c), s	24.2	24.3	8.1	29.1	16.3	23.1
Prop In Lane		0.52	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	861	828	402	1250	476	424
V/C Ratio(X)	0.66	0.66	0.80	0.70	0.69	0.91
Avail Cap(c_a), veh/h	861	828	574	1250	543	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.40	0.40	1.00	1.00
Uniform Delay (d), s/veh	19.9	19.9	17.2	11.9	33.1	35.6
Incr Delay (d2), s/veh	2.5	2.7	2.3	1.3	3.1	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	10.0	3.8	11.8	7.4	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.5	22.6	19.4	13.2	36.2	54.8
LnGrp LOS	C	C	B	B	D	D
Approach Vol, veh/h	1120			1197	711	
Approach Delay, s/veh	22.5			14.9	46.2	
Approach LOS	C			B	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.7		31.3	15.8	52.8
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		30.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		31.1		25.1	10.1	26.3
Green Ext Time (p_c), s		7.8		1.2	0.7	4.7
Intersection Summary						
HCM 6th Ctrl Delay			25.1			
HCM 6th LOS			C			

Year 2025 Build Traffic Volumes
15: Rapp Road & S. Frontage Road

Saturday Peak Hour
02/17/2020



Lane Group	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	79	193	12	140	0	0
Future Volume (vph)	79	193	12	140	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		0%	-4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.876			
Flt Protected		0.986				
Satd. Flow (prot)	0	1837	1664	0	0	1863
Flt Permitted		0.986				
Satd. Flow (perm)	0	1837	1664	0	0	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	432		517	
Travel Time (s)		17.2	9.8		11.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	85	208	13	151	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	293	164	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.97	0.97	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.4					
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↔	↔			↔
Traffic Vol, veh/h	79	193	12	140	0	0
Future Vol, veh/h	79	193	12	140	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-4	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	208	13	151	0	0

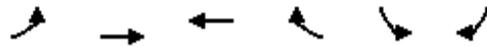
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	164	0	-	0	- 89
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	- 3.318
Pot Cap-1 Maneuver	1414	-	-	-	0 969
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1414	-	-	-	- 969
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	NB	SB	NE
HCM Control Delay, s	2.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NBL	NBT	SBT	SBR
Capacity (veh/h)	-	1414	-	-	-
HCM Lane V/C Ratio	-	0.06	-	-	-
HCM Control Delay (s)	0	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	-

Year 2025 Build Traffic Volumes
 16: Western Ave (U.S. Route 20) & Westmere Terrace

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	1352	1343	4	9	13
Future Volume (vph)	12	1352	1343	4	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fr _t					0.918	
Fl _t Protected	0.950				0.981	
Satd. Flow (prot)	1805	3574	3574	0	1711	0
Fl _t Permitted	0.950				0.981	
Satd. Flow (perm)	1805	3574	3574	0	1711	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		921	374		1043	
Travel Time (s)		15.7	6.4		23.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%
Adj. Flow (vph)	13	1408	1399	4	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1408	1403	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	1352	1343	4	9	13
Future Vol, veh/h	12	1352	1343	4	9	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	13	1408	1399	4	9	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1403	0	-	0	2131 702
Stage 1	-	-	-	-	1401 -
Stage 2	-	-	-	-	730 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	493	-	-	-	44 385
Stage 1	-	-	-	-	197 -
Stage 2	-	-	-	-	443 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	493	-	-	-	43 385
Mov Cap-2 Maneuver	-	-	-	-	43 -
Stage 1	-	-	-	-	192 -
Stage 2	-	-	-	-	443 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	57.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	493	-	-	-	91
HCM Lane V/C Ratio	0.025	-	-	-	0.252
HCM Control Delay (s)	12.5	-	-	-	57.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9



Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	22	55	55	204	202	22
Future Volume (vph)	22	55	55	204	202	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			1%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.987	
Flt Protected	0.986			0.989		
Satd. Flow (prot)	1694	0	0	1841	1842	0
Flt Permitted	0.986			0.989		
Satd. Flow (perm)	1694	0	0	1841	1842	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	359			913	439	
Travel Time (s)	8.2			20.8	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	2%	0%
Adj. Flow (vph)	24	60	60	222	220	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	0	282	244	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.01	1.01	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations	T			T		T
Traffic Vol, veh/h	22	55	55	204	202	22
Future Vol, veh/h	22	55	55	204	202	22
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	-	-	1	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	24	60	60	222	220	24

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	574	232	244	0	0
Stage 1	232	-	-	-	-
Stage 2	342	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	484	812	1334	-	-
Stage 1	811	-	-	-	-
Stage 2	724	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	459	812	1334	-	-
Mov Cap-2 Maneuver	459	-	-	-	-
Stage 1	770	-	-	-	-
Stage 2	724	-	-	-	-

Approach	EB	NE	SW
HCM Control Delay, s	11.2	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	EBLn1	SWT	SWR
Capacity (veh/h)	1334	-	666	-	-
HCM Lane V/C Ratio	0.045	-	0.126	-	-
HCM Control Delay (s)	7.8	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Year 2025 Build Traffic Volumes
 19: Crossgates Mall Road & Site 2 Driveway (NW)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↘	↖	↕
Traffic Volume (vph)	0	133	370	82	125	398
Future Volume (vph)	0	133	370	82	125	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.865	0.973			
Flt Protected						0.988
Satd. Flow (prot)	0	1611	3478	0	0	3514
Flt Permitted						0.988
Satd. Flow (perm)	0	1611	3478	0	0	3514
Link Speed (mph)	30		30			30
Link Distance (ft)	234		275			114
Travel Time (s)	5.3		6.3			2.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	145	402	89	136	433
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	145	491	0	0	569
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	133	370	82	125	398
Future Vol, veh/h	0	133	370	82	125	398
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	145	402	89	136	433

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	246	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	754	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	754	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1069
HCM Lane V/C Ratio	-	-	0.192	0.127
HCM Control Delay (s)	-	-	10.9	8.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.4

Year 2025 Build Traffic Volumes
 20: Crossgates Mall Road & Site 2 Driveway (SW)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	452	83	0	398
Future Volume (vph)	0	0	452	83	0	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		-2%			-1%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.977			
Flt Protected						
Satd. Flow (prot)	0	1863	3492	0	0	3557
Flt Permitted						
Satd. Flow (perm)	0	1863	3492	0	0	3557
Link Speed (mph)	30		30			30
Link Distance (ft)	236		346			275
Travel Time (s)	5.4		7.9			6.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	491	90	0	433
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	581	0	0	433
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.99	0.99	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	0	452	83	0	398
Future Vol, veh/h	0	0	452	83	0	398
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	-	-2	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	491	90	0	433

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	291	0	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	706	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	706	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Year 2025 Build Traffic Volumes
 21: Gabriel Terrace & Site 2 Driveway (E)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	378	123	43	53	49	280
Future Volume (vph)	378	123	43	53	49	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%			0%	-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967				0.885	
Flt Protected	0.964			0.978		
Satd. Flow (prot)	1736	0	0	1822	1657	0
Flt Permitted	0.964			0.978		
Satd. Flow (perm)	1736	0	0	1822	1657	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			295	294	
Travel Time (s)	4.8			6.7	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	411	134	47	58	53	304
Shared Lane Traffic (%)						
Lane Group Flow (vph)	545	0	0	105	357	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	17.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	378	123	43	53	49	280
Future Vol, veh/h	378	123	43	53	49	280
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	-1	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	411	134	47	58	53	304

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	357	205	357	0	0
Stage 1	205	-	-	-	-
Stage 2	152	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	641	836	1202	-	-
Stage 1	829	-	-	-	-
Stage 2	876	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	615	836	1202	-	-
Mov Cap-2 Maneuver	615	-	-	-	-
Stage 1	796	-	-	-	-
Stage 2	876	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.2	3.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1202	-	658	-	-
HCM Lane V/C Ratio	0.039	-	0.828	-	-
HCM Control Delay (s)	8.1	0	31.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	8.9	-	-

Year 2025 Build Traffic Volumes
 22: Gabriel Terrace & Site 3 Driveway (W)

Saturday Peak Hour
 02/17/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	100	349	82	83	251
Future Volume (vph)	78	100	349	82	83	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	0%		0%			-1%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.924		0.974			
Flt Protected	0.979					0.988
Satd. Flow (prot)	1685	0	1814	0	0	1850
Flt Permitted	0.979					0.988
Satd. Flow (perm)	1685	0	1814	0	0	1850
Link Speed (mph)	30		30			30
Link Distance (ft)	219		294			351
Travel Time (s)	5.0		6.7			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	109	379	89	90	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	194	0	468	0	0	363
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.99	0.99
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	78	100	349	82	83	251
Future Vol, veh/h	78	100	349	82	83	251
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	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	109	379	89	90	273

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	877	424	0	0	468	0
Stage 1	424	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	319	630	-	-	1094	-
Stage 1	660	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	288	630	-	-	1094	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	2.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	414	1094
HCM Lane V/C Ratio	-	-	0.467	0.082
HCM Control Delay (s)	-	-	21.1	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	2.4	0.3

Year 2025 Build Traffic Volumes
 23: Hotel Driveway & Site 3 Driveway (E)

Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	98	0	44	0	0	92
Future Volume (vph)	98	0	44	0	0	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected	0.950			0.950		
Satd. Flow (prot)	1770	0	0	1770	0	1611
Fl _t Permitted	0.950			0.950		
Satd. Flow (perm)	1770	0	0	1770	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	212			226	394	
Travel Time (s)	4.8			5.1	9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	0	48	0	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	0	0	48	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↙		↘
Traffic Vol, veh/h	98	0	44	0	0	92
Future Vol, veh/h	98	0	44	0	0	92
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	16965	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	0	48	0	0	100

Major/Minor	Minor2	Major1	
Conflicting Flow All	96	-	0
Stage 1	0	-	-
Stage 2	96	-	-
Critical Hdwy	6.42	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	-	2.218
Pot Cap-1 Maneuver	903	0	-
Stage 1	-	0	-
Stage 2	928	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	903	-	-
Mov Cap-2 Maneuver	903	-	-
Stage 1	-	-	-
Stage 2	928	-	-

Approach	EB	NB
HCM Control Delay, s	9.5	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	903
HCM Lane V/C Ratio	-	-	0.118
HCM Control Delay (s)	-	-	9.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.4

INTERSECTION #11
W/ SIGNALIZATION

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	303	7	58	121	5	6	0	58	8	0	20
Future Volume (vph)	12	303	7	58	121	5	6	0	58	8	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.997			0.994			0.877				0.902
Fl _t Protected	0.950			0.950				0.995				0.986
Satd. Flow (prot)	1762	1796	0	1752	1852	0	0	1625	0	0	912	0
Fl _t Permitted	0.673			0.539				0.963				0.884
Satd. Flow (perm)	1248	1796	0	994	1852	0	0	1573	0	0	818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4			109				109
Link Speed (mph)		30			30			30				30
Link Distance (ft)		780			786			309				287
Travel Time (s)		17.7			17.9			7.0				6.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	2%	2%	1%	0%	2%	2%	2%	75%	2%	84%
Adj. Flow (vph)	13	316	7	60	126	5	6	0	60	8	0	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	323	0	60	131	0	0	66	0	0	29	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		4			8		
Permitted Phases	6			2			4			8		

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020

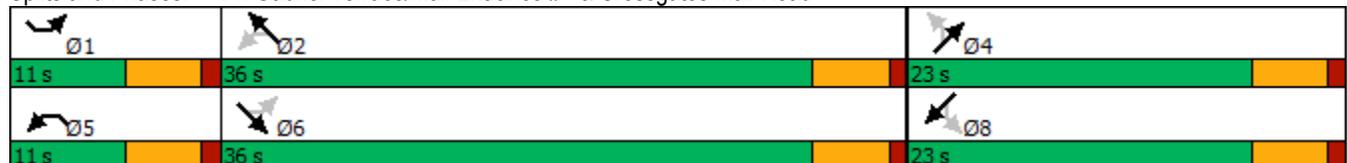


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	11.0	36.0		11.0	36.0		23.0	23.0		23.0	23.0	
Total Split (%)	15.7%	51.4%		15.7%	51.4%		32.9%	32.9%		32.9%	32.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.01	0.28		0.08	0.10			0.18			0.13	
Control Delay	3.4	8.2		3.5	5.6			3.5			1.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	3.4	8.2		3.5	5.6			3.5			1.1	
Queue Length 50th (ft)	1	26		4	9			0			0	
Queue Length 95th (ft)	4	111		13	46			14			0	
Internal Link Dist (ft)		700			706			229			207	
Turn Bay Length (ft)												
Base Capacity (vph)	886	1575		794	1624			911			497	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.01	0.21		0.08	0.08			0.07			0.06	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 34.4
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	12	303	7	58	121	5	6	0	58	8	0	20
Future Volume (veh/h)	12	303	7	58	121	5	6	0	58	8	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1934	1934	1847	1862	1862	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	12	316	7	60	126	5	6	0	60	8	0	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	3	3	2	1	1	2	2	2	2	2	2
Cap, veh/h	680	555	12	530	597	24	162	0	113	210	0	88
Arrive On Green	0.01	0.29	0.29	0.05	0.34	0.34	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1884	1884	42	1759	1778	71	148	0	1478	439	0	1152
Grp Volume(v), veh/h	12	0	323	60	0	131	66	0	0	29	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1926	1759	0	1849	1626	0	0	1591	0	0
Q Serve(g_s), s	0.1	0.0	3.7	0.6	0.0	1.3	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	3.7	0.6	0.0	1.3	1.0	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.04	0.09		0.91	0.28		0.72
Lane Grp Cap(c), veh/h	680	0	567	530	0	621	275	0	0	297	0	0
V/C Ratio(X)	0.02	0.00	0.57	0.11	0.00	0.21	0.24	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	1089	0	2289	840	0	2197	1235	0	0	1177	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	0.0	7.8	6.0	0.0	6.2	11.6	0.0	0.0	11.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.1	0.0	0.2	0.4	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.0	0.1	0.0	0.3	0.3	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	0.0	8.7	6.1	0.0	6.4	12.0	0.0	0.0	11.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		335			191			66			29	
Approach Delay, s/veh		8.6			6.3			12.0			11.5	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	13.8		7.0	6.4	12.7		7.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	31.0		18.0	6.0	31.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	3.3		3.0	2.6	5.7		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.2	0.0	2.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	28	180	32	142	357	65	35	12	195	78	12	63
Future Volume (vph)	28	180	32	142	357	65	35	12	195	78	12	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.977			0.977			0.891				0.945
Fl _t Protected	0.950			0.950				0.993				0.975
Satd. Flow (prot)	1762	1748	0	1752	1838	0	0	1648	0	0	1530	0
Fl _t Permitted	0.467			0.513				0.936				0.671
Satd. Flow (perm)	866	1748	0	946	1838	0	0	1553	0	0	1053	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			16			214				51
Link Speed (mph)		30			30			30				30
Link Distance (ft)		780			786			249				287
Travel Time (s)		17.7			17.9			5.7				6.5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	31	198	35	156	392	71	38	13	214	86	13	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	233	0	156	463	0	0	265	0	0	168	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		4			8		
Permitted Phases	6			2			4			8		

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020

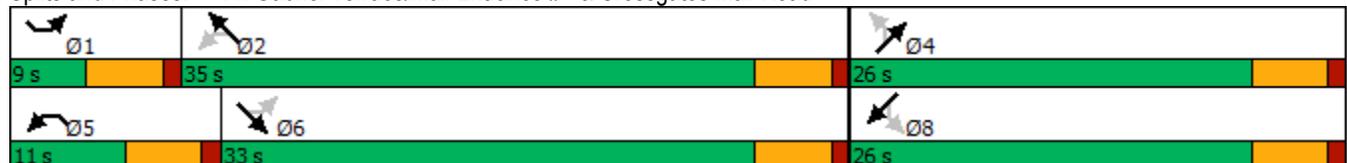


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	9.0	33.0		11.0	35.0		26.0	26.0		26.0	26.0	
Total Split (%)	12.9%	47.1%		15.7%	50.0%		37.1%	37.1%		37.1%	37.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.07	0.40		0.27	0.55			0.49			0.57	
Control Delay	6.9	14.8		7.5	13.5			8.5			21.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.9	14.8		7.5	13.5			8.5			21.4	
Queue Length 50th (ft)	3	43		17	57			9			24	
Queue Length 95th (ft)	16	112		55	226			68			95	
Internal Link Dist (ft)		700			706			169			207	
Turn Bay Length (ft)												
Base Capacity (vph)	431	1170		585	1292			900			564	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.07	0.20		0.27	0.36			0.29			0.30	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 45.8
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Weekday Peak PM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	28	180	32	142	357	65	35	12	195	78	12	63
Future Volume (veh/h)	28	180	32	142	357	65	35	12	195	78	12	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	31	198	35	156	392	71	38	13	214	86	13	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	365	452	80	556	538	97	138	40	301	285	68	148
Arrive On Green	0.03	0.28	0.28	0.09	0.35	0.35	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1884	1587	281	1759	1546	280	135	170	1279	613	289	629
Grp Volume(v), veh/h	31	0	233	156	0	463	265	0	0	168	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1868	1759	0	1826	1583	0	0	1531	0	0
Q Serve(g_s), s	0.4	0.0	3.9	2.3	0.0	8.6	2.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	3.9	2.3	0.0	8.6	5.9	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.15	0.14		0.81	0.51		0.41
Lane Grp Cap(c), veh/h	365	0	531	556	0	635	479	0	0	501	0	0
V/C Ratio(X)	0.08	0.00	0.44	0.28	0.00	0.73	0.55	0.00	0.00	0.34	0.00	0.00
Avail Cap(c_a), veh/h	505	0	1351	665	0	1415	955	0	0	893	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	11.3	8.5	0.0	11.0	13.5	0.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.3	0.0	1.6	1.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.4	0.7	0.0	2.8	1.8	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.0	11.9	8.7	0.0	12.7	14.5	0.0	0.0	13.0	0.0	0.0
LnGrp LOS	A	A	B	A	A	B	B	A	A	B	A	A
Approach Vol, veh/h		264			619			265			168	
Approach Delay, s/veh		11.7			11.7			14.5			13.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	18.5		14.1	8.6	16.0		14.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	30.0		21.0	6.0	28.0		21.0				
Max Q Clear Time (g_c+I1), s	2.4	10.6		7.9	4.3	5.9		5.3				
Green Ext Time (p_c), s	0.0	2.9		1.3	0.1	1.3		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	94	219	46	190	213	171	47	15	287	118	15	98
Future Volume (vph)	94	219	46	190	213	171	47	15	287	118	15	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%			4%	
Lane Util. Factor	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 Factor					0.99						1.00	
Frt		0.974			0.933			0.889			0.942	
Flt Protected	0.950			0.950				0.993			0.975	
Satd. Flow (prot)	1745	1743	0	1752	1730	0	0	1644	0	0	1605	0
Flt Permitted	0.432			0.416				0.930			0.589	
Satd. Flow (perm)	793	1743	0	767	1730	0	0	1540	0	0	970	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			64			312			61	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		780			786			250			287	
Travel Time (s)		17.7			17.9			5.7			6.5	
Confl. Peds. (#/hr)						1				1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	102	238	50	207	232	186	51	16	312	128	16	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	288	0	207	418	0	0	379	0	0	251	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	

Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

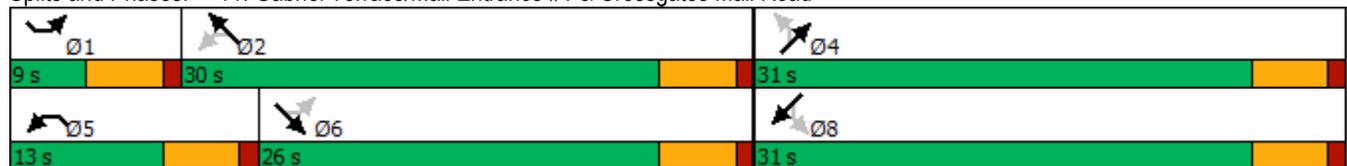


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		4	4		8		8
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0		21.0
Total Split (s)	9.0	26.0		13.0	30.0		31.0	31.0		31.0		31.0
Total Split (%)	12.9%	37.1%		18.6%	42.9%		44.3%	44.3%		44.3%		44.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0				5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None
v/c Ratio	0.29	0.58		0.40	0.67			0.54				0.73
Control Delay	11.9	22.7		11.5	19.8			7.1				26.6
Queue Delay	0.0	0.0		0.0	0.0			0.0				0.0
Total Delay	11.9	22.7		11.5	19.8			7.1				26.6
Queue Length 50th (ft)	15	74		32	90			15				51
Queue Length 95th (ft)	47	169		88	214			77				144
Internal Link Dist (ft)		700			706			170				207
Turn Bay Length (ft)												
Base Capacity (vph)	350	824		521	992			1013				580
Starvation Cap Reductn	0	0		0	0			0				0
Spillback Cap Reductn	0	0		0	0			0				0
Storage Cap Reductn	0	0		0	0			0				0
Reduced v/c Ratio	0.29	0.35		0.40	0.42			0.37				0.43

