

Traffic Impact Study

Castleton Heights

Castle Rock, Colorado

Prepared for:

TWG Development

Kimley»Horn

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

Castleton Heights

Castle Rock, Colorado

**Prepared for
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1.0 EXECUTIVE SUMMARY

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study for the Castleton Heights project proposed to be located near the southwest corner of the Castleton Road and Castleton Court intersection in Castle Rock, Colorado. Castleton Heights is proposed to include 80 affordable housing multifamily residential units. It is expected that the project will be completed in the next several years; therefore, analysis was conducted for the 2028 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

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

- Meadows Parkway and Castleton Drive
- Castleton Road/Castleton Way and Castleton Court
- Justice Way and Castleton Court
- Santa Fe Drive and Castleton Court
- Castleton Drive & Genoa Way

In addition, the existing full movement cross access along Castleton Road and existing full movement access along Castleton Court were evaluated.

Regional access to the site will be provided by Interstate 25 (I-25) and US-85. Primary access will be provided by Meadows Parkway and Santa Fe Drive. Direct access will be provided by the existing full movement accesses along Castleton Road and Castleton Court. The studied access intersections currently provide access to commercial uses located north of the project and will be shared accesses with the project.

Castleton Heights is expected to generate approximately 386 weekday daily trips, with 29 of these trips occurring during the morning peak hour and 37 of these trips occurring during the afternoon peak hour.



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

- With completion of Castleton Heights, the existing accesses along Castleton Road and Castleton Court will be used to serve the development. The existing driveways proposed to be shared accesses with the project are currently uncontrolled; therefore, R1-1 “STOP” signs could be installed on the exiting approaches of both shared access locations.
- The T-intersection of Castleton Road/Castleton Way and Castleton Court (#2) currently operates with stop control on the northbound and westbound approaches. This stop control configuration does not conform to the Highway Capacity Manual (HCM) standards and cannot be evaluated in its current state. Therefore, this intersection was analyzed under two scenarios: all-way stop control (AWSC) and with stop control only on the northbound Castleton Court approach (removal of stop control on the westbound Castleton Way approach) in order to provide analysis results. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon under both stop control scenarios. Therefore, no additional lane improvements are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis; however, the Town of Castle Rock has the discretion to modify the intersection stop sign control configuration to meet HCM standards and to minimize driver confusion.
- By 2045, the Liggett Road and Santa Fe Drive T-intersection is expected to be relocated to align with the Castleton Court and Santa Fe Drive T-intersection as one combined four-leg intersection. It is anticipated that new four-legged intersection will operate under either roundabout or signal control.
- The intersection of Castleton Drive and Genoa Way has been identified as an intersection of concern by the Town of Castle Rock and was further studied in the Castleton Drive Intersection Control Evaluation (ICE) Memorandum in February 2022. Further, the Town of Castle Rock reviewed the findings in the ICE assessment and determined the greatest benefit to cost is to convert the full movement intersection to three-quarter movement by restricting



the left/through movements on the minor approaches. Therefore, the intersection has additionally been analyzed as a three-quarter movement intersection for both the Genoa Way and Castleton Road minor approaches in the 2045 planning level horizon. However, due to the existing intersection delay and safety concerns, it is recommended this restriction be put in place prior to the 2028 short-term horizon. It should be noted that the project has negligible impacts to the vehicle delays and vehicle queues into this intersection.

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

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study for the Castleton Heights project proposed to be located near the southwest corner of the Castleton Road and Castleton Court intersection in Castle Rock, Colorado. A vicinity map illustrating the project development location is shown in **Figure 1**. Castleton Heights is proposed to include 80 affordable housing multifamily residential units. A conceptual site plan is attached in **Appendix A**. It is expected that the project will be completed in the next several years; therefore, analysis was conducted for the 2028 short-term buildout horizon as well as the 2045 long-term twenty-year planning horizon.

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

- Meadows Parkway and Castleton Drive
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- Justice Way and Castleton Court
- Santa Fe Drive and Castleton Court
- Castleton Drive & Genoa Way

In addition, the existing full movement cross access along Castleton Road and existing full movement access along Castleton Court were evaluated.

Regional access to the site will be provided by Interstate 25 (I-25) and US-85. Primary access will be provided by Meadows Parkway and Santa Fe Drive. Direct access will be provided by the existing full movement accesses along Castleton Road and Castleton Court. The studied access intersections currently provide access to commercial uses located north of the project and will be shared accesses with the project.