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 51.1
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road



Year 2025 No-Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	94	219	46	190	213	171	47	15	287	118	15	98
Future Volume (veh/h)	94	219	46	190	213	171	47	15	287	118	15	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1964	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	102	238	50	207	232	186	51	16	312	128	16	107
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, %	1	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	370	390	82	496	300	240	130	45	400	276	59	161
Arrive On Green	0.06	0.25	0.25	0.12	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1870	1537	323	1759	963	772	138	151	1344	528	198	540
Grp Volume(v), veh/h	102	0	288	207	0	418	379	0	0	251	0	0
Grp Sat Flow(s),veh/h/ln	1870	0	1860	1759	0	1736	1633	0	0	1266	0	0
Q Serve(g_s), s	1.8	0.0	6.3	3.8	0.0	10.0	1.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	6.3	3.8	0.0	10.0	9.4	0.0	0.0	7.6	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.44	0.13		0.82	0.51		0.43
Lane Grp Cap(c), veh/h	370	0	472	496	0	540	575	0	0	496	0	0
V/C Ratio(X)	0.28	0.00	0.61	0.42	0.00	0.77	0.66	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	415	0	854	591	0	948	993	0	0	822	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	15.1	10.7	0.0	14.3	14.6	0.0	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.3	0.6	0.0	2.4	1.3	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	2.4	1.3	0.0	3.6	3.2	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	16.3	11.2	0.0	16.7	15.9	0.0	0.0	14.5	0.0	0.0
LnGrp LOS	B	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		390			625			379			251	
Approach Delay, s/veh		15.3			14.9			15.9			14.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	19.2		18.6	10.5	16.6		18.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	25.0		26.0	8.0	21.0		26.0				
Max Q Clear Time (g_c+I1), s	3.8	12.0		11.4	5.8	8.3		9.6				
Green Ext Time (p_c), s	0.0	2.2		2.2	0.1	1.3		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				15.2								
HCM 6th LOS				B								

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	324	38	71	130	5	23	0	65	8	0	20
Future Volume (vph)	12	324	38	71	130	5	23	0	65	8	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.995			0.900				0.904
Flt Protected	0.950			0.950				0.987				0.986
Satd. Flow (prot)	1762	1760	0	1752	1872	0	0	1655	0	0	1381	0
Flt Permitted	0.663			0.466				0.901				0.888
Satd. Flow (perm)	1230	1760	0	859	1872	0	0	1511	0	0	1244	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			3			109				109
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	13	356	41	77	143	5	25	0	71	9	0	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	397	0	77	148	0	0	96	0	0	31	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2		4			8		
Permitted Phases	6			2			4			8		

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 11: Gabriel Terrace & Crossgates Mall Road

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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	9.0	37.0		10.0	38.0		23.0	23.0		23.0	23.0	
Total Split (%)	12.9%	52.9%		14.3%	54.3%		32.9%	32.9%		32.9%	32.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.02	0.36		0.11	0.11			0.28			0.10	
Control Delay	3.8	9.6		3.6	5.2			6.7			0.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	3.8	9.6		3.6	5.2			6.7			0.7	
Queue Length 50th (ft)	1	67		5	11			0			0	
Queue Length 95th (ft)	5	141		17	49			27			0	
Internal Link Dist (ft)		705			706			271			207	
Turn Bay Length (ft)												
Base Capacity (vph)	817	1487		711	1606			807			674	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.02	0.27		0.11	0.09			0.12			0.05	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 37.9
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

Weekday Peak AM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	12	324	38	71	130	5	23	0	65	8	0	20
Future Volume (veh/h)	12	324	38	71	130	5	23	0	65	8	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	13	356	41	77	143	5	25	0	71	9	0	22
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	700	552	64	506	679	24	194	0	104	200	3	102
Arrive On Green	0.01	0.33	0.33	0.06	0.38	0.38	0.09	0.00	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1884	1689	195	1759	1802	63	414	0	1176	442	30	1153
Grp Volume(v), veh/h	13	0	397	77	0	148	96	0	0	31	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1884	1759	0	1865	1590	0	0	1624	0	0
Q Serve(g_s), s	0.1	0.0	5.2	0.8	0.0	1.5	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	5.2	0.8	0.0	1.5	1.7	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.03	0.26		0.74	0.29		0.71
Lane Grp Cap(c), veh/h	700	0	616	506	0	703	298	0	0	305	0	0
V/C Ratio(X)	0.02	0.00	0.64	0.15	0.00	0.21	0.32	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	936	0	2092	699	0	2136	1118	0	0	1070	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	0.0	8.3	6.1	0.0	6.1	12.7	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.1	0.0	0.1	0.6	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.5	0.2	0.0	0.4	0.5	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	0.0	9.4	6.2	0.0	6.2	13.3	0.0	0.0	12.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		410			225			96				31
Approach Delay, s/veh		9.3			6.2			13.3				12.3
Approach LOS		A			A			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	15.9		7.6	6.8	14.4		7.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	33.0		18.0	5.0	32.0		18.0				
Max Q Clear Time (g_c+I1), s	2.1	3.5		3.7	2.8	7.2		2.5				
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	2.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	28	195	76	155	384	65	87	19	234	78	19	63
Future Volume (vph)	28	195	76	155	384	65	87	19	234	78	19	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.958			0.978			0.907				0.947
Fl _t Protected	0.950			0.950				0.987				0.976
Satd. Flow (prot)	1762	1718	0	1752	1840	0	0	1668	0	0	1541	0
Fl _t Permitted	0.424			0.428				0.877				0.603
Satd. Flow (perm)	787	1718	0	789	1840	0	0	1482	0	0	952	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			14			168				49
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Heavy Vehicles (%)	0%	4%	2%	2%	0%	0%	2%	2%	2%	1%	2%	28%
Adj. Flow (vph)	31	214	83	168	422	71	95	21	254	86	21	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	297	0	168	493	0	0	370	0	0	176	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4			8		

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Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	21.0		9.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	9.0	30.0		12.0	33.0		28.0	28.0		28.0	28.0	
Total Split (%)	12.9%	42.9%		17.1%	47.1%		40.0%	40.0%		40.0%	40.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.08	0.53		0.32	0.60			0.70			0.60	
Control Delay	8.1	17.9		9.0	15.8			18.0			22.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	8.1	17.9		9.0	15.8			18.0			22.6	
Queue Length 50th (ft)	4	63		21	75			47			30	
Queue Length 95th (ft)	17	152		65	263			154			101	
Internal Link Dist (ft)		705			706			271			207	
Turn Bay Length (ft)												
Base Capacity (vph)	385	1002		537	1150			864			527	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.08	0.30		0.31	0.43			0.43			0.33	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 49.2
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: Gabriel Terrace & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 11: Gabriel Terrace & Crossgates Mall Road

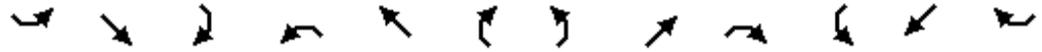
Weekday Peak PM Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	28	195	76	155	384	65	87	19	234	78	19	63
Future Volume (veh/h)	28	195	76	155	384	65	87	19	234	78	19	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	31	214	83	168	422	71	95	21	254	86	21	69
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	311	359	139	475	537	90	191	55	318	274	84	154
Arrive On Green	0.03	0.27	0.27	0.10	0.34	0.34	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1884	1316	511	1759	1566	263	307	189	1086	526	287	525
Grp Volume(v), veh/h	31	0	297	168	0	493	370	0	0	176	0	0
Grp Sat Flow(s),veh/h/ln	1884	0	1827	1759	0	1829	1582	0	0	1339	0	0
Q Serve(g_s), s	0.5	0.0	6.3	3.0	0.0	10.8	5.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	6.3	3.0	0.0	10.8	9.5	0.0	0.0	4.3	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.14	0.26		0.69	0.49		0.39
Lane Grp Cap(c), veh/h	311	0	499	475	0	628	565	0	0	512	0	0
V/C Ratio(X)	0.10	0.00	0.60	0.35	0.00	0.79	0.66	0.00	0.00	0.34	0.00	0.00
Avail Cap(c_a), veh/h	426	0	1021	577	0	1144	900	0	0	790	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.8	0.0	14.1	10.2	0.0	13.2	14.4	0.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.1	0.4	0.0	2.2	1.3	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.3	1.0	0.0	3.9	3.0	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	15.3	10.7	0.0	15.4	15.7	0.0	0.0	13.0	0.0	0.0
LnGrp LOS	B	A	B	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		328			661			370				176
Approach Delay, s/veh		14.9			14.2			15.7				13.0
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	20.4		18.1	9.4	17.2		18.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	28.0		23.0	7.0	25.0		23.0				
Max Q Clear Time (g_c+I1), s	2.5	12.8		11.5	5.0	8.3		6.3				
Green Ext Time (p_c), s	0.0	2.5		1.7	0.1	1.4		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				14.6								
HCM 6th LOS				B								

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	94	240	104	208	238	171	93	22	335	118	22	98
Future Volume (vph)	94	240	104	208	238	171	93	22	335	118	22	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	12	15	12	15
Grade (%)		-2%			2%			0%				4%
Lane Util. Factor	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 Factor	1.00	0.99		1.00	0.99			0.99				1.00
Frt		0.955			0.937			0.900				0.944
Flt Protected	0.950			0.950				0.990				0.976
Satd. Flow (prot)	1745	1702	0	1752	1739	0	0	1643	0	0	1613	0
Flt Permitted	0.448			0.305				0.873				0.517
Satd. Flow (perm)	822	1702	0	562	1739	0	0	1449	0	0	854	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			57			244				59
Link Speed (mph)		30			30			30				30
Link Distance (ft)		785			786			351				287
Travel Time (s)		17.8			17.9			8.0				6.5
Confl. Peds. (#/hr)	1		1	1		1			1	1		
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
Heavy Vehicles (%)	1%	4%	2%	2%	0%	1%	2%	2%	2%	0%	2%	15%
Adj. Flow (vph)	102	261	113	226	259	186	101	24	364	128	24	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	374	0	226	445	0	0	489	0	0	259	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	0.99	1.01	1.01	1.01	1.00	1.00	1.00	0.91	1.03	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	

Year 2025 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020

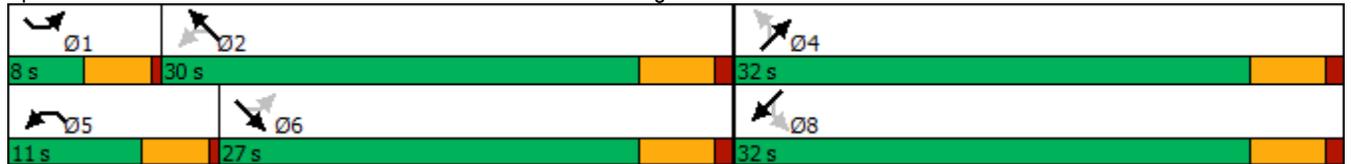


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		4	4		8		8
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	21.0		8.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	8.0	27.0		11.0	30.0		32.0	32.0		32.0	32.0	
Total Split (%)	11.4%	38.6%		15.7%	42.9%		45.7%	45.7%		45.7%	45.7%	
Yellow Time (s)	3.5	4.0		3.5	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	4.0	5.0		4.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.27	0.73		0.51	0.63			0.78			0.84	
Control Delay	11.2	26.6		14.0	19.1			18.7			38.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	11.2	26.6		14.0	19.1			18.7			38.9	
Queue Length 50th (ft)	16	100		38	107			66			60	
Queue Length 95th (ft)	47	216		96	237			189			#186	
Internal Link Dist (ft)		705			706			271			207	
Turn Bay Length (ft)												
Base Capacity (vph)	384	726		439	851			858			464	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.27	0.52		0.51	0.52			0.57			0.56	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 55.8
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road



Year 2025 Build Traffic Volumes
 11: Gabriel Terrace/Mall Entrance #1 & Crossgates Mall Road

Saturday Peak Hour
 02/17/2020



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	94	240	104	208	238	171	93	22	335	118	22	98
Future Volume (veh/h)	94	240	104	208	238	171	93	22	335	118	22	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1964	1919	1919	1847	1876	1876	1870	1870	1870	1847	1776	1847
Adj Flow Rate, veh/h	102	261	113	226	259	186	101	24	364	128	24	107
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, %	1	4	4	2	0	0	2	2	2	2	2	2
Cap, veh/h	335	328	142	417	325	233	173	55	426	263	68	161
Arrive On Green	0.06	0.26	0.26	0.12	0.32	0.32	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1870	1269	549	1759	1015	729	257	156	1203	453	191	453
Grp Volume(v), veh/h	102	0	374	226	0	445	489	0	0	259	0	0
Grp Sat Flow(s),veh/h/ln	1870	0	1818	1759	0	1744	1616	0	0	1097	0	0
Q Serve(g_s), s	2.1	0.0	10.1	4.6	0.0	12.3	4.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	10.1	4.6	0.0	12.3	14.4	0.0	0.0	10.3	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.42	0.21		0.74	0.49		0.41
Lane Grp Cap(c), veh/h	335	0	470	417	0	558	655	0	0	491	0	0
V/C Ratio(X)	0.30	0.00	0.80	0.54	0.00	0.80	0.75	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	365	0	759	436	0	827	894	0	0	677	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.8	0.0	18.2	12.3	0.0	16.4	15.5	0.0	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	3.1	1.2	0.0	3.4	2.3	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	4.2	1.6	0.0	4.7	4.9	0.0	0.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	21.4	13.6	0.0	19.7	17.8	0.0	0.0	14.8	0.0	0.0
LnGrp LOS	B	A	C	B	A	B	B	A	A	B	A	A
Approach Vol, veh/h		476			671			489			259	
Approach Delay, s/veh		19.9			17.7			17.8			14.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	21.9		23.7	10.4	18.6		23.7				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	4.0	25.0		27.0	7.0	22.0		27.0				
Max Q Clear Time (g_c+I1), s	4.1	14.3		16.4	6.6	12.1		12.3				
Green Ext Time (p_c), s	0.0	1.9		2.3	0.0	1.5		1.4				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B



Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

**APPENDIX E
TRAFFIC COUNT DATA**

Western Ave / Crossgates Mall
Driveway
Guilderland, New York
Thursday, September 19, 2019
Location: 42.685582, -
73.851774

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: 1. Western Ave /
Crossgates Mall Driveway
Site Code: Guilderland, New
York
Start Date: 09/19/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	US 20 - Western Ave Eastbound					US 20 - Western Ave Westbound					Crossgates Mall Driveway Southbound						Int. Total	
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds		App. Total
7:45 AM	79	379	0	0	458	219	17	7	0	0	243	6	0	3	0	0	9	710
8:00 AM	51	334	0	0	385	195	25	2	0	0	222	15	4	1	0	1	20	627
8:15 AM	79	399	0	0	478	231	21	2	0	0	254	15	3	1	0	0	19	751
8:30 AM	65	355	0	1	420	222	19	7	0	0	248	14	1	5	0	0	20	688
Total	274	1467	0	1	1741	867	82	18	0	0	967	50	8	10	0	1	68	2776
Approach %	15.7	84.3	0.0	-	-	89.7	8.5	1.9	0.0	-	-	73.5	11.8	14.7	0.0	-	-	-
Total %	9.9	52.8	0.0	-	62.7	31.2	3.0	0.6	0.0	-	34.8	1.8	0.3	0.4	0.0	-	2.4	-
PHF	0.867	0.919	0.000	-	0.911	0.938	0.820	0.643	0.000	-	0.952	0.833	0.500	0.500	0.000	-	0.850	0.924
Lights	274	1389	0	-	1663	800	79	18	0	-	897	50	8	9	0	-	67	2627
% Lights	100.0	94.7	-	-	95.5	92.3	96.3	100.0	-	-	92.8	100.0	100.0	90.0	-	-	98.5	94.6
Buses	0	28	0	-	28	29	1	0	0	-	30	0	0	0	0	-	0	58
% Buses	0.0	1.9	-	-	1.6	3.3	1.2	0.0	-	-	3.1	0.0	0.0	0.0	-	-	0.0	2.1
Trucks	0	50	0	-	50	38	2	0	0	-	40	0	0	1	0	-	1	91
% Trucks	0.0	3.4	-	-	2.9	4.4	2.4	0.0	-	-	4.1	0.0	0.0	10.0	-	-	1.5	3.3
Bicycles on Road	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
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Count Name: 2. Western Ave /
Gabriel Terrace
Site Code: Guilderland, New
York
Start Date: 09/19/2019
Page No: 3

Western Ave / Gabriel Terrace
Guilderland, New York
Thursday, September 19, 2019
Location: 42.687058, -
73.856051

Turning Movement Peak Hour Data (7:30 AM)

Start Time	US 20 - Western Ave Eastbound						US 20 - Western Ave Westbound						Private Drive Northbound						Gabriel Terrace Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	0	407	1	0	0	408	1	242	0	1	1	244	0	0	3	0	1	3	0	0	0	0	0	0	655
7:45 AM	0	447	0	0	0	447	3	225	0	0	0	228	0	0	3	0	0	3	0	0	0	0	0	0	678
8:00 AM	0	402	3	0	0	405	0	187	0	0	0	187	0	0	4	0	0	4	0	0	0	0	2	0	596
8:15 AM	2	450	1	0	0	453	2	222	0	1	0	225	1	0	12	0	0	13	0	0	0	0	0	0	691
Total	2	1706	5	0	0	1713	6	876	0	2	1	884	1	0	22	0	1	23	0	0	0	0	2	0	2620
Approach %	0.1	99.6	0.3	0.0	-	-	0.7	99.1	0.0	0.2	-	-	4.3	0.0	95.7	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.1	65.1	0.2	0.0	-	65.4	0.2	33.4	0.0	0.1	-	33.7	0.0	0.0	0.8	0.0	-	0.9	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.250	0.948	0.417	0.000	-	0.945	0.500	0.905	0.000	0.500	-	0.906	0.250	0.000	0.458	0.000	-	0.442	0.000	0.000	0.000	0.000	-	0.000	0.948
Lights	1	1634	5	0	-	1640	5	807	0	2	-	814	1	0	21	0	-	22	0	0	0	0	-	0	2476
% Lights	50.0	95.8	100.0	-	-	95.7	83.3	92.1	-	100.0	-	92.1	100.0	-	95.5	-	-	95.7	-	-	-	-	-	-	94.5
Buses	0	30	0	0	-	30	1	30	0	0	-	31	0	0	1	0	-	1	0	0	0	0	-	0	62
% Buses	0.0	1.8	0.0	-	-	1.8	16.7	3.4	-	0.0	-	3.5	0.0	-	4.5	-	-	4.3	-	-	-	-	-	-	2.4
Trucks	1	42	0	0	-	43	0	39	0	0	-	39	0	0	0	0	-	0	0	0	0	0	-	0	82
% Trucks	50.0	2.5	0.0	-	-	2.5	0.0	4.5	-	0.0	-	4.4	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	3.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Western Ave / Rapp Rd /
Johnston Rd
Guilderland, New York
Thursday, September 19, 2019
Location: 42.688145, -73.8595

Turning Movement Peak Hour Data (7:30 AM)

Start Time	US 20 - Western Ave Eastbound							US 20 - Western Ave Westbound							Johnston Rd Northbound							Rapp Rd / Crossgate Mall Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	57	337	23	6	0	1	423	34	158	2	0	0	1	194	23	35	9	34	0	0	101	6	16	6	10	0	0	38	756
7:45 AM	67	371	45	1	0	0	484	28	201	7	2	0	0	238	31	42	18	44	0	0	135	11	9	6	17	0	0	43	900
8:00 AM	65	350	12	0	0	0	427	18	136	5	0	0	0	159	22	33	13	28	0	0	96	11	6	3	18	0	1	38	720
8:15 AM	46	382	10	0	0	0	438	15	202	14	0	0	1	231	16	36	9	26	0	0	87	11	10	4	23	0	0	48	804
Total	235	1440	90	7	0	1	1772	95	697	28	2	0	2	822	92	146	49	132	0	0	419	39	41	19	68	0	1	167	3180
Approach %	13.3	81.3	5.1	0.4	0.0	-	-	11.6	84.8	3.4	0.2	0.0	-	-	22.0	34.8	11.7	31.5	0.0	-	-	23.4	24.6	11.4	40.7	0.0	-	-	-
Total %	7.4	45.3	2.8	0.2	0.0	-	55.7	3.0	21.9	0.9	0.1	0.0	-	25.8	2.9	4.6	1.5	4.2	0.0	-	13.2	1.2	1.3	0.6	2.1	0.0	-	5.3	-
PHF	0.87 7	0.942	0.500	0.292	0.000	-	0.915	0.699	0.863	0.500	0.250	0.000	-	0.863	0.742	0.869	0.681	0.750	0.000	-	0.776	0.886	0.641	0.792	0.739	0.000	-	0.870	0.883
Lights	231	1391	81	7	0	-	1710	84	647	24	1	0	-	756	82	144	46	123	0	-	395	29	40	19	65	0	-	153	3014
% Lights	98.3	96.6	90.0	100.0	-	-	96.5	88.4	92.8	85.7	50.0	-	92.0	89.1	98.6	93.9	93.2	-	-	94.3	74.4	97.6	100.0	95.6	-	-	91.6	94.8	
Buses	2	11	7	0	0	-	20	10	15	3	1	0	-	29	9	1	3	6	0	-	19	8	0	0	2	0	-	10	78
% Buses	0.9	0.8	7.8	0.0	-	-	1.1	10.5	2.2	10.7	50.0	-	3.5	9.8	0.7	6.1	4.5	-	-	4.5	20.5	0.0	0.0	2.9	-	-	6.0	2.5	
Trucks	2	38	2	0	0	-	42	1	35	1	0	0	-	37	1	1	0	3	0	-	5	2	1	0	1	0	-	4	88
% Trucks	0.9	2.6	2.2	0.0	-	-	2.4	1.1	5.0	3.6	0.0	-	4.5	1.1	0.7	0.0	2.3	-	-	1.2	5.1	2.4	0.0	1.5	-	-	2.4	2.8	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Springsteen Rd Westbound					Rapp Rd Northbound					Rapp Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
7:30 AM	0	0	0	0	0	0	46	0	0	46	2	19	0	0	21	67
7:45 AM	0	0	0	0	0	0	67	0	0	67	1	13	0	0	14	81
8:00 AM	0	0	0	0	0	0	42	0	0	42	1	20	0	1	21	63
8:15 AM	0	0	0	0	0	0	56	0	0	56	2	19	0	0	21	77
Total	0	0	0	0	0	0	211	0	0	211	6	71	0	1	77	288
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	7.8	92.2	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	73.3	0.0	-	73.3	2.1	24.7	0.0	-	26.7	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.787	0.000	-	0.787	0.750	0.888	0.000	-	0.917	0.889
Lights	0	0	0	-	0	0	208	0	-	208	6	68	0	-	74	282
% Lights	-	-	-	-	-	-	98.6	-	-	98.6	100.0	95.8	-	-	96.1	97.9
Buses	0	0	0	-	0	0	1	0	-	1	0	3	0	-	3	4
% Buses	-	-	-	-	-	-	0.5	-	-	0.5	0.0	4.2	-	-	3.9	1.4
Trucks	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Trucks	-	-	-	-	-	-	0.9	-	-	0.9	0.0	0.0	-	-	0.0	0.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Springsteen Rd Eastbound						Springsteen Rd Westbound						S Frontage Rd Northbound						S Frontage Rd Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	26	19	2	0	0	47	14	0	23	0	0	37	0	6	3	0	0	9	5	0	0	0	1	5	98
7:45 AM	37	32	2	0	0	71	17	0	28	0	0	45	0	0	5	0	0	5	4	2	0	0	3	6	127
8:00 AM	23	17	2	0	0	42	8	0	50	0	0	58	0	2	7	0	0	9	4	0	0	0	1	4	113
8:15 AM	32	23	1	0	0	56	4	0	28	1	0	33	0	4	5	0	0	9	5	0	0	0	1	5	103
Total	118	91	7	0	0	216	43	0	129	1	0	173	0	12	20	0	0	32	18	2	0	0	6	20	441
Approach %	54.6	42.1	3.2	0.0	-	-	24.9	0.0	74.6	0.6	-	-	0.0	37.5	62.5	0.0	-	-	90.0	10.0	0.0	0.0	-	-	-
Total %	26.8	20.6	1.6	0.0	-	49.0	9.8	0.0	29.3	0.2	-	39.2	0.0	2.7	4.5	0.0	-	7.3	4.1	0.5	0.0	0.0	-	4.5	-
PHF	0.797	0.711	0.875	0.000	-	0.761	0.632	0.000	0.645	0.250	-	0.746	0.000	0.500	0.714	0.000	-	0.889	0.900	0.250	0.000	0.000	-	0.833	0.868
Lights	116	90	7	0	-	213	39	0	128	1	-	168	0	11	18	0	-	29	17	1	0	0	-	18	428
% Lights	98.3	98.9	100.0	-	-	98.6	90.7	-	99.2	100.0	-	97.1	-	91.7	90.0	-	-	90.6	94.4	50.0	-	-	-	90.0	97.1
Buses	1	0	0	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	0.8	0.0	0.0	-	-	0.5	0.0	-	0.8	0.0	-	0.6	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.5
Trucks	1	1	0	0	-	2	4	0	0	0	-	4	0	1	2	0	-	3	1	1	0	0	-	2	11
% Trucks	0.8	1.1	0.0	-	-	0.9	9.3	-	0.0	0.0	-	2.3	-	8.3	10.0	-	-	9.4	5.6	50.0	-	-	-	10.0	2.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Washington Ave Ext /
Springsteen Rd / Crossgates
Commons
Albany, New York
Thursday, September 19, 2019
Location: 42.69598, -73.849883

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: 9. Washington Ave
Ext / Springsteen Rd /
Crossgates Commons
Site Code: Albany, New York
Start Date: 09/19/2019
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Springsteen Rd Eastbound							Crossgates Commons Westbound							Washington Ave Ext Northbound							Washington Ave Ext Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	0	0	7	25	0	0	32	30	8	11	10	0	0	59	15	219	16	14	0	2	264	27	328	1	0	0	1	356	711
7:45 AM	0	0	24	20	0	0	44	28	9	28	17	1	0	83	44	277	26	13	0	1	360	30	330	3	2	0	1	365	852
8:00 AM	0	0	18	11	0	1	29	25	6	25	8	0	0	64	28	272	19	14	0	1	333	39	305	0	1	0	2	345	771
8:15 AM	0	0	15	13	0	0	28	21	11	16	11	0	0	59	39	349	22	7	0	0	417	29	330	1	0	0	1	360	864
Total	0	0	64	69	0	1	133	104	34	80	46	1	0	265	126	1117	83	48	0	4	1374	125	1293	5	3	0	5	1426	3198
Approach %	0.0	0.0	48.1	51.9	0.0	-	-	39.2	12.8	30.2	17.4	0.4	-	-	9.2	81.3	6.0	3.5	0.0	-	-	8.8	90.7	0.4	0.2	0.0	-	-	-
Total %	0.0	0.0	2.0	2.2	0.0	-	4.2	3.3	1.1	2.5	1.4	0.0	-	8.3	3.9	34.9	2.6	1.5	0.0	-	43.0	3.9	40.4	0.2	0.1	0.0	-	44.6	-
PHF	0.000	0.000	0.667	0.690	0.000	-	0.756	0.867	0.773	0.714	0.676	0.250	-	0.798	0.716	0.800	0.798	0.857	0.000	-	0.824	0.801	0.980	0.417	0.375	0.000	-	0.977	0.925
Lights	0	0	63	69	0	-	132	97	32	74	45	1	-	249	123	1075	72	47	0	-	1317	117	1256	5	3	0	-	1381	3079
% Lights	-	-	98.4	100.0	-	-	99.2	93.3	94.1	92.5	97.8	100.0	-	94.0	97.6	96.2	86.7	97.9	-	-	95.9	93.6	97.1	100.0	100.0	-	-	96.8	96.3
Buses	0	0	0	0	0	-	0	4	0	2	1	0	-	7	0	13	7	1	0	-	21	2	6	0	0	0	-	8	36
% Buses	-	-	0.0	0.0	-	-	0.0	3.8	0.0	2.5	2.2	0.0	-	2.6	0.0	1.2	8.4	2.1	-	-	1.5	1.6	0.5	0.0	0.0	-	-	0.6	1.1
Trucks	0	0	1	0	0	-	1	3	2	4	0	0	-	9	3	29	3	0	0	-	35	6	31	0	0	0	-	37	82
% Trucks	-	-	1.6	0.0	-	-	0.8	2.9	5.9	5.0	0.0	0.0	-	3.4	2.4	2.6	3.6	0.0	-	-	2.5	4.8	2.4	0.0	0.0	-	-	2.6	2.6
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	0	-	1	0	0	0	0	0	-	0	1
% Bicycles on Road	-	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	1.2	0.0	-	-	0.1	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	5	-	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

10. Crossgates Mall Rd / I87 ON/OFF Ramps - TMC

Thu Sep 19, 2019

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 701163, Location: 42.687391, -73.845699, Site Code: Albany, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Crossgates Mall Rd Southbound						I87 OFF Ramps Southwestbound						
	T	BL	HL	U	App	Ped*	HR	BL	L	U	HRR	App	Ped*
2019-09-19 7:00AM	9	28	0	0	37	0	41	32	2	0	33	108	0
7:15AM	9	33	0	0	42	0	51	29	0	0	36	116	0
7:30AM	9	30	0	0	39	0	60	29	1	0	33	123	0
7:45AM	9	23	0	0	32	0	70	41	1	0	42	154	0
Hourly Total	36	114	0	0	150	0	222	131	4	0	144	501	0
8:00AM	10	32	0	0	42	0	73	26	2	0	65	166	0
8:15AM	14	36	0	0	50	0	84	34	1	0	59	178	0
8:30AM	16	44	0	0	60	0	53	32	3	0	50	138	0
8:45AM	15	47	0	0	62	0	52	28	1	0	62	143	0
Hourly Total	55	159	0	0	214	0	262	120	7	0	236	625	0
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00PM	47	147	0	0	194	0	44	97	0	0	46	187	0
4:15PM	49	139	0	0	188	0	53	85	3	0	57	198	0
4:30PM	60	147	0	0	207	0	46	98	2	0	55	201	0
4:45PM	60	135	0	0	195	0	63	100	6	0	69	238	0
Hourly Total	216	568	0	0	784	0	206	380	11	0	227	824	0
5:00PM	82	118	0	0	200	0	64	106	4	0	51	225	0
5:15PM	60	128	0	0	188	0	47	101	5	0	63	216	0
5:30PM	78	133	0	0	211	0	37	75	1	0	71	184	0
5:45PM	65	113	0	0	178	0	46	109	3	0	47	205	0
Hourly Total	285	492	0	0	777	0	194	391	13	0	232	830	0
6:00PM	0	1	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	0	0
Total	592	1334	0	0	1926	0	884	1022	35	0	839	2780	0
% Approach	30.7%	69.3%	0%	0%	-	-	31.8%	36.8%	1.3%	0%	30.2%	-	-
% Total	8.7%	19.6%	0%	0%	28.3%	-	13.0%	15.0%	0.5%	0%	12.3%	40.8%	-
Lights	540	1295	0	0	1835	-	867	1009	34	0	825	2735	-
% Lights	91.2%	97.1%	0%	0%	95.3%	-	98.1%	98.7%	97.1%	0%	98.3%	98.4%	-
Articulated Trucks and Single-Unit Trucks	6	33	0	0	39	-	12	6	1	0	13	32	-
% Articulated Trucks and Single-Unit Trucks	1.0%	2.5%	0%	0%	2.0%	-	1.4%	0.6%	2.9%	0%	1.5%	1.2%	-
Buses	46	6	0	0	52	-	5	7	0	0	1	13	-
% Buses	7.8%	0.4%	0%	0%	2.7%	-	0.6%	0.7%	0%	0%	0.1%	0.5%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

10. Crossgates Mall Rd / I87 ON/OFF Ramps - TMC

Thu Sep 19, 2019

AM Peak (7:45 AM - 8:45 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 701163, Location: 42.687391, -73.845699, Site Code: Albany, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Crossgates Mall Rd Southbound						I87 OFF Ramps Southwestbound						
	T	BL	HL	U	App	Ped*	HR	BL	L	U	HRR	App	Ped*
2019-09-19 7:45AM	9	23	0	0	32	0	70	41	1	0	42	154	0
8:00AM	10	32	0	0	42	0	73	26	2	0	65	166	0
8:15AM	14	36	0	0	50	0	84	34	1	0	59	178	0
8:30AM	16	44	0	0	60	0	53	32	3	0	50	138	0
Total	49	135	0	0	184	0	280	133	7	0	216	636	0
% Approach	26.6%	73.4%	0%	0%	-	-	44.0%	20.9%	1.1%	0%	34.0%	-	-
% Total	3.3%	9.2%	0%	0%	12.5%	-	19.1%	9.1%	0.5%	0%	14.7%	43.4%	-
PHF	0.766	0.767	-	-	0.767	-	0.833	0.811	0.583	-	0.831	0.893	-
Lights	40	118	0	0	158	-	274	127	7	0	213	621	-
% Lights	81.6%	87.4%	0%	0%	85.9%	-	97.9%	95.5%	100%	0%	98.6%	97.6%	-
Articulate d Trucks and Single-Unit Trucks	2	14	0	0	16	-	4	3	0	0	2	9	-
% Articulate d Trucks and Single-Unit Trucks	4.1%	10.4%	0%	0%	8.7%	-	1.4%	2.3%	0%	0%	0.9%	1.4%	-
Buses	7	3	0	0	10	-	2	3	0	0	1	6	-
% Buses	14.3%	2.2%	0%	0%	5.4%	-	0.7%	2.3%	0%	0%	0.5%	0.9%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

10. Crossgates Mall Rd / I87 ON/OFF Ramps - TMC

Thu Sep 19, 2019

AM Peak (7:45 AM - 8:45 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 701163, Location: 42.687391, -73.845699, Site Code: Albany, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	I87 ON Ramps Northwestbound						Crossgates Mall Rd Northbound						Int	
	R	BR	HL	U	App	Ped*	HR	BR	T	U	HRR	App		Ped*
2019-09-19 7:45AM	0	0	0	0	0	0	118	0	19	0	52	189	0	375
8:00AM	0	0	0	0	0	0	80	0	19	0	61	160	0	368
8:15AM	0	0	0	0	0	0	127	0	14	0	25	166	0	394
8:30AM	0	0	0	0	0	0	72	0	19	0	41	132	0	330
Total	0	0	0	0	0	0	397	0	71	0	179	647	0	1467
% Approach	0%	0%	0%	0%	-	-	61.4%	0%	11.0%	0%	27.7%	-	-	-
% Total	0%	0%	0%	0%	0%	-	27.1%	0%	4.8%	0%	12.2%	44.1%	-	-
PHF	-	-	-	-	-	-	0.781	-	0.934	-	0.734	0.856	-	0.931
Lights	0	0	0	0	0	-	392	0	68	0	179	639	-	1418
% Lights	0%	0%	0%	0%	-	-	98.7%	0%	95.8%	0%	100%	98.8%	-	96.7%
Articulate d Trucks and Single-Unit Trucks	0	0	0	0	0	-	3	0	3	0	0	6	-	31
% Articulate d Trucks and Single-Unit Trucks	0%	0%	0%	0%	-	-	0.8%	0%	4.2%	0%	0%	0.9%	-	2.1%
Buses	0	0	0	0	0	-	2	0	0	0	0	2	-	18
% Buses	0%	0%	0%	0%	-	-	0.5%	0%	0%	0%	0%	0.3%	-	1.2%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

LOCATION: S. FRONTAGE ROAD & RAPP ROAD PROJECT: CROSSGATES
 DATE OF COUNT: 09/20/19 DAY: FRIDAY JCE JOB #: 19002052A START TIME: 07:00 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

AM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total		
	1	2	3	4	5	6	7	8	9	10	11	12			
07:00 AM 07:15 AM		6	8	7	34								55	A	
07:15 AM 07:30 AM		2	8	4	27								41	A	
07:30 AM 07:45 AM		3	10	7	35								55	A	
07:45 AM 08:00 AM		5	10	6	64								85	X	236
08:00 AM 08:15 AM		6	13	11	60								90	X	271
08:15 AM 08:30 AM		7	9	14	55								85	X	315
08:30 AM 08:45 AM		3	8	10	62								83	X	343
08:45 AM 09:00 AM		11	11	18	30								70	A	328
09:00 AM 09:15 AM													0	A	238
09:15 AM 09:30 AM													0	A	153
09:30 AM 09:45 AM													0	A	70
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0
10:45 AM 11:00 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45 AM 08:00 AM	0	5	10	6	64	0	0	0	0	0	0	0	85		
08:00 AM 08:15 AM	0	6	13	11	60	0	0	0	0	0	0	0	90		
08:15 AM 08:30 AM	0	7	9	14	55	0	0	0	0	0	0	0	85		
08:30 AM 08:45 AM	0	3	8	10	62	0	0	0	0	0	0	0	83		
08:45 AM 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:45 AM 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
07:45 AM 08:45 AM	0	21	40	41	241	0	0	0	0	0	0	0	343	0.95

0	0	0	^	6	0
12	11	10	<	5	241
<	v	>	v	4	41
0	1	^	<	^	>
21	2	>	7	8	9
40	3	v	0	0	0



Western Ave / Westmere
Terrace
Guilderland, New York
Thursday, September 19, 2019
Location: 42.688607, -
73.860953

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: 21. Western Ave /
Westmere Terrace
Site Code: Guilderland, New
York
Start Date: 09/19/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	US 20 - Western Ave Eastbound					US 20 - Western Ave Westbound					Westmere Terrace Southbound					Int. Total
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
7:45 AM	0	479	0	0	479	251	0	0	0	251	1	0	0	1	1	731
8:00 AM	0	432	0	0	432	178	1	0	0	179	3	0	0	0	3	614
8:15 AM	0	431	0	0	431	245	0	0	0	245	0	0	0	0	0	676
8:30 AM	1	405	0	0	406	237	1	0	0	238	0	2	0	0	2	646
Total	1	1747	0	0	1748	911	2	0	0	913	4	2	0	1	6	2667
Approach %	0.1	99.9	0.0	-	-	99.8	0.2	0.0	-	-	66.7	33.3	0.0	-	-	-
Total %	0.0	65.5	0.0	-	65.5	34.2	0.1	0.0	-	34.2	0.1	0.1	0.0	-	0.2	-
PHF	0.250	0.912	0.000	-	0.912	0.907	0.500	0.000	-	0.909	0.333	0.250	0.000	-	0.500	0.912
Lights	1	1676	0	-	1677	845	2	0	-	847	4	2	0	-	6	2530
% Lights	100.0	95.9	-	-	95.9	92.8	100.0	-	-	92.8	100.0	100.0	-	-	100.0	94.9
Buses	0	20	0	-	20	28	0	0	-	28	0	0	0	-	0	48
% Buses	0.0	1.1	-	-	1.1	3.1	0.0	-	-	3.1	0.0	0.0	-	-	0.0	1.8
Trucks	0	51	0	-	51	38	0	0	-	38	0	0	0	-	0	89
% Trucks	0.0	2.9	-	-	2.9	4.2	0.0	-	-	4.2	0.0	0.0	-	-	0.0	3.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Project No.: 118-279
 Counted By: NSB
 Location: Gabriel Ter/Western Ave
 Comments:

File Name : tm118279p1
 Site Code : 00118111
 Start Date : 11/29/2018
 Page No : 1