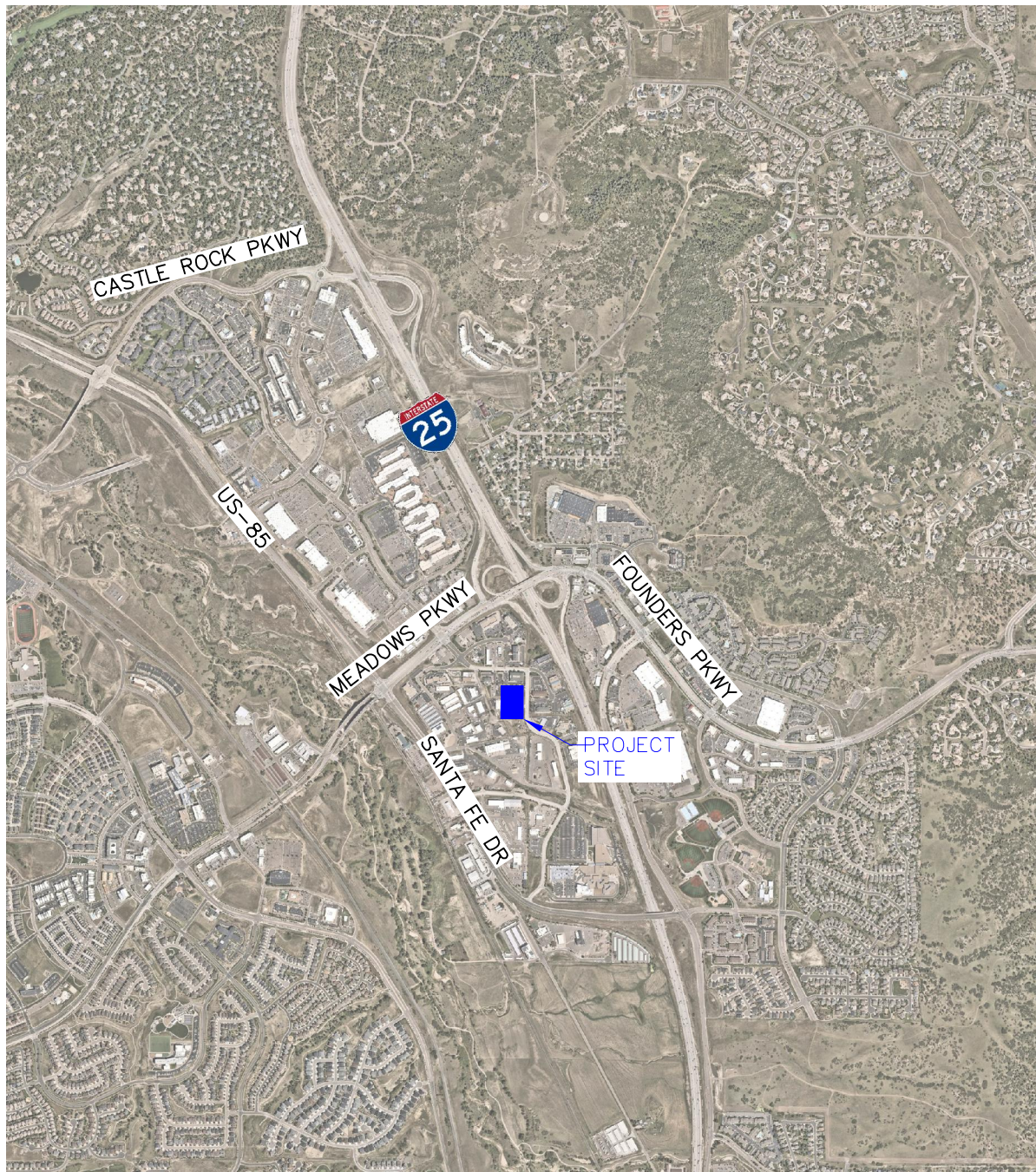


FIGURE 1
CASTLETON HEIGHTS
CASTLE ROCK, CO
VICINITY MAP

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

The existing site is currently vacant land. The surrounding area contains a mix of uses. Directly east of the site is a hotel. To the west and to the south are industrial uses. North of the site are more commercial uses. Retail centers and the Outlets at Castle Rock are located north of Meadows Parkway while residential uses are located in the extended area to the north, east, and west.

3.2 Existing Roadway Network

Meadows Parkway (US-85) primarily extends east/west as a six-lane roadway (three lanes in each direction) near the intersection of Castleton Drive. The posted speed limit is 45 miles per hour. The Colorado Department of Transportation (CDOT) identifies the roadway as a NR-A: Non-Rural Principal Highway.