Groups Printed- Passenger Veh - Heavy Veh - School Buses

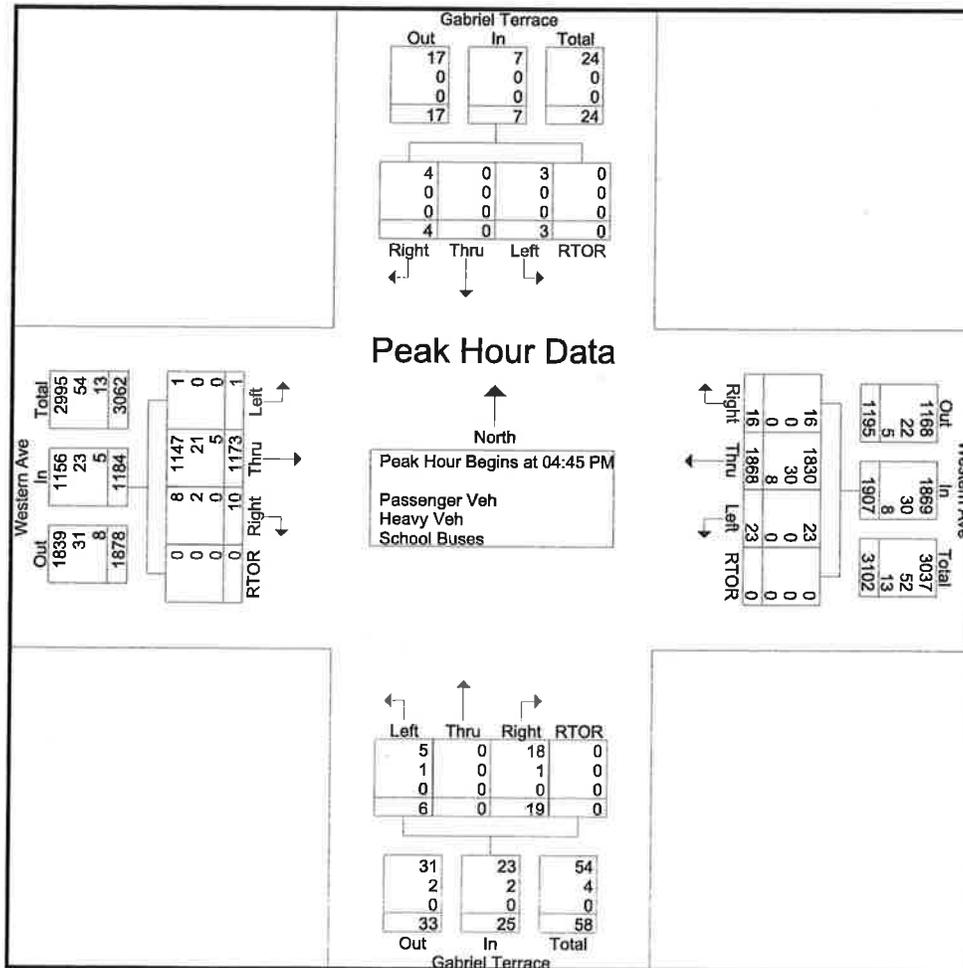
Start Time	Western Ave Eastbound					Western Ave Westbound					Gabriel Terrace Northbound					Gabriel Terrace Southbound					Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
04:00 PM	0	313	2	0	315	4	415	1	0	420	2	0	2	0	4	1	0	1	0	2	741
04:15 PM	0	287	0	0	287	4	402	0	0	406	1	0	4	0	5	0	0	0	0	0	698
04:30 PM	0	311	1	0	312	6	388	3	0	397	1	0	2	0	3	1	0	1	0	2	714
04:45 PM	1	310	2	0	313	7	502	2	0	511	1	0	4	0	5	0	0	1	0	1	830
Total	1	1221	5	0	1227	21	1707	6	0	1734	5	0	12	0	17	2	0	3	0	5	2983
05:00 PM	0	280	5	0	285	5	426	7	0	438	2	0	4	0	6	1	0	2	0	3	732
05:15 PM	0	279	3	0	282	6	472	4	0	482	2	0	5	0	7	0	0	0	0	0	771
05:30 PM	0	304	0	0	304	5	468	3	0	476	1	0	6	0	7	2	0	1	0	3	790
05:45 PM	2	264	3	0	269	3	505	1	0	509	0	0	5	0	5	1	0	1	0	2	785
Total	2	1127	11	0	1140	19	1871	15	0	1905	5	0	20	0	25	4	0	4	0	8	3078
Grand Total	3	2348	16	0	2367	40	3578	21	0	3639	10	0	32	0	42	6	0	7	0	13	6061
Apprch %	0.1	99.2	0.7	0		1.1	98.3	0.6	0		23.8	0	76.2	0		46.2	0	53.8	0		
Total %	0	38.7	0.3	0	39.1	0.7	59	0.3	0	60	0.2	0	0.5	0	0.7	0.1	0	0.1	0	0.2	
Passenger Veh	3	2285	14	0	2302	40	3509	21	0	3570	9	0	30	0	39	6	0	7	0	13	5924
% Passenger Veh	100	97.3	87.5	0	97.3	100	98.1	100	0	98.1	90	0	93.8	0	92.9	100	0	100	0	100	97.7
Heavy Veh	0	45	2	0	47	0	46	0	0	46	1	0	2	0	3	0	0	0	0	0	96
% Heavy Veh	0	1.9	12.5	0	2	0	1.3	0	0	1.3	10	0	6.2	0	7.1	0	0	0	0	0	1.6
School Buses	0	18	0	0	18	0	23	0	0	23	0	0	0	0	0	0	0	0	0	0	41
% School Buses	0	0.8	0	0	0.8	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0.7



Project No.: 118-279
 Counted By: NSB
 Location: Gabriel Ter/Western Ave
 Comments:

File Name : tm118279p1
 Site Code : 00118111
 Start Date : 11/29/2018
 Page No : 2

Start Time	Western Ave Eastbound					Western Ave Westbound					Gabriel Terrace Northbound					Gabriel Terrace Southbound					InL Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:45:00 PM																					
4:45:00 PM	1	310	2	0	313	7	502	2	0	511	1	0	4	0	5	0	0	1	0	1	830
5:00:00 PM	0	280	5	0	285	5	426	7	0	438	2	0	4	0	6	1	0	2	0	3	732
5:15:00 PM	0	279	3	0	282	6	472	4	0	482	2	0	5	0	7	0	0	0	0	0	771
5:30:00 PM	0	304	0	0	304	5	468	3	0	476	1	0	6	0	7	2	0	1	0	3	790
Total Volume	1	1173	10	0	1184	23	1868	16	0	1907	6	0	19	0	25	3	0	4	0	7	3123
% App. Total	0.1	99.1	0.8	0		1.2	98	0.8	0		24	0	76	0		42.9	0	57.1	0		
PHF	.250	.946	.500	.000	.946	.821	.930	.571	.000	.933	.750	.000	.792	.000	.893	.375	.000	.500	.000	.583	.941
Passenger Veh	1	1147	8	0	1156	23	1830	16	0	1869	5	0	18	0	23	3	0	4	0	7	3055
% Passenger Veh	100	97.8	80.0	0	97.6	100	98.0	100	0	98.0	83.3	0	94.7	0	92.0	100	0	100	0	100	97.8
Heavy Veh	0	21	2	0	23	0	30	0	0	30	1	0	1	0	2	0	0	0	0	0	55
% Heavy Veh	0	1.8	20.0	0	1.9	0	1.6	0	0	1.6	16.7	0	5.3	0	8.0	0	0	0	0	0	1.8
School Buses	0	5	0	0	5	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	13
% School Buses	0	0.4	0	0	0.4	0	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.4



Turning Movement Peak Hour Data (4:30 PM)

Start Time	US 20 Western Ave Eastbound							US 20 Western Ave Westbound							Johnston Rd Northbound							Rapp Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:30 PM	43	231	17	1	0	0	292	36	380	7	1	0	1	424	33	18	3	15	0	0	69	17	41	23	44	0	0	125	910
4:45 PM	30	223	22	2	0	0	277	37	359	5	0	0	5	401	24	16	3	18	0	1	61	17	38	33	51	0	2	139	878
5:00 PM	34	229	20	2	0	0	285	23	353	9	0	0	2	385	32	18	3	21	0	1	74	32	57	38	40	0	0	167	911
5:15 PM	35	265	31	3	0	0	334	30	339	6	0	0	2	375	40	23	10	21	0	2	94	29	67	44	50	0	2	190	993
Total	142	948	90	8	0	0	1188	126	1431	27	1	0	10	1585	129	75	19	75	0	4	298	95	203	138	185	0	4	621	3692
Approach %	12.0	79.8	7.6	0.7	0.0	-	-	7.9	90.3	1.7	0.1	0.0	-	-	43.3	25.2	6.4	25.2	0.0	-	-	15.3	32.7	22.2	29.6	0.0	-	-	-
Total %	3.8	25.7	2.4	0.2	0.0	-	32.2	3.4	38.8	0.7	0.0	0.0	-	42.9	3.5	2.0	0.5	2.0	0.0	-	8.1	2.6	5.5	3.7	5.0	0.0	-	16.8	-
PHF	0.826	0.894	0.726	0.667	0.000	-	0.869	0.851	0.941	0.750	0.250	0.000	-	0.835	0.806	0.815	0.475	0.893	0.000	-	0.793	0.742	0.757	0.784	0.907	0.000	-	0.817	0.930
Lights	139	936	90	8	0	-	1173	126	1389	23	1	0	-	1549	127	75	19	75	0	-	296	85	202	136	184	0	-	607	3825
% Lights	97.9	98.7	100.0	100.0	-	-	98.7	100.0	97.8	85.2	100.0	-	97.7	98.4	100.0	100.0	100.0	-	-	99.3	89.5	99.5	98.6	99.5	-	-	97.7	98.2	
Buses	2	1	0	0	0	-	3	0	4	4	0	0	-	8	1	0	0	0	0	-	1	9	0	1	0	0	-	10	22
% Buses	1.4	0.1	0.0	0.0	-	-	0.3	0.0	0.3	14.8	0.0	-	0.5	0.8	0.0	0.0	0.0	-	-	0.3	9.5	0.0	0.7	0.0	-	-	1.6	0.6	
Trucks	1	11	0	0	0	-	12	0	28	0	0	0	-	28	1	0	0	0	0	-	1	1	1	1	1	0	-	4	45
% Trucks	0.7	1.2	0.0	0.0	-	-	1.0	0.0	2.0	0.0	0.0	-	1.8	0.8	0.0	0.0	0.0	-	-	0.3	1.1	0.5	0.7	0.5	-	-	0.6	1.2	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	25.0	-	-	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	-	4	-	-	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	75.0	-	-	

#8

TRI-ST TE
TRAFFIC DATA

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Albany, NY
Springsteen Rd/Frontage Rd
Thursday, November 30, 2017
Location: 42.695952, -
73.849958

Count Name: Springsteen Rd @
S Frontage Rd
Site Code: Albany, NY
Start Date: 11/30/2017
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Springsteen Rd Eastbound					Springsteen Rd Westbound					S Frontage Rd Northbound					S Frontage Rd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
4:30 PM	17	5	2	0	24	7	47	0	0	54	12	20	0	0	32	29	0	0	0	29	139
4:45 PM	24	13	0	0	37	8	34	0	0	42	3	3	0	0	6	25	0	0	0	25	110
5:00 PM	18	12	0	0	30	6	51	1	0	58	5	11	0	0	16	30	1	0	0	31	135
5:15 PM	22	12	0	0	34	6	61	0	0	67	5	2	0	0	7	16	1	0	0	17	125
Total	81	42	2	0	125	27	193	1	0	221	25	36	0	1	61	100	2	0	0	102	509
Approach %	64.8	33.6	1.6	-	-	12.2	87.3	0.5	-	-	41.0	59.0	0.0	-	-	98.0	2.0	0.0	-	-	-
Total %	15.9	8.3	0.4	-	24.6	5.3	37.9	0.2	-	43.4	4.9	7.1	0.0	-	12.0	19.6	0.4	0.0	-	20.0	-
PHF	0.844	0.808	0.250	-	0.845	0.844	0.791	0.250	-	0.825	0.521	0.450	0.000	-	0.477	0.833	0.500	0.000	-	0.823	0.915
Lights	81	42	2	-	125	27	193	1	-	221	25	36	0	-	61	100	2	0	-	102	509
% Lights	100.0	100.0	100.0	-	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Trucks	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Albany County, NY
Springsteen Rd/Wash Ave Ext.
Thursday, November 16, 2017
Location: 42.696044, -73.84974

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Washington Ave
Ext @ Springsteen Rd
Site Code: Albany, NY
Start Date: 11/16/2017
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Springsteen Rd Eastbound							Springsteen Rd Westbound							Washington Ave Ext Northbound							Washington Ave Ext Southbound							Int Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:30 PM	0	0	41	4	0	1	45	75	4	40	20	0	0	139	39	299	61	34	0	1	433	56	330	1	0	0	0	387	1004
4:45 PM	0	0	32	6	0	0	38	61	20	40	17	0	0	138	35	369	62	25	1	0	492	43	281	0	1	0	2	325	993
5:00 PM	0	0	27	18	0	0	45	70	9	37	12	0	0	128	48	364	45	38	0	0	495	65	384	0	1	0	1	450	1118
5:15 PM	0	0	42	13	0	0	55	80	20	60	25	0	0	185	50	323	52	26	0	1	451	70	342	0	2	0	0	414	1105
Total	0	0	142	41	0	1	183	286	53	177	74	0	0	590	172	1355	220	123	1	2	1871	234	1337	1	4	0	3	1578	4220
Approach %	0.0	0.0	77.6	22.4	0.0	-	-	48.5	9.0	30.0	12.5	0.0	-	-	9.2	72.4	11.8	6.6	0.1	-	-	14.8	84.8	0.1	0.3	0.0	-	-	-
Total %	0.0	0.0	3.4	1.0	0.0	-	4.3	6.8	1.3	4.2	1.8	0.0	-	14.0	4.1	32.1	5.2	2.9	0.0	-	44.3	5.5	31.7	0.0	0.1	0.0	-	37.3	-
PHF	0.000	0.000	0.845	0.569	0.000	-	0.832	0.894	0.863	0.738	0.740	0.000	-	0.797	0.880	0.918	0.887	0.809	0.250	-	0.945	0.838	0.870	0.250	0.500	0.000	-	0.876	0.944
Lights	0	0	141	41	0	-	182	274	53	175	73	0	-	575	172	1338	212	120	1	-	1841	231	1327	1	4	0	-	1563	4181
% Lights	-	-	99.3	100.0	-	-	99.5	95.8	100.0	98.9	98.6	-	-	97.5	100.0	98.6	96.4	97.6	100.0	-	98.4	98.7	99.3	100.0	100.0	-	-	99.2	98.6
Buses	0	0	1	0	0	-	1	7	0	2	0	0	-	9	0	2	4	2	0	-	8	1	2	0	0	0	-	3	21
% Buses	-	-	0.7	0.0	-	-	0.5	2.4	0.0	1.1	0.0	-	-	1.5	0.0	0.1	1.8	1.6	0.0	-	0.4	0.4	0.1	0.0	0.0	-	-	0.2	0.5
Trucks	0	0	0	0	0	-	0	5	0	0	1	0	-	6	0	17	4	1	0	-	22	2	8	0	0	0	-	10	38
% Trucks	-	-	0.0	0.0	-	-	0.0	1.7	0.0	0.0	1.4	-	-	1.0	0.0	1.3	1.8	0.8	0.0	-	1.2	0.9	0.6	0.0	0.0	-	-	0.6	0.9
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	-	2	-	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

Crossgates Mall Loop/I-87 Ramps - Weekday - TMC

Mon Nov 19, 2018

Full Length (4PM-6PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592316, Location: 42.687391, -73.845699, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Crossgates Mall Loop Westbound						I87 OFF Ramps Northwestbound						
	T	BL	HL	U	App	Ped*	HR	BL	L	U	HRR	App	Ped*
2018-11-19 4:00PM	44	138	0	0	182	0	47	71	4	0	75	197	0
4:15PM	58	127	0	0	185	0	44	87	6	0	63	200	0
4:30PM	42	115	0	0	157	0	70	97	4	0	53	224	0
4:45PM	55	138	0	0	193	0	51	87	5	0	64	207	0
Hourly Total	199	518	0	0	717	0	212	342	19	0	255	828	0
5:00PM	54	169	0	0	223	0	58	80	4	0	48	190	0
5:15PM	55	156	0	0	211	0	71	114	2	0	67	254	0
5:30PM	63	162	0	0	225	0	60	94	2	0	87	243	0
5:45PM	53	145	0	0	198	0	53	116	3	0	61	233	0
Hourly Total	225	632	0	0	857	0	242	404	11	0	263	920	0
Total	424	1150	0	0	1574	0	454	746	30	0	518	1748	0
% Approach	26.9%	73.1%	0%	0%	-	-	26.0%	42.7%	1.7%	0%	29.6%	-	-
% Total	9.7%	26.4%	0%	0%	36.2%	-	10.4%	17.1%	0.7%	0%	11.9%	40.1%	-
Lights	391	1137	0	0	1528	-	450	736	30	0	507	1723	-
% Lights	92.2%	98.9%	0%	0%	97.1%	-	99.1%	98.7%	100%	0%	97.9%	98.6%	-
Articulated Trucks and Single-Unit Trucks	9	8	0	0	17	-	3	2	0	0	10	15	-
% Articulated Trucks and Single-Unit Trucks	2.1%	0.7%	0%	0%	1.1%	-	0.7%	0.3%	0%	0%	1.9%	0.9%	-
Buses	24	5	0	0	29	-	1	8	0	0	1	10	-
% Buses	5.7%	0.4%	0%	0%	1.8%	-	0.2%	1.1%	0%	0%	0.2%	0.6%	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - Weekday - TMC

Mon Nov 19, 2018

Full Length (4PM-6PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592316, Location: 42.687391, -73.845699, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction Time	I87 ON Ramps Northeastbound							Crossgates Mall Loop Eastbound							Int
	R	BR	HL	U	RR	App	Ped*	HR	BR	T	U	HRR	App	Ped*	
2018-11-19 4:00PM	0	0	0	0	0	0	0	55	0	32	0	41	128	0	507
4:15PM	0	0	0	0	0	0	0	33	0	36	0	40	109	0	494
4:30PM	0	0	0	0	0	0	0	66	0	42	0	30	138	0	519
4:45PM	0	0	0	0	0	0	0	44	0	35	0	46	125	0	525
Hourly Total	0	0	0	0	0	0	0	198	0	145	0	157	500	0	2045
5:00PM	0	0	0	0	0	0	0	17	0	24	0	72	113	0	526
5:15PM	0	0	0	0	0	0	0	54	0	39	0	52	145	0	610
5:30PM	0	0	0	0	0	0	0	52	0	34	0	46	132	0	600
5:45PM	0	0	0	0	0	0	0	48	0	51	0	43	142	0	573
Hourly Total	0	0	0	0	0	0	0	171	0	148	0	213	532	0	2309
Total	0	0	0	0	0	0	0	369	0	293	0	370	1032	0	4354
% Approach	0%	0%	0%	0%	0%	-	-	35.8%	0%	28.4%	0%	35.9%	-	-	-
% Total	0%	0%	0%	0%	0%	0%	-	8.5%	0%	6.7%	0%	8.5%	23.7%	-	-
Lights	0	0	0	0	0	0	0	364	0	290	0	369	1023	-	4274
% Lights	0%	0%	0%	0%	0%	-	-	98.6%	0%	99.0%	0%	99.7%	99.1%	-	98.2%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	0	0	-	2	0	3	0	1	6	-	38
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	0%	-	-	0.5%	0%	1.0%	0%	0.3%	0.6%	-	0.9%
Buses	0	0	0	0	0	0	-	3	0	0	0	0	3	-	42
% Buses	0%	0%	0%	0%	0%	-	-	0.8%	0%	0%	0%	0%	0.3%	-	1.0%
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - Weekday - TMC

Mon Nov 19, 2018

PM Peak (5PM - 6PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592316, Location: 42.687391, -73.845699, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Crossgates Mall Loop Westbound							I87 OFF Ramps Northwestbound						
	T	BL	HL	U	App	Ped*	HR	BL	L	U	HRR	App	Ped*	
2018-11-19 5:00PM	54	169	0	0	223	0	58	80	4	0	48	190	0	
5:15PM	55	156	0	0	211	0	71	114	2	0	67	254	0	
5:30PM	63	162	0	0	225	0	60	94	2	0	87	243	0	
5:45PM	53	145	0	0	198	0	53	116	3	0	61	233	0	
Total	225	632	0	0	857	0	242	404	11	0	263	920	0	
% Approach	26.3%	73.7%	0%	0%	-	-	26.3%	43.9%	1.2%	0%	28.6%	-	-	
% Total	9.7%	27.4%	0%	0%	37.1%	-	10.5%	17.5%	0.5%	0%	11.4%	39.8%	-	
PHF	0.893	0.935	-	-	0.952	-	0.852	0.871	0.688	-	0.756	0.906	-	
Lights	209	629	0	0	838	-	240	403	11	0	259	913	-	
% Lights	92.9%	99.5%	0%	0%	97.8%	-	99.2%	99.8%	100%	0%	98.5%	99.2%	-	
Articulated Trucks and Single-Unit Trucks	3	3	0	0	6	-	2	1	0	0	4	7	-	
% Articulated Trucks and Single-Unit Trucks	1.3%	0.5%	0%	0%	0.7%	-	0.8%	0.2%	0%	0%	1.5%	0.8%	-	
Buses	13	0	0	0	13	-	0	0	0	0	0	0	-	
% Buses	5.8%	0%	0%	0%	1.5%	-	0%	0%	0%	0%	0%	0%	-	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - Weekday - TMC

Mon Nov 19, 2018

PM Peak (5PM - 6PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592316, Location: 42.687391, -73.845699, Site Code: Guilderland, New York



Provided by: Tri-State Traffic

Data, Inc.

184 Baker Road,

Coatesville, PA, 19320, US

Leg Direction	I87 ON Ramps Northeastbound								Crossgates Mall Loop Eastbound							Int
	R	BR	HL	U	RR	App	Ped*		HR	BR	T	U	HRR	App	Ped*	
2018-11-19 5:00PM	0	0	0	0	0	0	0	0	17	0	24	0	72	113	0	526
5:15PM	0	0	0	0	0	0	0	0	54	0	39	0	52	145	0	610
5:30PM	0	0	0	0	0	0	0	0	52	0	34	0	46	132	0	600
5:45PM	0	0	0	0	0	0	0	0	48	0	51	0	43	142	0	573
Total	0	0	0	0	0	0	0	0	171	0	148	0	213	532	0	2309
% Approach	0%	0%	0%	0%	0%	-	-	-	32.1%	0%	27.8%	0%	40.0%	-	-	-
% Total	0%	0%	0%	0%	0%	0%	-	-	7.4%	0%	6.4%	0%	9.2%	23.0%	-	-
PHF	-	-	-	-	-	-	-	-	0.792	-	0.725	-	0.740	0.917	-	0.946
Lights	0	0	0	0	0	0	0	-	170	0	148	0	213	531	-	2282
% Lights	0%	0%	0%	0%	0%	-	-	-	99.4%	0%	100%	0%	100%	99.8%	-	98.8%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	13
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	0%	-	-	-	0%	0%	0%	0%	0%	0%	-	0.6%
Buses	0	0	0	0	0	0	0	-	1	0	0	0	0	1	-	14
% Buses	0%	0%	0%	0%	0%	-	-	-	0.6%	0%	0%	0%	0%	0.2%	-	0.6%
Bicycles on Road	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	-	-	0%	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

#11



Albany, NY
 Crossgates Mall
 Loop/Crossgates Mall Entrance
 Monday, November 19, 2018
 Location: 42.689388, -
 73.854733

www.TSTData.com
 184 Baker Rd

Coatesville, Pennsylvania, United States 19320
 610-466-1469
 Serving Transportation Professionals Since 1995

Count Name: Crossgates Mall
 Loop/Crossgates Mall Entrance
 Site Code: Guilderland, New
 York
 Start Date: 11/19/2018
 Page No: 1

Turning Movement Data

Start Time	Crossgates Mall Loop Eastbound					Crossgates Mall Loop Westbound					Crossgates Mall Entrance Southbound					Int. Total
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
4:00 PM	6	32	0	0	38	51	12	0	1	63	17	15	0	0	32	133
4:15 PM	12	31	0	0	43	63	19	0	0	82	20	14	0	0	34	159
4:30 PM	7	41	0	0	48	69	14	0	1	83	19	19	0	0	38	169
4:45 PM	7	29	0	0	36	87	13	0	0	100	17	14	0	0	31	167
Hourly Total	32	133	0	0	165	270	58	0	2	328	73	62	0	0	135	628
5:00 PM	6	44	0	0	50	90	17	0	0	107	25	17	0	0	42	199
5:15 PM	5	48	0	0	53	74	17	0	0	91	19	13	0	0	32	176
5:30 PM	9	42	0	0	51	86	16	0	0	102	15	17	0	0	32	185
5:45 PM	9	38	0	0	47	60	19	0	0	79	15	18	0	0	33	159
Hourly Total	29	172	0	0	201	310	69	0	0	379	74	65	0	0	139	719
Grand Total	61	305	0	0	366	580	127	0	2	707	147	127	0	0	274	1347
Approach %	16.7	83.3	0.0	-	-	82.0	18.0	0.0	-	-	53.6	46.4	0.0	-	-	-
Total %	4.5	22.6	0.0	-	27.2	43.1	9.4	0.0	-	52.5	10.9	9.4	0.0	-	20.3	-
Lights	61	291	0	-	352	580	127	0	-	707	144	87	0	-	231	1290
% Lights	100.0	95.4	-	-	96.2	100.0	100.0	-	-	100.0	98.0	68.5	-	-	84.3	95.8
Buses	0	13	0	-	13	0	0	0	-	0	3	40	0	-	43	56
% Buses	0.0	4.3	-	-	3.6	0.0	0.0	-	-	0.0	2.0	31.5	-	-	15.7	4.2
Trucks	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Trucks	0.0	0.3	-	-	0.3	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

#15

LOCATION: S. FRONTAGE ROAD & RAPP ROAD PROJECT: CROSSGATES
 DATE OF COUNT: 10/03/19 DAY: THURSDAY JCE JOB #: 19002052A START TIME: 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

PM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total
	1	2	3	4	5	6	7	8	9	10	11	12	
04:00 PM	33	28	24	25									110
04:15 PM	20	30	37	34									121
04:30 PM	29	53	40	29									151
04:45 PM	16	47	55	29									147
05:00 PM	32	58	53	21									164
05:15 PM	13	55	50	24									142
05:30 PM	14	31	55	29									129
05:45 PM	10	30	41	26									107
06:00 PM													0
06:15 PM													0
06:30 PM													0
06:45 PM													0
07:00 PM													0
07:15 PM													0
07:30 PM													0
07:45 PM													0
08:00 PM													0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	29	53	40	29	0	0	0	0	0	0	0	151
04:45 PM	0	16	47	55	29	0	0	0	0	0	0	0	147
05:00 PM	0	32	58	53	21	0	0	0	0	0	0	0	164
05:15 PM	0	13	55	50	24	0	0	0	0	0	0	0	142
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:30 PM	0	90	213	198	103	0	0	0	0	0	0	0	604	0.92

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	11	10	9	8	7	6	5	4	3	2	1	0	0	0
<	v	>	v	>	v	>	v	>	v	>	v	>	v	>
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
90	2	3	4	5	6	7	8	9	10	11	12	13	14	15
213	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Western Ave / Westmere
Terrace
Guiderland, New York
Thursday, September 19, 2019
Location: 42.688607, -
73.860953

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: 21. Western Ave /
Westmere Terrace
Site Code: Guiderland, New
York
Start Date: 09/19/2019
Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

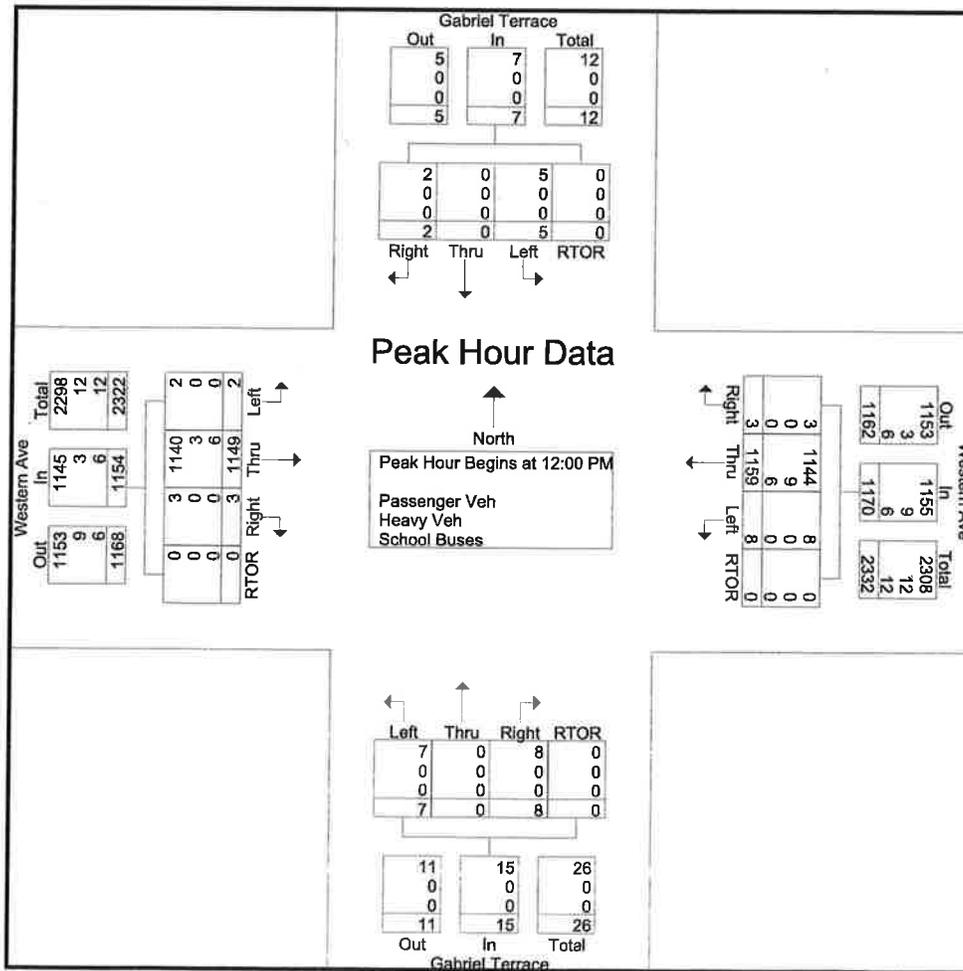
Start Time	US 20 - Western Ave Eastbound					US 20 - Western Ave Westbound					Westmere Terrace Southbound					Int. Total
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
4:45 PM	3	246	0	0	249	533	5	0	0	538	3	2	0	1	5	792
5:00 PM	3	251	0	0	254	484	2	0	0	486	2	4	0	0	6	746
5:15 PM	0	212	0	0	212	541	6	0	0	547	1	0	0	1	1	760
5:30 PM	2	262	0	0	264	494	4	0	0	498	4	0	0	0	4	766
Total	8	971	0	0	979	2052	17	0	0	2069	10	6	0	2	16	3064
Approach %	0.8	99.2	0.0	-	-	99.2	0.8	0.0	-	-	62.5	37.5	0.0	-	-	-
Total %	0.3	31.7	0.0	-	32.0	67.0	0.6	0.0	-	67.5	0.3	0.2	0.0	-	0.5	-
PHF	0.667	0.927	0.000	-	0.927	0.948	0.708	0.000	-	0.946	0.625	0.375	0.000	-	0.667	0.967
Lights	8	947	0	-	955	2013	17	0	-	2030	10	6	0	-	16	3001
% Lights	100.0	97.5	-	-	97.5	98.1	100.0	-	-	98.1	100.0	100.0	-	-	100.0	97.9
Buses	0	3	0	-	3	7	0	0	-	7	0	0	0	-	0	10
% Buses	0.0	0.3	-	-	0.3	0.3	0.0	-	-	0.3	0.0	0.0	-	-	0.0	0.3
Trucks	0	20	0	-	20	32	0	0	-	32	0	0	0	-	0	52
% Trucks	0.0	2.1	-	-	2.0	1.6	0.0	-	-	1.5	0.0	0.0	-	-	0.0	1.7
Bicycles on Road	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.1	-	-	0.1	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Project No.: 118279
 Counted By: NSB
 Location: Western Ave/Gabriel Terrace
 Comments:

File Name : tm118279s1
 Site Code : 00118271
 Start Date : 12/1/2018
 Page No : 2

Start Time	Western Ave Eastbound					Western Ave Westbound					Gabriel Terrace Northbound					Gabriel Terrace Southbound					Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	
Peak Hour Analysis From 12:00:00 PM to 1:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00:00 PM																					
12:00:00 PM	0	303	0	0	303	2	309	1	0	312	0	0	2	0	2	1	0	1	0	2	619
12:15:00 PM	0	285	2	0	287	3	281	0	0	284	3	0	2	0	5	2	0	1	0	3	579
12:30:00 PM	2	276	0	0	278	0	290	0	0	290	1	0	2	0	3	1	0	0	0	1	572
12:45:00 PM	0	285	1	0	286	3	279	2	0	284	3	0	2	0	5	1	0	0	0	1	576
Total Volume	2	1149	3	0	1154	8	1159	3	0	1170	7	0	8	0	15	5	0	2	0	7	2346
% App. Total	0.2	99.6	0.3	0		0.7	99.1	0.3	0		46.7	0	53.3	0		71.4	0	28.6	0		
PHF	.250	.948	.375	.000	.952	.667	.938	.375	.000	.938	.583	.000	1.0	.000	.750	.625	.000	.500	.000	.583	.947
Passenger Veh	2	1140	3	0	1145	8	1144	3	0	1155	7	0	8	0	15	5	0	2	0	7	2322
% Passenger Veh	100	99.2	100	0	99.2	100	98.7	100	0	98.7	100	0	100	0	100	100	0	100	0	100	99.0
Heavy Veh	0	3	0	0	3	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	12
% Heavy Veh	0	0.3	0	0	0.3	0	0.8	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0.5
School Buses	0	6	0	0	6	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	12
% School Buses	0	0.5	0	0	0.5	0	0.5	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.5





Albany, NY
 US 20/Rapp Road
 Saturday, November 17, 2018
 Location: 42.688135, -
 73.859422

www.TSTData.com
 184 Baker Rd

Coatesville, Pennsylvania, United States 19320
 610-466-1469
 Serving Transportation Professionals Since 1995

Count Name: US 20 at Rapp
 Rd/Johnston Rd
 Site Code: Guilderland, New
 York
 Start Date: 11/17/2018
 Page No: 1

Turning Movement Data

Start Time	US 20 - Western Ave Eastbound							US 20 - Western Ave Westbound							Johnston Rd Northbound							Rapp Rd / Crossgates Mall Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
12:00 PM	48	250	29	4	0	0	331	11	234	20	0	0	0	265	36	20	4	15	0	0	75	27	19	4	34	0	0	84	755
12:15 PM	43	252	17	1	0	0	313	15	228	17	7	0	0	267	25	27	3	18	0	0	73	20	24	3	41	0	0	88	741
12:30 PM	53	224	17	6	0	0	300	24	198	17	3	0	0	242	40	28	2	12	0	0	82	13	20	8	44	0	0	85	709
12:45 PM	32	218	15	3	0	1	268	22	237	21	1	0	0	281	31	25	4	18	0	0	78	20	22	6	29	0	0	77	704
Hourly Total	176	944	78	14	0	1	1212	72	897	75	11	0	0	1055	132	100	13	63	0	0	308	80	85	21	148	0	0	334	2809
1:00 PM	50	216	34	0	0	1	300	17	191	11	1	0	0	220	24	22	0	11	0	0	57	12	37	10	29	0	0	88	665
1:15 PM	47	223	43	0	0	0	313	15	254	12	0	0	0	281	32	17	7	12	0	0	88	20	25	13	32	0	0	90	752
1:30 PM	59	221	20	0	0	0	300	12	233	28	3	0	0	276	37	23	6	14	0	0	80	12	33	11	39	0	4	95	751
1:45 PM	41	211	24	4	0	0	280	13	218	15	1	0	0	247	28	25	9	12	0	0	74	12	31	21	39	0	0	103	704
Hourly Total	197	871	121	4	0	1	1183	57	896	66	5	0	0	1024	121	87	22	49	0	0	279	56	126	55	139	0	4	376	2872
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	373	1815	199	18	0	2	2405	129	1793	141	16	0	0	2079	253	187	35	112	0	0	587	136	211	76	287	0	4	710	5781
Approach %	15.5	75.5	8.3	0.7	0.0	-	-	6.2	86.2	6.8	0.8	0.0	-	-	43.1	31.9	6.0	19.1	0.0	-	-	19.2	29.7	10.7	40.4	0.0	-	-	-
Total %	6.5	31.4	3.4	0.3	0.0	-	41.6	2.2	31.0	2.4	0.3	0.0	-	36.0	4.4	3.2	0.6	1.9	0.0	-	10.2	2.4	3.6	1.3	5.0	0.0	-	12.3	-
Lights	368	1797	199	18	0	-	2382	128	1762	135	13	0	-	2038	252	187	35	112	0	-	586	124	210	75	285	0	-	694	5700
% Lights	98.7	99.0	100.0	100.0	-	-	99.0	99.2	98.3	95.7	81.3	-	-	98.0	99.6	100.0	100.0	100.0	-	-	99.8	91.2	99.5	98.7	99.3	-	-	97.7	98.6
Buses	3	0	0	0	0	-	3	0	3	5	3	0	-	11	0	0	0	0	0	-	0	11	0	1	2	0	-	14	28
% Buses	0.8	0.0	0.0	0.0	-	-	0.1	0.0	0.2	3.5	18.8	-	-	0.5	0.0	0.0	0.0	0.0	-	-	0.0	8.1	0.0	1.3	0.7	-	-	2.0	0.5
Trucks	2	18	0	0	0	-	20	1	28	1	0	0	-	30	1	0	0	0	0	-	1	1	0	0	0	0	-	1	52
% Trucks	0.5	1.0	0.0	0.0	-	-	0.8	0.8	1.6	0.7	0.0	-	-	1.4	0.4	0.0	0.0	0.0	-	-	0.2	0.7	0.0	0.0	0.0	-	-	0.1	0.9
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	1	0	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	0.0	-	-	0.1	0.0
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	4	-
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-

#5

Rapp Rd/Gipp Rd - TMC

Sat Nov 17, 2018

Full Length (12PM-2PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592291, Location: 42.693995, -73.85538, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Rapp Rd Southbound					Rapp Rd Northbound					Gipp Rd Eastbound					Int
	R	T	U	App	Ped*	T	L	U	App	Ped*	R	L	U	App	Ped*	
2018-11-17 12:00PM	13	19	0	32	0	20	5	0	25	0	9	10	0	19	0	76
12:15PM	16	35	0	51	0	28	5	0	33	0	7	13	0	20	1	104
12:30PM	7	23	0	30	0	26	1	0	27	0	7	6	0	13	0	70
12:45PM	10	34	0	44	1	32	3	0	35	0	6	10	0	16	2	95
Hourly Total	46	111	0	157	1	106	14	0	120	0	29	39	0	68	3	345
1:00PM	13	23	0	36	0	25	8	1	34	0	7	9	0	16	0	86
1:15PM	8	32	0	40	0	29	3	2	34	0	2	8	0	10	0	84
1:30PM	15	33	0	48	0	37	8	0	45	0	6	8	0	14	0	107
1:45PM	13	19	0	32	0	24	5	0	29	0	3	9	0	12	0	73
Hourly Total	49	107	0	156	0	115	24	3	142	0	18	34	0	52	0	350
2:00PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	95	218	0	313	1	221	38	3	262	0	47	73	0	120	3	695
% Approach	30.4%	69.6%	0%	-	-	84.4%	14.5%	1.1%	-	-	39.2%	60.8%	0%	-	-	-
% Total	13.7%	31.4%	0%	45.0%	-	31.8%	5.5%	0.4%	37.7%	-	6.8%	10.5%	0%	17.3%	-	-
Lights	94	218	0	312	-	221	38	3	262	-	47	72	0	119	-	693
% Lights	98.9%	100%	0%	99.7%	-	100%	100%	100%	100%	-	100%	98.6%	0%	99.2%	-	99.7%
Articulated Trucks and Single-Unit Trucks	1	0	0	1	-	0	0	0	0	-	0	1	0	1	-	2
% Articulated Trucks and Single-Unit Trucks	1.1%	0%	0%	0.3%	-	0%	0%	0%	0%	-	0%	1.4%	0%	0.8%	-	0.3%
Buses	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Buses	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	3
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Rapp Rd/Gipp Rd - TMC

Sat Nov 17, 2018

Midday Peak (WKND) (12:45PM - 1:45PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592291, Location: 42.693995, -73.85538, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Rapp Rd Southbound					Rapp Rd Northbound					Gipp Rd Eastbound					Int
	R	T	U	App	Ped*	T	L	U	App	Ped*	R	L	U	App	Ped*	
2018-11-17 12:45PM	10	34	0	44	1	32	3	0	35	0	6	10	0	16	2	95
1:00PM	13	23	0	36	0	25	8	1	34	0	7	9	0	16	0	86
1:15PM	8	32	0	40	0	29	3	2	34	0	2	8	0	10	0	84
1:30PM	15	33	0	48	0	37	8	0	45	0	6	8	0	14	0	107
Total	46	122	0	168	1	123	22	3	148	0	21	35	0	56	2	372
% Approach	27.4%	72.6%	0%	-	-	83.1%	14.9%	2.0%	-	-	37.5%	62.5%	0%	-	-	-
% Total	12.4%	32.8%	0%	45.2%	-	33.1%	5.9%	0.8%	39.8%	-	5.6%	9.4%	0%	15.1%	-	-
PHF	0.767	0.897	-	0.875	-	0.831	0.688	0.375	0.822	-	0.750	0.875	-	0.875	-	0.869
Lights	46	122	0	168	-	123	22	3	148	-	21	35	0	56	-	372
% Lights	100%	100%	0%	100%	-	100%	100%	100%	100%	-	100%	100%	0%	100%	-	100%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Buses	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	2
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

17



www.TSTData.com
184 Baker Rd

Albany County, NY
Rapp Rd/Springsteen Rd
Saturday, November 18, 2017
Location: 42.695981, -73.85186

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Rapp Rd @
Springsteen Rd - Weekend
Site Code: Albany, NY
Start Date: 11/18/2017
Page No: 1

Turning Movement Data

Start Time	Springsteen Rd Westbound					Rapp Rd Northbound					Rapp Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
12:00 PM	0	0	0	0	0	0	32	0	0	32	0	41	0	0	41	73
12:15 PM	0	0	0	0	0	0	28	0	0	28	2	37	0	0	39	67
12:30 PM	0	0	0	0	0	0	40	0	0	40	3	36	0	0	39	79
12:45 PM	0	0	0	0	0	0	38	0	0	38	0	31	0	0	31	69
Hourly Total	0	0	0	0	0	0	138	0	0	138	5	145	0	0	150	288
1:00 PM	0	0	0	0	0	0	37	0	0	37	0	44	0	0	44	81
1:15 PM	0	0	0	0	0	0	36	0	0	36	0	49	0	0	49	85
1:30 PM	0	0	0	0	0	0	30	0	0	30	0	41	0	0	41	71
1:45 PM	0	0	0	0	0	0	45	0	0	45	0	36	0	0	36	81
Hourly Total	0	0	0	0	0	0	148	0	0	148	0	170	0	0	170	318
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	286	0	0	286	5	315	0	0	320	606
Approach %	NaN	NaN	NaN	-	-	0.0	100.0	0.0	-	-	1.6	98.4	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	47.2	0.0	-	47.2	0.8	52.0	0.0	-	52.8	-
Lights	0	0	0	-	0	0	282	0	-	282	5	314	0	-	319	601
% Lights	-	-	-	-	-	-	98.6	-	-	98.6	100.0	99.7	-	-	99.7	99.2
Buses	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Buses	-	-	-	-	-	-	0.3	-	-	0.3	0.0	0.0	-	-	0.0	0.2
Trucks	0	0	0	-	0	0	3	0	-	3	0	1	0	-	1	4
% Trucks	-	-	-	-	-	-	1.0	-	-	1.0	0.0	0.3	-	-	0.3	0.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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www.TSTData.com
184 Baker Rd

Albany, NY
Springsteen Rd/S.Frontage Rd
Saturday, December 2, 2017
Location: 42.695952, -
73.849958

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Springsteen Rd @
S Frontage Rd
Site Code: Albany, NY
Start Date: 12/02/2017
Page No: 1

Turning Movement Data

Start Time	Springsteen Rd Eastbound					Springsteen Rd Westbound					S Frontage Rd Northbound					S Frontage Rd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
12:00 PM	25	8	1	1	34	3	18	0	0	21	1	7	0	2	8	12	0	0	0	12	75
12:15 PM	31	7	1	1	39	3	38	1	0	42	0	3	0	0	3	3	1	0	0	4	88
12:30 PM	25	6	1	0	32	2	29	1	0	32	3	2	0	0	5	2	1	0	0	3	72
12:45 PM	29	11	0	1	40	3	34	0	0	37	2	1	0	0	3	2	1	0	1	3	83
Hourly Total	110	32	3	3	145	11	119	2	0	132	6	13	0	2	19	19	3	0	1	22	318
1:00 PM	24	9	1	0	34	3	26	0	0	29	1	3	0	0	4	2	0	0	0	2	69
1:15 PM	26	8	2	0	36	1	36	1	0	38	1	3	0	0	4	4	0	0	0	4	82
1:30 PM	35	9	1	0	45	4	29	1	0	34	2	2	0	0	4	4	1	0	0	5	88
1:45 PM	35	12	5	0	52	4	17	1	0	22	2	3	0	0	5	4	1	0	0	5	84
Hourly Total	120	38	9	0	167	12	108	3	0	123	6	11	0	0	17	14	2	0	0	16	323
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	230	70	12	3	312	23	227	5	0	255	12	24	0	2	36	33	5	0	1	38	641
Approach %	73.7	22.4	3.8	-	-	9.0	89.0	2.0	-	-	33.3	66.7	0.0	-	-	86.8	13.2	0.0	-	-	-
Total %	35.9	10.9	1.9	-	48.7	3.6	35.4	0.8	-	39.8	1.9	3.7	0.0	-	5.6	5.1	0.8	0.0	-	5.9	-
Lights	229	70	11	-	310	23	227	5	-	255	12	24	0	-	36	33	5	0	-	38	639
% Lights	99.6	100.0	91.7	-	99.4	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	99.7
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	1	0	1	-	2	0	0	0	-	0	0	0	-	0	0	0	0	0	-	0	2
% Trucks	0.4	0.0	8.3	-	0.6	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	3	-	-	-	0	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Springsteen Rd Eastbound					Springsteen Rd Westbound					S Frontage Rd Northbound					S Frontage Rd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
1:00 PM	24	9	1	0	34	3	26	0	0	29	1	3	0	0	4	2	0	0	0	2	69
1:15 PM	26	8	2	0	36	1	36	1	0	38	1	3	0	0	4	4	0	0	0	4	82
1:30 PM	35	9	1	0	45	4	29	1	0	34	2	2	0	0	4	4	1	0	0	5	88
1:45 PM	35	12	5	0	52	4	17	1	0	22	2	3	0	0	5	4	1	0	0	5	84
Total	120	38	9	0	167	12	108	3	0	123	6	11	0	0	17	14	2	0	0	16	323
Approach %	71.9	22.8	5.4	-	-	9.8	87.8	2.4	-	-	35.3	64.7	0.0	-	-	87.5	12.5	0.0	-	-	-
Total %	37.2	11.8	2.8	-	51.7	3.7	33.4	0.9	-	38.1	1.9	3.4	0.0	-	5.3	4.3	0.6	0.0	-	5.0	-
PHF	0.857	0.792	0.450	-	0.803	0.750	0.750	0.750	-	0.809	0.750	0.917	0.000	-	0.850	0.875	0.500	0.000	-	0.800	0.918
Lights	119	38	8	-	165	12	108	3	-	123	6	11	0	-	17	14	2	0	-	16	321
% Lights	99.2	100.0	88.9	-	98.8	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	99.4
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Trucks	1	0	1	-	2	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	2
% Trucks	0.8	0.0	11.1	-	1.2	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.6
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-



www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Washington Ave
Ext @ Springsteen Rd -
Weekend
Site Code: Albany, NY
Start Date: 11/18/2017
Page No: 1

Albany County, PA
Springsteen Rd/Wash. Ave Ext.
Saturday, November 18, 2017
Location: 42.696044, -73.84974

Turning Movement Data

Start Time	Springsteen Rd Eastbound							Springsteen Rd Westbound							Washington Ave Ext Northbound							Washington Ave Ext Southbound							Int. Total	
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total		
12:00 PM	0	0	14	8	0	0	22	96	11	42	45	0	0	194	19	137	63	34	0	2	253	116	156	1	0	0	0	273	742	
12:15 PM	0	0	11	6	0	0	17	96	21	46	50	0	0	213	14	111	77	36	0	0	238	89	144	0	0	0	0	233	701	
12:30 PM	0	0	14	13	0	0	27	104	7	50	42	0	0	203	15	129	76	50	2	0	272	92	135	1	2	0	0	230	732	
12:45 PM	0	0	9	6	0	0	15	107	12	55	26	0	0	200	19	145	71	48	1	0	284	90	128	0	1	2	0	221	720	
Hourly Total	0	0	48	33	0	0	81	403	51	193	163	0	0	810	67	522	287	168	3	2	1047	387	563	2	3	2	0	957	2895	
1:00 PM	0	0	11	4	0	0	15	99	12	52	43	0	0	206	20	140	67	46	0	2	273	94	133	1	0	0	0	228	722	
1:15 PM	0	0	10	10	0	0	20	103	18	51	36	0	0	208	16	107	75	31	0	1	229	85	130	0	1	0	0	216	673	
1:30 PM	0	0	4	13	0	0	17	111	21	50	35	0	0	217	18	113	62	40	0	0	233	59	112	1	1	0	0	173	640	
1:45 PM	0	0	9	11	0	0	20	105	11	50	51	0	0	217	17	117	67	36	0	1	237	83	140	0	0	0	1	223	697	
Hourly Total	0	0	34	38	0	0	72	418	62	203	165	0	0	848	71	477	271	153	0	4	972	321	515	2	2	0	1	840	2732	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	
Grand Total	0	0	82	71	0	0	153	821	113	396	328	0	0	1658	138	1000	558	321	3	6	2020	708	1078	4	5	2	1	1797	5628	
Approach %	0.0	0.0	53.6	46.4	0.0	-	-	49.5	6.8	23.9	19.8	0.0	-	-	6.8	49.5	27.6	15.9	0.1	-	-	39.4	60.0	0.2	0.3	0.1	-	-	-	
Total %	0.0	0.0	1.5	1.3	0.0	-	2.7	14.6	2.0	7.0	5.8	0.0	-	29.5	2.5	17.8	9.9	5.7	0.1	-	35.9	12.6	19.2	0.1	0.1	0.0	-	31.9	-	
Lights	0	0	81	70	0	-	151	813	113	392	326	0	-	1644	137	984	546	319	3	-	1989	705	1070	4	5	2	-	1786	5570	
% Lights	-	-	98.8	98.6	-	-	98.7	99.0	100.0	99.0	99.4	-	-	99.2	99.3	98.4	97.8	99.4	100.0	-	98.5	99.6	99.3	100.0	100.0	100.0	-	99.4	99.0	
Buses	0	0	0	0	0	-	0	6	0	1	1	0	-	8	0	0	7	1	0	-	8	1	1	0	0	0	-	2	18	
% Buses	-	-	0.0	0.0	-	-	0.0	0.7	0.0	0.3	0.3	-	-	0.5	0.0	0.0	1.3	0.3	0.0	-	0.4	0.1	0.1	0.0	0.0	0.0	-	0.1	0.3	
Trucks	0	0	1	1	0	-	2	2	0	3	1	0	-	6	1	16	5	1	0	-	23	2	7	0	0	0	-	9	40	
% Trucks	-	-	1.2	1.4	-	-	1.3	0.2	0.0	0.8	0.3	-	-	0.4	0.7	1.6	0.9	0.3	0.0	-	1.1	0.3	0.6	0.0	0.0	0.0	-	0.5	0.7	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	6	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

#10

Crossgates Mall Loop/I-87 Ramps - TMC

Sat Nov 17, 2018

Full Length (12PM-2PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592314, Location: 42.687385, -73.845714, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction Time	Crossgates Loop Eastbound							Crossgates Loop Westbound					
	HR	BR	T	U	HRR	App	Ped*	T	BL	HL	U	App	Ped*
2018-11-17 12:00PM	57	0	48	0	44	149	0	60	102	0	0	162	0
12:15PM	47	0	45	0	71	163	0	43	108	0	0	151	0
12:30PM	54	0	44	0	60	158	0	65	101	0	0	166	0
12:45PM	49	0	62	0	46	157	0	72	118	0	0	190	0
Hourly Total	207	0	199	0	221	627	0	240	429	0	0	669	0
1:00PM	27	0	69	0	86	182	0	64	127	0	0	191	0
1:15PM	48	0	67	0	86	201	0	72	124	0	0	196	0
1:30PM	36	0	56	0	90	182	0	63	139	0	0	202	0
1:45PM	49	0	75	0	84	208	0	74	128	0	0	202	0
Hourly Total	160	0	267	0	346	773	0	273	518	0	0	791	0
Total	367	0	466	0	567	1400	0	513	947	0	0	1460	0
% Approach	26.2%	0%	33.3%	0%	40.5%	-	-	35.1%	64.9%	0%	0%	-	-
% Total	7.1%	0%	9.0%	0%	11.0%	27.1%	-	9.9%	18.3%	0%	0%	28.2%	-
Lights	365	0	466	0	564	1395	-	503	941	0	0	1444	-
% Lights	99.5%	0%	100%	0%	99.5%	99.6%	-	98.1%	99.4%	0%	0%	98.9%	-
Articulated Trucks and Single-Unit Trucks	2	0	0	0	0	2	-	1	6	0	0	7	-
% Articulated Trucks and Single-Unit Trucks	0.5%	0%	0%	0%	0%	0.1%	-	0.2%	0.6%	0%	0%	0.5%	-
Buses	0	0	0	0	3	3	-	9	0	0	0	9	-
% Buses	0%	0%	0%	0%	0.5%	0.2%	-	1.8%	0%	0%	0%	0.6%	-
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	-
% Bicycles on Road	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - TMC

Sat Nov 17, 2018

Full Length (12PM-2PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592314, Location: 42.687385, -73.845714, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.

184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction Time	I 87 OFF Ramp Northwestbound							I 87 ON RAMP Northeastbound						Int
	HR	BL	L	U	HRR	App	Ped*	R	BR	HL	U	App	Ped*	
2018-11-17 12:00PM	86	116	2	0	76	280	0	0	0	0	0	0	0	591
12:15PM	84	102	6	0	84	276	0	0	0	0	0	0	0	590
12:30PM	76	121	2	0	99	298	0	0	0	0	0	0	0	622
12:45PM	84	136	1	0	90	311	0	0	0	0	0	0	0	658
Hourly Total	330	475	11	0	349	1165	0	0	0	0	0	0	0	2461
1:00PM	79	99	4	0	95	277	0	0	0	0	0	0	0	650
1:15PM	95	120	6	0	81	302	0	0	0	0	0	0	0	699
1:30PM	61	123	3	0	84	271	0	0	0	0	0	0	0	655
1:45PM	91	119	2	0	83	295	0	0	0	0	0	0	0	705
Hourly Total	326	461	15	0	343	1145	0	0	0	0	0	0	0	2709
Total	656	936	26	0	692	2310	0	0	0	0	0	0	0	5170
% Approach	28.4%	40.5%	1.1%	0%	30.0%	-	-	0%	0%	0%	0%	-	-	-
% Total	12.7%	18.1%	0.5%	0%	13.4%	44.7%	-	0%	0%	0%	0%	0%	-	-
Lights	646	933	26	0	682	2287	-	0	0	0	0	0	-	5126
% Lights	98.5%	99.7%	100%	0%	98.6%	99.0%	-	0%	0%	0%	0%	-	-	99.1%
Articulated Trucks and Single-Unit Trucks	9	1	0	0	8	18	-	0	0	0	0	0	-	27
% Articulated Trucks and Single-Unit Trucks	1.4%	0.1%	0%	0%	1.2%	0.8%	-	0%	0%	0%	0%	-	-	0.5%
Buses	1	2	0	0	2	5	-	0	0	0	0	0	-	17
% Buses	0.2%	0.2%	0%	0%	0.3%	0.2%	-	0%	0%	0%	0%	-	-	0.3%
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	0%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - TMC

Sat Nov 17, 2018

Midday Peak (WKND) (1PM - 2PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592314, Location: 42.687385, -73.845714, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	Crossgates Loop Eastbound							Crossgates Loop Westbound						
	HR	BR	T	U	HRR	App	Ped*	T	BL	HL	U	App	Ped*	
2018-11-17 1:00PM	27	0	69	0	86	182	0	64	127	0	0	191	0	
1:15PM	48	0	67	0	86	201	0	72	124	0	0	196	0	
1:30PM	36	0	56	0	90	182	0	63	139	0	0	202	0	
1:45PM	49	0	75	0	84	208	0	74	128	0	0	202	0	
Total	160	0	267	0	346	773	0	273	518	0	0	791	0	
% Approach	20.7%	0%	34.5%	0%	44.8%	-	-	34.5%	65.5%	0%	0%	-	-	
% Total	5.9%	0%	9.9%	0%	12.8%	28.5%	-	10.1%	19.1%	0%	0%	29.2%	-	
PHF	0.816	-	0.890	-	0.961	0.929	-	0.922	0.932	-	-	0.979	-	
Lights	159	0	267	0	344	770	-	269	516	0	0	785	-	
% Lights	99.4%	0%	100%	0%	99.4%	99.6%	-	98.5%	99.6%	0%	0%	99.2%	-	
Articulated Trucks and Single-Unit Trucks	1	0	0	0	0	1	-	0	2	0	0	2	-	
% Articulated Trucks and Single-Unit Trucks	0.6%	0%	0%	0%	0%	0.1%	-	0%	0.4%	0%	0%	0.3%	-	
Buses	0	0	0	0	2	2	-	4	0	0	0	4	-	
% Buses	0%	0%	0%	0%	0.6%	0.3%	-	1.5%	0%	0%	0%	0.5%	-	
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	-	
% Bicycles on Road	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

Crossgates Mall Loop/I-87 Ramps - TMC

Sat Nov 17, 2018

Midday Peak (WKND) (1PM - 2PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 592314, Location: 42.687385, -73.845714, Site Code: Guilderland, New York



Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg Direction	I 87 OFF Ramp Northwestbound							I 87 ON RAMP Northeastbound							Int
	HR	BL	L	U	HRR	App	Ped*	R	BR	HL	U	App	Ped*		
2018-11-17 1:00PM	79	99	4	0	95	277	0	0	0	0	0	0	0	650	
1:15PM	95	120	6	0	81	302	0	0	0	0	0	0	0	699	
1:30PM	61	123	3	0	84	271	0	0	0	0	0	0	0	655	
1:45PM	91	119	2	0	83	295	0	0	0	0	0	0	0	705	
Total	326	461	15	0	343	1145	0	0	0	0	0	0	0	2709	
% Approach	28.5%	40.3%	1.3%	0%	30.0%	-	-	0%	0%	0%	0%	-	-	-	
% Total	12.0%	17.0%	0.6%	0%	12.7%	42.3%	-	0%	0%	0%	0%	0%	-	-	
PHF	0.858	0.937	0.625	-	0.903	0.948	-	-	-	-	-	-	-	0.961	
Lights	323	459	15	0	337	1134	-	0	0	0	0	0	-	2689	
% Lights	99.1%	99.6%	100%	0%	98.3%	99.0%	-	0%	0%	0%	0%	-	-	99.3%	
Articulated Trucks and Single-Unit Trucks	2	1	0	0	4	7	-	0	0	0	0	0	-	10	
% Articulated Trucks and Single-Unit Trucks	0.6%	0.2%	0%	0%	1.2%	0.6%	-	0%	0%	0%	0%	-	-	0.4%	
Buses	1	1	0	0	2	4	-	0	0	0	0	0	-	10	
% Buses	0.3%	0.2%	0%	0%	0.6%	0.3%	-	0%	0%	0%	0%	-	-	0.4%	
Bicycles on Road	0	0	0	0	0	0	-	0	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	0%	
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, T: Thru, U: U-Turn

Albany, NY
Crossgates Mall
Loop/Crossgates Mall Entrance
Saturday, November 17, 2018
Location: 42.689388, -
73.854733

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Crossgates Mall
Loop/Crossgates Mall Entrance
Site Code: Guilderland, New
York
Start Date: 11/17/2018
Page No: 1

Turning Movement Data

Start Time	Crossgates Mall Loop Eastbound					Crossgates Mall Loop Westbound					Crossgates Mall Entrance Southbound					Int. Total
	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	
12:00 PM	16	60	0	0	76	41	41	0	0	82	28	14	0	0	42	200
12:15 PM	23	51	0	0	74	40	32	0	0	72	23	14	0	0	37	183
12:30 PM	22	69	0	0	91	33	42	0	0	75	25	14	0	0	39	205
12:45 PM	8	50	0	0	58	38	41	0	0	79	26	16	0	0	42	179
Hourly Total	69	230	0	0	299	152	156	0	0	308	102	58	0	0	160	767
1:00 PM	23	57	0	0	80	47	33	0	1	80	31	18	0	0	49	209
1:15 PM	22	49	0	0	71	50	37	0	0	87	23	22	0	0	45	203
1:30 PM	27	43	0	0	70	40	44	0	0	84	31	29	0	0	60	214
1:45 PM	19	53	0	0	72	58	48	0	0	107	30	26	0	0	56	235
Hourly Total	91	202	0	0	293	195	163	0	1	358	115	95	0	0	210	861
Grand Total	160	432	0	0	592	347	319	0	1	666	217	153	0	0	370	1628
Approach %	27.0	73.0	0.0	-	-	52.1	47.9	0.0	-	-	58.6	41.4	0.0	-	-	-
Total %	9.8	26.5	0.0	-	36.4	21.3	19.6	0.0	-	40.9	13.3	9.4	0.0	-	22.7	-
Lights	158	418	0	-	576	347	318	0	-	665	215	128	0	-	343	1584
% Lights	98.8	96.8	-	-	97.3	100.0	99.7	-	-	99.8	99.1	83.7	-	-	92.7	97.3
Buses	2	12	0	-	14	0	0	0	-	0	1	24	0	-	25	39
% Buses	1.3	2.8	-	-	2.4	0.0	0.0	-	-	0.0	0.5	15.7	-	-	6.8	2.4
Trucks	0	1	0	-	1	0	1	0	-	1	1	1	0	-	2	4
% Trucks	0.0	0.2	-	-	0.2	0.0	0.3	-	-	0.2	0.5	0.7	-	-	0.5	0.2
Bicycles on Road	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.2	-	-	0.2	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-



Albany, NY
 Crossgates Mall
 Loop/Crossgates Mall Entrance
 Saturday, November 17, 2018
 Location: 42.687948, -
 73.852348

www.TSTData.com
 184 Baker Rd

Coatesville, Pennsylvania, United States 19320
 610-466-1469
 Serving Transportation Professionals Since 1995

Count Name: Crossgates Mall
 Loop/Crossgates Mall Entrance -
 Saturday
 Site Code: Guilderland, New
 York
 Start Date: 11/17/2018
 Page No: 1

Turning Movement Data

Start Time	Crossgates Mall Loop Eastbound							Crossgates Mall Loop Westbound							Hilton Albany-Crossgates Hotel Entrance Northbound							Crossgates Mall Entrance Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
12:00 PM	11	62	0	0	0	0	73	0	58	88	25	0	4	171	1	0	1	1	0	2	3	47	0	5	2	0	0	54	301
12:15 PM	15	76	1	0	0	0	92	1	60	97	14	0	7	172	0	0	1	2	0	1	3	55	0	8	2	0	0	65	332
12:30 PM	16	69	1	0	0	0	86	1	66	118	17	0	4	202	1	0	3	2	0	0	6	51	0	4	5	0	0	60	354
12:45 PM	14	64	0	0	0	0	78	0	54	101	24	0	0	179	0	0	2	5	0	0	7	55	0	6	8	0	0	69	333
Hourly Total	56	271	2	0	0	0	329	2	238	404	80	0	15	724	2	0	7	10	0	3	19	208	0	23	17	0	0	248	1920
1:00 PM	10	69	0	0	0	0	79	2	79	99	21	0	5	201	0	1	1	5	0	3	7	78	1	5	7	0	0	91	378
1:15 PM	9	59	0	0	0	1	68	3	75	76	30	0	0	184	0	1	2	1	0	0	4	75	2	7	4	0	0	88	344
1:30 PM	13	68	0	0	0	0	81	0	81	106	17	0	2	204	0	1	1	1	0	0	3	87	1	6	3	0	0	97	385
1:45 PM	11	76	0	0	0	0	87	3	86	115	15	0	1	219	2	0	2	0	0	0	4	82	2	4	5	0	0	93	403
Hourly Total	43	272	0	0	0	1	315	8	321	396	53	0	8	808	2	3	6	7	0	3	18	322	6	22	19	0	0	369	1610
2:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	99	544	2	0	0	1	645	10	559	800	163	0	23	1532	4	3	13	17	0	6	37	530	6	45	36	0	0	617	2831
Approach %	15.3	84.3	0.3	0.0	0.0	-	-	0.7	36.5	52.2	10.6	0.0	-	-	10.8	8.1	35.1	45.9	0.0	-	-	85.9	1.0	7.3	5.8	0.0	-	-	-
Total %	3.5	19.2	0.1	0.0	0.0	-	22.8	0.4	19.7	28.3	5.8	0.0	-	54.1	0.1	0.1	0.5	0.6	0.0	-	1.3	18.7	0.2	1.6	1.3	0.0	-	21.8	-
Lights	87	539	2	0	0	-	628	10	558	788	162	0	-	1518	4	3	13	17	0	-	37	528	6	45	36	0	-	615	2798
% Lights	87.9	99.1	100.0	-	-	-	97.4	100.0	99.8	98.5	99.4	-	-	99.1	100.0	100.0	100.0	100.0	-	-	100.0	99.6	100.0	100.0	100.0	-	-	99.7	98.8
Buses	11	4	0	0	0	-	15	0	0	12	1	0	-	13	0	0	0	0	0	-	0	1	0	0	0	0	-	1	29
% Buses	11.1	0.7	0.0	-	-	-	2.3	0.0	0.0	1.5	0.6	-	0.8	0.0	0.0	0.0	0.0	-	-	0.0	0.2	0.0	0.0	0.0	-	-	0.2	1.0	
Trucks	1	1	0	0	0	-	2	0	1	0	0	0	-	1	0	0	0	0	0	-	0	1	0	0	0	0	-	1	4
% Trucks	1.0	0.2	0.0	-	-	-	0.3	0.0	0.2	0.0	0.0	-	0.1	0.0	0.0	0.0	0.0	-	-	0.0	0.2	0.0	0.0	0.0	-	-	0.2	0.1	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	0	-		
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-		
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	23	-	-	-	-	-	-	-	6	-	-	-	-	0	-	-		
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-		

LOCATION: S. FRONTAGE ROAD & RAPP ROAD PROJECT: CROSSGATES

DATE OF COUNT: 10/19/19 DAY: SATURDAY JCE JOB #: 19002052A START TIME: 12:00

SAT

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

AM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total
	1	2	3	4	5	6	7	8	9	10	11	12	
12:00 PM	4	15	24	24	25								68
12:15 PM	3	20	22	24									69
12:30 PM	2	15	18	29									64
12:45 PM	3	12	13	29									57
01:00 PM													0
01:15 PM													0
01:30 PM													0
01:45 PM													0
02:00 PM													0
02:15 PM													0
02:30 PM													0
02:45 PM													0
03:00 PM													0
03:15 PM													0
03:30 PM													0
03:45 PM													0

CALCULATED PEAK 15-MINUTE VOLUMES

15-MINUTE PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
12:00 PM	0	4	15	24	25	0	0	0	0	0	0	0	68	0.93
12:15 PM	0	3	20	22	24	0	0	0	0	0	0	0	69	
12:30 PM	0	2	15	18	29	0	0	0	0	0	0	0	64	
12:45 PM	0	3	12	13	29	0	0	0	0	0	0	0	57	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
12:00 PM	0	12	62	77	107	0	0	0	0	0	0	0	258	0.93

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	11	10	<	5	107	>	4	77	>	7	8	9	0	0
0	1	2	<	4	77	>	7	8	9	0	0	0	0	0

LOCATION: WESTERN HIGHWAY & WESTMERE TERRACE PROJECT: CROSSGATES
 DATE OF COUNT: 10/19/19 DAY: SATURDAY JCE JOB #: 19002052A START TIME: 13:30 **SAT**

ENTER 15 - MINUTE COUNT VOLUMES BY MOVEMENT

AM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total
	1	2	3	4	5	6	7	8	9	10	11	12	
01:30 PM	3				1					0		5	9
01:45 PM	1				2					3		3	9
02:00 PM	5				0					1		2	8
02:15 PM	3				1					5		3	12
02:30 PM													0
02:45 PM													0
03:00 PM													0
03:15 PM													0
03:30 PM													0
03:45 PM													0
04:00 PM													0
04:15 PM													0
04:30 PM													0
04:45 PM													0
05:00 PM													0
05:15 PM													0
05:30 PM													0

CALCULATED PEAK 15 - MINUTE VOLUMES

01:30 PM	3	0	0	0	0	1	0	0	0	0	0	5	9
01:45 PM	1	0	0	0	0	2	0	0	0	0	0	3	9
02:00 PM	5	0	0	0	0	0	0	0	0	1	0	2	8
02:15 PM	3	0	0	0	0	1	0	0	0	5	0	3	12
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHE
01:30 PM	12	0	0	0	0	4	0	0	0	9	0	13	38	0.79

13	0	9	^	6	4	0
12	11	10	<	5	0	0
<	v	>	v	4	0	0
12	1	^	<	^	>	
0	2	>	7	8	9	
0	3	v	0	0	0	



Traffic Impact Study
Rapp Road Residential / Costco
Western Avenue Mixed-Use Development
MC Project No.: 19002502A
Appendix

***RAPP ROAD RESIDENTIAL
COSTCO
WESTERN AVENUE MIXED-USE DEVELOPMENT***

**APPENDIX F
CDTA PROJECT**

TABLE NO. 7

LEVEL OF SERVICE SUMMARY TABLE

W/ CDTA IMPROVEMENTS

	LOCATION	YEAR 2025 BUILD								
		WEEKDAY AM			WEEKDAY PM			SATURDAY		
		LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C
1	WESTERN AVENUE (U.S. ROUTE 20) & CROSSGATES MALL DRIVEWAY <u>W/ STANDARD "T" INTERSECTION</u> WESTERN AVENUE (U.S. ROUTE 20) EB L EB T / T EB APPROACH WESTERN AVENUE (U.S. ROUTE 20) WB T / T WB T-R WB APPROACH CROSSGATES MALL DRIVEWAY SB L / L SB R SB APPROACH OVERALL INTERSECTION	B	19.6	0.39	D	37.5	0.34	D	36.6	0.39
		A	8.0	0.66	A	5.7	0.46	A	9.3	0.49
		A	9.8	----	A	8.4	----	B	12.2	----
		C	33.4	0.77	C	22.2	0.85	C	27.8	0.85
		D	35.1	0.77	C	27.0	0.87	C	33.2	0.86
		C	34.0	----	C	23.8	----	C	29.6	----
		D	36.7	0.14	D	46.1	0.67	D	40.0	0.70
		D	36.5	0.09	D	38.7	0.22	C	30.8	0.15
		D	36.6	----	D	45.1	----	D	39.2	----
		B	19.1	----	C	21.0	----	C	25.3	----
10	CROSSGATES MALL ROAD & I-87 ON/OFF RAMPS <u>W/ ROUNDABOUT</u> I-87 OFF RAMP WB L WB R WB APPROACH CROSSGATES MALL ROAD NB T NB R NB APPROACH CROSSGATES MALL ROAD SB L-T SB T SB APPROACH OVERALL INTERSECTION	A	4.8	0.223	A	8.7	0.527	B	13.7	0.693
		A	0.0	0.289	A	0.0	0.288	A	0.0	0.378
		A	1.6	----	A	4.7	----	A	7.1	----
		A	3.6	0.066	A	6.7	0.202	A	7.6	0.323
		B	12.1	0.653	E	40.5	0.912	E	41.5	0.948
		B	11.3	----	D	33.6	----	D	32.6	----
		A	5.5	0.163	E	40.7	0.925	D	31.2	0.838
		A	4.4	0.058	A	8.5	0.320	B	10.4	0.406
		A	5.2	----	D	32.3	----	C	24.0	----
		A	6.3	----	C	21.3	----	C	19.4	----
13/14	CROSSGATES MALL ROAD & CROSSGATES MALL DRIVEWAY <u>W/ ROUNDABOUT</u> CROSSGATES MALL ROAD SEB L-T SEB T-R SEB APPROACH CROSSGATES MALL ROAD NWB L-T NWB T-R NWB APPROACH CROSSGATES MALL DRIVEWAY NEB L NEB T-R NEB APPROACH CDTA TRANSIT DRIVEWAY SWB L-T-R SWB APPROACH OVERALL INTERSECTION	A	4.6	0.197	A	6.7	0.342	B	10.5	0.537
		A	4.5	0.210	A	6.6	0.361	B	10.5	0.562
		A	4.6	----	A	6.7	----	B	10.5	----
		A	4.2	0.136	A	7.6	0.419	B	11.6	0.580
		A	4.1	0.146	A	7.6	0.443	B	11.6	0.606
		A	4.2	----	A	7.6	----	B	11.6	----
		A	4.5	0.033	A	6.8	0.195	B	14.4	0.521
		A	9.5	0.467	A	7.3	0.281	B	14.9	0.580
		A	9.2	----	A	7.1	----	B	14.7	----
		B	3.8	0.022	A	7.5	0.042	B	10.4	0.057
		B	3.8	----	A	7.5	----	B	10.4	----
		A	6.1	----	A	7.2	----	B	11.9	----

THE ABOVE REPRESENTS THE LEVELS OF SERVICE, VEHICLE DELAY IN SECONDS AND VOLUME-TO-CAPACITY (V/C) RATIO FOR THE ABOVE INTERSECTIONS.

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

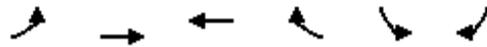
Weekday Peak AM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↑↑	↑↑↑		↖	↗
Traffic Volume (vph)	291	1568	939	108	70	19
Future Volume (vph)	291	1568	939	108	70	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.985			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1745	3438	4545	0	3432	1583
Flt Permitted	0.146				0.950	
Satd. Flow (perm)	268	3438	4545	0	3432	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			24			21
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	8%	4%	0%	0%
Adj. Flow (vph)	316	1704	1021	117	76	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	316	1704	1138	0	76	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020

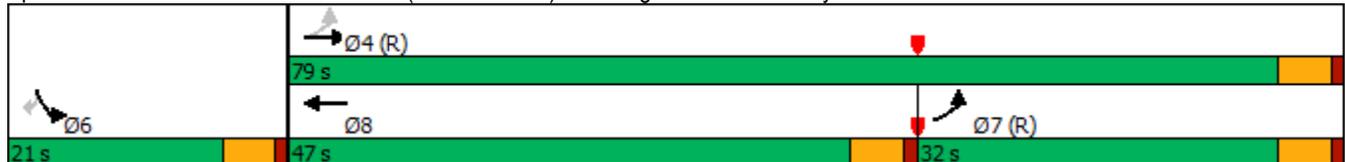


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Detector Phase	7	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	9.0	26.5	21.0		21.0	21.0
Total Split (s)	32.0	79.0	47.0		21.0	21.0
Total Split (%)	32.0%	79.0%	47.0%		21.0%	21.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio	0.44	0.67	0.74		0.14	0.08
Control Delay	19.2	8.3	31.3		36.9	15.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	19.2	8.3	31.3		36.9	15.4
Queue Length 50th (ft)	70	247	226		21	0
Queue Length 95th (ft)	155	311	250		42	21
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)	125					
Base Capacity (vph)	719	2544	1922		549	270
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.44	0.67	0.59		0.14	0.08

Intersection Summary

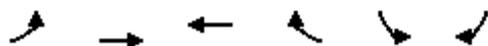
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 4:EBTL and 7:EBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak AM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↶	↕↕	↕↕↕		↷↷	↶	
Traffic Volume (veh/h)	291	1568	939	108	70	19	
Future Volume (veh/h)	291	1568	939	108	70	19	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1900	1826	1758	1828	1806	1806	
Adj Flow Rate, veh/h	316	1704	1021	117	76	21	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	5	8	8	0	0	
Cap, veh/h	806	2567	1329	152	534	245	
Arrive On Green	0.39	0.74	0.30	0.30	0.16	0.16	
Sat Flow, veh/h	1810	3561	4526	500	3336	1530	
Grp Volume(v), veh/h	316	1704	747	391	76	21	
Grp Sat Flow(s),veh/h/ln	1810	1735	1600	1668	1668	1530	
Q Serve(g_s), s	5.8	25.1	21.2	21.3	2.0	1.2	
Cycle Q Clear(g_c), s	5.8	25.1	21.2	21.3	2.0	1.2	
Prop In Lane	1.00			0.30	1.00	1.00	
Lane Grp Cap(c), veh/h	806	2567	973	507	534	245	
V/C Ratio(X)	0.39	0.66	0.77	0.77	0.14	0.09	
Avail Cap(c_a), veh/h	806	2567	1344	701	534	245	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	19.2	6.6	31.6	31.6	36.1	35.8	
Incr Delay (d2), s/veh	0.3	1.4	1.8	3.5	0.6	0.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.7	7.0	8.0	8.6	0.8	1.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	19.6	8.0	33.4	35.1	36.7	36.5	
LnGrp LOS	B	A	C	D	D	D	
Approach Vol, veh/h		2020	1138		97		
Approach Delay, s/veh		9.8	34.0		36.6		
Approach LOS		A	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				79.0	21.0	43.6	35.4
Change Period (Y+Rc), s				5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s				74.0	16.0	27.0	42.0
Max Q Clear Time (g_c+I1), s				27.1	4.0	7.8	23.3
Green Ext Time (p_c), s				20.1	0.2	0.9	7.1
Intersection Summary							
HCM 6th Ctrl Delay			19.1				
HCM 6th LOS			B				

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak AM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	261	511	73	0	699	139	50	0	0
Future Volume (vph)	261	511	73	0	699	139	50	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	100		0		0		0	0
Storage Lanes	1	1		1		0		1	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850			0.850				
Flt Protected	0.950						0.965		
Satd. Flow (prot)	1728	1697	1818	0	1644	0	2916	1900	0
Flt Permitted	0.950						0.965		
Satd. Flow (perm)	1728	1697	1818	0	1644	0	2916	1900	0
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	2%	4%	0%	1%	13%	18%	0%	0%
Adj. Flow (vph)	281	549	78	0	752	149	54	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	281	549	78	0	752	0	203	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	12		0				0	12	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Sign Control	Yield		Yield				Yield	Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection							
Intersection Delay, s/veh	6.3						
Intersection LOS	A						
Approach	WB	NB		SB	NW		
Entry Lanes	1	1		2		1	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	830	830		203		0	
Demand Flow Rate, veh/h	855	841		232		0	
Vehicles Circulating, veh/h	81	168		295		81	
Vehicles Exiting, veh/h	0	359		81		168	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	1.6	11.3		5.2		0.0	
Approach LOS	A	B		A		-	
Lane	Left	Bypass	Left	Bypass	Left	Right	Left
Designated Moves	L	R	T	R	LT	TR	LR
Assumed Moves	L	R	T	R	L	TR	LR
RT Channelized		Free		Yield			
Lane Util	1.000		1.000		0.724	0.276	1.000
Follow-Up Headway, s	2.535		2.535		2.667	2.535	2.535
Critical Headway, s	4.328	560	4.328	760	4.645	4.328	4.328
Entry Flow, veh/h	295	1938	81	1163	168	64	0
Cap Entry Lane, veh/h	1326	0.980	1231	0.990	1029	1105	1326
Entry HV Adj Factor	0.953	549	0.962	752	0.887	0.847	1.000
Flow Entry, veh/h	281	1900	78	1151	149	54	0
Cap Entry, veh/h	1263	0.289	1184	0.653	913	937	1326
V/C Ratio	0.223	0.0	0.066	12.1	0.163	0.058	0.000
Control Delay, s/veh	4.8	A	3.6	B	5.5	4.4	2.7
LOS	A	1	A	5	A	A	A
95th %tile Queue, veh	1		0		1	0	0



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔		↔	↔			↔	
Traffic Volume (vph)	0	420	42	46	255	0	26	20	373	0	20	0
Future Volume (vph)	0	420	42	46	255	0	26	20	373	0	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.986						0.857				
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	3478	0	0	3199	0	1805	1627	0	0	1863	0
Flt Permitted					0.992		0.950					
Satd. Flow (perm)	0	3478	0	0	3199	0	1805	1627	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		547			1590			615			292	
Travel Time (s)		12.4			36.1			14.0			6.6	
Confl. Peds. (#/hr)									4			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.25	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	0%	0%	11%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	472	47	52	287	0	29	22	419	0	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	519	0	0	339	0	29	441	0	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

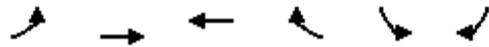
Intersection								
Intersection Delay, s/veh	6.1							
Intersection LOS	A							
Approach	SE		NW		NE		SW	
Entry Lanes	2		2		2		1	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	519		339		470		22	
Demand Flow Rate, veh/h	528		371		470		22	
Vehicles Circulating, veh/h	74		51		481		400	
Vehicles Exiting, veh/h	348		900		121		22	
Ped Vol Crossing Leg, #/h	0		4		0		0	
Ped Cap Adj	1.000		0.996		1.000		1.000	
Approach Delay, s/veh	4.6		4.2		9.2		3.8	
Approach LOS	A		A		A		A	
Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR	LTR	
Assumed Moves	LT	TR	LT	TR	L	TR	LTR	
RT Channelized								
Lane Util	0.470	0.530	0.469	0.531	0.062	0.938	1.000	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328	
Entry Flow, veh/h	248	280	174	197	29	441	22	
Cap Entry Lane, veh/h	1261	1334	1288	1360	867	943	1011	
Entry HV Adj Factor	0.983	0.982	0.917	0.913	1.000	0.999	0.980	
Flow Entry, veh/h	244	275	160	180	29	441	22	
Cap Entry, veh/h	1239	1309	1176	1236	867	943	991	
V/C Ratio	0.197	0.210	0.136	0.146	0.033	0.467	0.022	
Control Delay, s/veh	4.6	4.5	4.2	4.1	4.5	9.5	3.8	
LOS	A	A	A	A	A	A	A	
95th %tile Queue, veh	1	1	0	1	0	3	0	

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	102	1118	2013	237	322	49
Future Volume (vph)	102	1118	2013	237	322	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.984			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1711	3539	4789	0	3364	1552
Flt Permitted	0.063				0.950	
Satd. Flow (perm)	113	3539	4789	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			35			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1215	2188	258	350	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	1215	2446	0	350	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	Perm

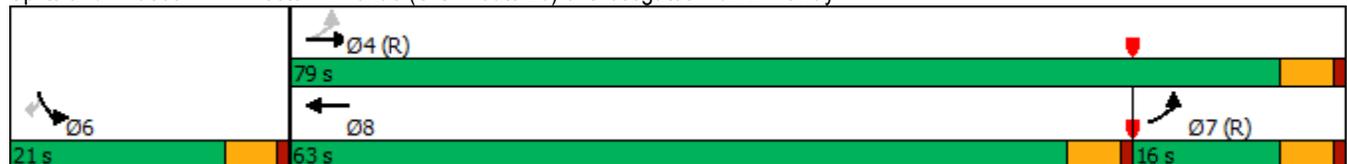


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Detector Phase	7	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	9.0	26.5	21.0		21.0	21.0
Total Split (s)	16.0	79.0	63.0		21.0	21.0
Total Split (%)	16.0%	79.0%	63.0%		21.0%	21.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio	0.43	0.46	0.88		0.65	0.18
Control Delay	27.5	5.8	22.3		45.8	12.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.5	5.8	22.3		45.8	12.1
Queue Length 50th (ft)	17	135	450		109	0
Queue Length 95th (ft)	70	170	531		157	34
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)	125					
Base Capacity (vph)	259	2618	2792		538	292
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.43	0.46	0.88		0.65	0.18

Intersection Summary

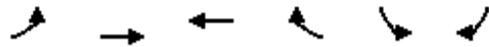
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 4:EBTL and 7:EBL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Weekday Peak PM Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	102	1118	2013	237	322	49	
Future Volume (veh/h)	102	1118	2013	237	322	49	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776	
Adj Flow Rate, veh/h	111	1215	2188	258	350	53	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	322	2630	2561	297	525	241	
Arrive On Green	0.13	0.74	0.56	0.56	0.16	0.16	
Sat Flow, veh/h	1781	3647	4748	531	3282	1505	
Grp Volume(v), veh/h	111	1215	1595	851	350	53	
Grp Sat Flow(s),veh/h/ln	1781	1777	1681	1751	1641	1505	
Q Serve(g_s), s	0.5	13.5	39.8	41.7	10.0	3.1	
Cycle Q Clear(g_c), s	0.5	13.5	39.8	41.7	10.0	3.1	
Prop In Lane	1.00			0.30	1.00	1.00	
Lane Grp Cap(c), veh/h	322	2630	1879	979	525	241	
V/C Ratio(X)	0.34	0.46	0.85	0.87	0.67	0.22	
Avail Cap(c_a), veh/h	322	2630	1949	1016	525	241	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	36.8	5.1	18.5	18.9	39.5	36.6	
Incr Delay (d2), s/veh	0.6	0.6	3.7	8.0	6.6	2.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.4	3.8	14.5	17.0	4.5	2.8	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	37.5	5.7	22.2	27.0	46.1	38.7	
LnGrp LOS	D	A	C	C	D	D	
Approach Vol, veh/h		1326	2446		403		
Approach Delay, s/veh		8.4	23.8		45.1		
Approach LOS		A	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				79.0	21.0	18.1	60.9
Change Period (Y+Rc), s				5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s				74.0	16.0	11.0	58.0
Max Q Clear Time (g_c+I1), s				15.5	12.0	2.5	43.7
Green Ext Time (p_c), s				11.6	0.6	0.1	12.2
Intersection Summary							
HCM 6th Ctrl Delay			21.0				
HCM 6th LOS			C				

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 10: Crossgates Mall Road & I-87 On/Off Ramps

Weekday Peak PM Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations							 	 	
Traffic Volume (vph)	620	520	152	0	595	651	232	0	0
Future Volume (vph)	620	520	152	0	595	651	232	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	100		0		0		0	0
Storage Lanes	1	1		1		0		1	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850			0.850				
Flt Protected	0.950						0.964		
Satd. Flow (prot)	1814	1714	1890	0	1660	0	3270	1900	0
Flt Permitted	0.950						0.964		
Satd. Flow (perm)	1814	1714	1890	0	1660	0	3270	1900	0
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	7%	0%	0%
Adj. Flow (vph)	653	547	160	0	626	685	244	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	653	547	160	0	626	0	929	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	12		0				0	12	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Sign Control	Yield		Yield				Yield	Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection							
Intersection Delay, s/veh	21.3						
Intersection LOS	C						
Approach	WB	NB		SB		NW	
Entry Lanes	1	1	1	2	1		
Conflicting Circle Lanes	2	2	2	2	2		
Adj Approach Flow, veh/h	1200	786	786	929	0		
Demand Flow Rate, veh/h	1205	786	786	946	0		
Vehicles Circulating, veh/h	160	685	685	653	160		
Vehicles Exiting, veh/h	0	914	914	160	685		
Ped Vol Crossing Leg, #/h	0	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	4.7	33.6	33.6	32.3	0.0		
Approach LOS	A	D	D	D	-		
Lane	Left	Bypass	Left	Bypass	Left	Right	Left
Designated Moves	L	R	T	R	LT	TR	LR
Assumed Moves	L	R	T	R	L	TR	LR
RT Channelized	Free		Yield				
Lane Util	1.000		1.000		0.724	0.276	1.000
Follow-Up Headway, s	2.535		2.535		2.667	2.535	2.535
Critical Headway, s	4.328	552	4.328	626	4.645	4.328	4.328
Entry Flow, veh/h	653	1919	160	686	685	261	0
Cap Entry Lane, veh/h	1240	0.990	793	1.000	740	815	1240
Entry HV Adj Factor	1.000	547	1.000	626	1.000	0.935	1.000
Flow Entry, veh/h	653	1900	160	686	685	244	0
Cap Entry, veh/h	1240	0.288	793	0.912	740	762	1240
V/C Ratio	0.527	0.0	0.202	40.5	0.925	0.320	0.000
Control Delay, s/veh	8.7	A	6.7	E	40.7	8.5	2.9
LOS	A	1	A	12	E	A	A
95th %tile Queue, veh	3		1		13	1	0



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔		↔	↔			↔	
Traffic Volume (vph)	0	542	189	181	736	0	138	20	200	0	20	0
Future Volume (vph)	0	542	189	181	736	0	138	20	200	0	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.961						0.864				
Flt Protected					0.990		0.950					
Satd. Flow (prot)	0	3418	0	0	3407	0	1787	1624	0	0	1863	0
Flt Permitted					0.990		0.950					
Satd. Flow (perm)	0	3418	0	0	3407	0	1787	1624	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		547			1590			615			278	
Travel Time (s)		12.4			36.1			14.0			6.3	
Confl. Peds. (#/hr)									4			
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
Heavy Vehicles (%)	2%	1%	1%	0%	3%	2%	1%	2%	1%	2%	2%	2%
Adj. Flow (vph)	0	589	205	197	800	0	150	22	217	0	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	794	0	0	997	0	150	239	0	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection								
Intersection Delay, s/veh	7.2							
Intersection LOS	A							
Approach	SE		NW		NE		SW	
Entry Lanes	2		2		2		1	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	794		997		389		22	
Demand Flow Rate, veh/h	802		1021		393		22	
Vehicles Circulating, veh/h	219		173		595		1172	
Vehicles Exiting, veh/h	975		814		426		22	
Ped Vol Crossing Leg, #/h	0		4		0		0	
Ped Cap Adj	1.000		0.996		1.000		1.000	
Approach Delay, s/veh	6.7		7.6		7.1		7.5	
Approach LOS	A		A		A		A	
Lane	Left	Right	Left	Right	Left	Right	Left	
Designated Moves	LT	TR	LT	TR	L	TR	LTR	
Assumed Moves	LT	TR	LT	TR	L	TR	LTR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.387	0.613	1.000	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328	
Entry Flow, veh/h	377	425	480	541	152	241	22	
Cap Entry Lane, veh/h	1104	1179	1151	1226	781	856	524	
Entry HV Adj Factor	0.990	0.990	0.976	0.977	0.987	0.990	0.980	
Flow Entry, veh/h	373	421	469	528	150	239	22	
Cap Entry, veh/h	1093	1167	1119	1193	771	848	514	
V/C Ratio	0.342	0.361	0.419	0.443	0.195	0.281	0.042	
Control Delay, s/veh	6.7	6.6	7.6	7.6	6.8	7.3	7.5	
LOS	A	A	A	A	A	A	A	
95th %tile Queue, veh	2	2	2	2	1	1	0	

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

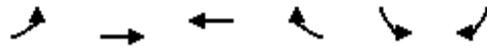
Saturday Peak Hour
 02/17/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	126	1053	1269	528	511	49
Future Volume (vph)	126	1053	1269	528	511	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	11	14	12	12
Grade (%)		0%	2%		4%	
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	2	1
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	1.00
Frt			0.956			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1711	3539	4652	0	3364	1552
Flt Permitted	0.075				0.950	
Satd. Flow (perm)	135	3539	4652	0	3364	1552
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			147			53
Link Speed (mph)		40	40		30	
Link Distance (ft)		292	969		615	
Travel Time (s)		5.0	16.5		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	137	1145	1379	574	555	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	1145	1953	0	555	53
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.04	1.00	1.06	0.93	1.03	1.03
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	Perm

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 02/17/2020

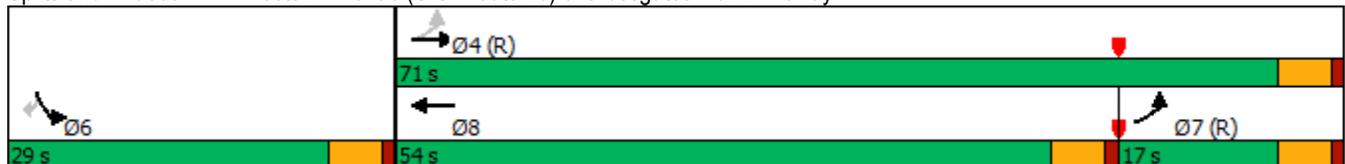


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases	7	4	8		6	
Permitted Phases	4					6
Detector Phase	7	4	8		6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	9.0	26.5	21.0		21.0	21.0
Total Split (s)	17.0	71.0	54.0		29.0	29.0
Total Split (%)	17.0%	71.0%	54.0%		29.0%	29.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0		5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max	C-Max	None		Max	Max
v/c Ratio	0.47	0.49	0.84		0.69	0.13
Control Delay	31.8	9.4	24.8		39.7	9.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.8	9.4	24.8		39.7	9.4
Queue Length 50th (ft)	33	173	352		166	0
Queue Length 95th (ft)	91	218	422		224	30
Internal Link Dist (ft)		212	889		535	
Turn Bay Length (ft)	125					
Base Capacity (vph)	291	2335	2354		807	412
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.47	0.49	0.83		0.69	0.13

Intersection Summary

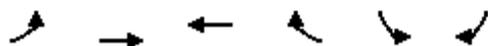
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 4:EBTL and 7:EBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway



Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 1: Western Avenue (U.S. Route 20) & Crossgates Mall Driveway

Saturday Peak Hour
 02/17/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖	↑↑	↗↖		↘↖	↘	
Traffic Volume (veh/h)	126	1053	1269	528	511	49	
Future Volume (veh/h)	126	1053	1269	528	511	49	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1870	1870	1847	1921	1776	1776	
Adj Flow Rate, veh/h	137	1145	1379	574	555	53	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	352	2345	1628	667	788	361	
Arrive On Green	0.15	0.66	0.46	0.46	0.24	0.24	
Sat Flow, veh/h	1781	3647	3677	1439	3282	1505	
Grp Volume(v), veh/h	137	1145	1320	633	555	53	
Grp Sat Flow(s),veh/h/ln	1781	1777	1681	1588	1641	1505	
Q Serve(g_s), s	1.5	16.2	34.7	35.6	15.5	2.8	
Cycle Q Clear(g_c), s	1.5	16.2	34.7	35.6	15.5	2.8	
Prop In Lane	1.00			0.91	1.00	1.00	
Lane Grp Cap(c), veh/h	352	2345	1559	736	788	361	
V/C Ratio(X)	0.39	0.49	0.85	0.86	0.70	0.15	
Avail Cap(c_a), veh/h	352	2345	1647	778	788	361	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.9	8.5	23.7	23.9	34.8	29.9	
Incr Delay (d2), s/veh	0.7	0.7	4.1	9.3	5.2	0.9	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.9	5.4	13.5	14.1	6.7	2.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	36.6	9.3	27.8	33.2	40.0	30.8	
LnGrp LOS	D	A	C	C	D	C	
Approach Vol, veh/h		1282	1953		608		
Approach Delay, s/veh		12.2	29.6		39.2		
Approach LOS		B	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				71.0	29.0	19.6	51.4
Change Period (Y+Rc), s				5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s				66.0	24.0	12.0	49.0
Max Q Clear Time (g_c+I1), s				18.2	17.5	3.5	37.6
Green Ext Time (p_c), s				10.3	1.4	0.2	8.8
Intersection Summary							
HCM 6th Ctrl Delay			25.3				
HCM 6th LOS			C				

Year 2025 Build Traffic Volumes (w/ Imp & Roundabout)
 10: Crossgates Mall Road & I-87 On/Off Ramps

Saturday Peak Hour
 02/17/2020

									
Lane Group	WBL	WBR	NBT	NBR	NBR2	SBL	SBT	NWL	NWR
Lane Configurations									
Traffic Volume (vph)	741	689	275	0	771	534	281	0	0
Future Volume (vph)	741	689	275	0	771	534	281	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	13	11	11	12	12
Grade (%)	-1%		1%				2%	0%	
Storage Length (ft)	0	100		0		0		0	0
Storage Lanes	1	1		1		0		1	0
Taper Length (ft)	25					25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.850			0.850				
Flt Protected	0.950						0.968		
Satd. Flow (prot)	1814	1714	1890	0	1644	0	3321	1900	0
Flt Permitted	0.950						0.968		
Satd. Flow (perm)	1814	1714	1890	0	1644	0	3321	1900	0
Link Speed (mph)	30		30				30	30	
Link Distance (ft)	707		1590				534	441	
Travel Time (s)	16.1		36.1				12.1	10.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	2%	0%	0%
Adj. Flow (vph)	772	718	286	0	803	556	293	0	0
Shared Lane Traffic (%)									
Lane Group Flow (vph)	772	718	286	0	803	0	849	0	0
Enter Blocked Intersection	No	No	No						
Lane Alignment	Left	Right	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)	12		0				0	12	
Link Offset(ft)	0		0				0	0	
Crosswalk Width(ft)	16		16				16	16	
Two way Left Turn Lane									
Headway Factor	0.99	0.91	1.01	1.01	0.96	1.06	1.06	1.00	1.00
Turning Speed (mph)	15	9		9	9	15		15	9
Sign Control	Yield		Yield				Yield	Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection							
Intersection Delay, s/veh	19.4						
Intersection LOS	C						
Approach	WB	NB		SB		NW	
Entry Lanes	1	1	1	2	1	1	1
Conflicting Circle Lanes	2	2	2	2	2	2	2
Adj Approach Flow, veh/h	1490	1089	1089	849	849	0	0
Demand Flow Rate, veh/h	1497	1097	1097	855	855	0	0
Vehicles Circulating, veh/h	286	556	556	772	772	286	286
Vehicles Exiting, veh/h	0	1071	1071	286	286	556	556
Ped Vol Crossing Leg, #/h	0	0	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	32.6	32.6	24.0	24.0	0.0	0.0
Approach LOS	A	D	D	C	C	-	-
Lane	Left	Bypass	Left	Bypass	Left	Right	Left
Designated Moves	L	R	T	R	LT	TR	LR
Assumed Moves	L	R	T	R	L	TR	LR
RT Channelized		Free		Yield			
Lane Util	1.000		1.000		0.650	0.350	1.000
Follow-Up Headway, s	2.535		2.535		2.667	2.535	2.535
Critical Headway, s	4.328	725	4.328	811	4.645	4.328	4.328
Entry Flow, veh/h	772	1919	286	855	556	299	0
Cap Entry Lane, veh/h	1114	0.990	885	0.990	664	737	1114
Entry HV Adj Factor	1.000	718	1.000	803	1.000	0.980	1.000
Flow Entry, veh/h	772	1900	286	847	556	293	0
Cap Entry, veh/h	1114	0.378	885	0.948	664	722	1114
V/C Ratio	0.693	0.0	0.323	41.5	0.838	0.406	0.000
Control Delay, s/veh	13.7	A	7.6	E	31.2	10.4	3.2
LOS	B	2	A	15	D	B	A
95th %tile Queue, veh	6		1		9	2	0



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔		↔	↔			↔↔	
Traffic Volume (vph)	0	766	264	297	804	0	301	20	353	0	20	0
Future Volume (vph)	0	766	264	297	804	0	301	20	353	0	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			0%			0%	
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.962						0.858				
Flt Protected					0.987		0.950					
Satd. Flow (prot)	0	3447	0	0	3454	0	1805	1628	0	0	1863	0
Flt Permitted					0.987		0.950					
Satd. Flow (perm)	0	3447	0	0	3454	0	1805	1628	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		547			1590			615			319	
Travel Time (s)		12.4			36.1			14.0			7.3	
Confl. Peds. (#/hr)									1			
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
Heavy Vehicles (%)	2%	0%	1%	0%	1%	2%	0%	2%	0%	2%	2%	2%
Adj. Flow (vph)	0	833	287	323	874	0	327	22	384	0	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1120	0	0	1197	0	327	406	0	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.03	1.03	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection								
Intersection Delay, s/veh	11.9							
Intersection LOS	B							
Approach	SE		NW		NE		SW	
Entry Lanes	2		2		2		1	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	1120		1197		733		22	
Demand Flow Rate, veh/h	1123		1206		733		22	
Vehicles Circulating, veh/h	345		349		833		1533	
Vehicles Exiting, veh/h	1210		1217		635		22	
Ped Vol Crossing Leg, #/h	0		1		0		0	
Ped Cap Adj	1.000		0.999		1.000		1.000	
Approach Delay, s/veh	10.5		11.6		14.7		10.4	
Approach LOS	B		B		B		B	
Lane	Left	Right	Left	Right	Left	Right	Left	
Designated Moves	LT	TR	LT	TR	L	TR	LTR	
Assumed Moves	LT	TR	LT	TR	L	TR	LTR	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.446	0.554	1.000	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.328	
Entry Flow, veh/h	528	595	567	639	327	406	22	
Cap Entry Lane, veh/h	983	1059	979	1056	627	699	386	
Entry HV Adj Factor	0.997	0.998	0.992	0.993	1.000	0.999	0.980	
Flow Entry, veh/h	526	594	563	635	327	406	22	
Cap Entry, veh/h	980	1057	971	1047	627	699	378	
V/C Ratio	0.537	0.562	0.580	0.606	0.521	0.580	0.057	
Control Delay, s/veh	10.5	10.5	11.6	11.6	14.4	14.9	10.4	
LOS	B	B	B	B	B	B	B	
95th %tile Queue, veh	3	4	4	4	3	4	0	