Santa Fe Drive is as a four-lane roadway (two lanes in each direction) near the intersection of Castleton Court and extends both north/south and east/west due to curvature in the roadway. It has a posted speed limit of 45 miles per hour.

Castleton Court extends in the north/south direction as a two-lane roadway (one lane in each direction) from Castleton Road to Santa Fe Drive. A Two-Way Left-Turn Lane is provided along the roadway. It has a posted speed limit of 30 miles per hour.

Castleton Road extends east/west with one through lane in each direction at the intersection with Castleton Drive. West of Castleton Drive, Castleton Road provides two eastbound through lanes with the outside lane dropping as a forced right turn lane at the intersection with Castleton Drive. Castleton Road has a speed limit of 30 miles per hour.

Genoa Way extends approximately 675 feet east of Castleton Drive with one through lane in each direction and has a posted speed limit of 25 miles per hour.

The signalized intersection of Meadows Parkway and Castleton Drive/Factory Shops Boulevard (#1) operates with protected-only left turn phasing on all four legs. For the purposes of this analysis, Meadows Parkway is considered the east/west roadway. The northbound Castleton Drive approach provides dual left turn lanes, one through lane, and one right turn lane while the southbound Factory Shops Boulevard approach provides three left turn lanes, one through lane, and a right turn lane. The eastbound Meadows Parkway approach provides dual left turn lanes, three through lanes, and one right turn lane while the westbound approach provides dual left turn lanes, three through lanes (with the outside lane being a shared through/right turn lane) plus one free right turn lane. It should be noted that the westbound approach provides a shared through/right turn lane plus a free right turn lane. An aerial photo of the existing intersection configuration is below (north is up - typical).



Meadows Parkway and Castleton Drive/Factory Shops Boulevard (#1)

The unsignalized 'T'-intersection of Castleton Road/Castleton Way and Castleton Court (#2) operates with stop control on the northbound and westbound approaches. The northbound approach provides one shared lane for left and right turn movements. The eastbound approach provides one through lane and one right turn lane. The westbound approach provides one shared lane for through and left turn movements. An aerial photo of the existing intersection configuration is below.



Castleton Road/Castleton Way and Castleton Court (#2)

The unsignalized intersection of Justice Way and Castleton Court (#3) operates with stop control on all four approaches. The northbound and southbound Castleton Court approaches provide one left turn lane and a shared through/right turn lane. The eastbound Justice Way approach provides one left turn lane and a shared through/right turn lane. The westbound approach provides one shared lane for all movements. An aerial photo of the existing intersection configuration is below.



Justice Way and Castleton Court (#3)

The unsignalized 'T'-intersection of Santa Fe Drive and Castleton Court (#4) operates with stop control on the southbound approach. The southbound Castleton Court approach provides one left turn lane and one right turn lane. The eastbound Santa Fe Drive approach provides one left turn lane and two through lanes while the westbound approach provides two through lanes with the outside lane being a shared through/right turn lane. This is a High T intersection with the southbound to eastbound left turn movement being protected from eastbound through traffic with a left turn acceleration lane. An aerial photo of the existing intersection configuration is below.



Santa Fe Drive and Castleton Court (#4)

The unsignalized intersection of Castleton Drive and Genoa Way/Castleton Road (#7) operates with stop control on the northeastbound Castleton Road and southwestbound Genoa Way approach. The northeastbound Castleton Road approach provides a shared left/through lane and a right turn lane while the southwestbound Genoa Way approach provides a left turn lane and a shared through/right turn lane. The southeastbound Castleton Drive approach provides a left turn lane and two through lanes with the outside through being a shared right. The northwestbound Castleton Drive approach provides a left turn lane and a shared through/right turn lane. For the purpose of this study, Castleton Drive is oriented as the east/west roadway east of the Meadows Parkway and Castleton Drive/Factory Shops Boulevard intersection. An aerial photo of the existing intersection configuration is below.



Castleton Drive and Genoa Way (#7)

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

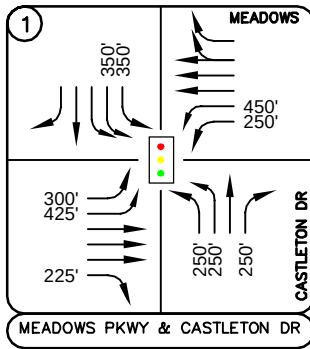
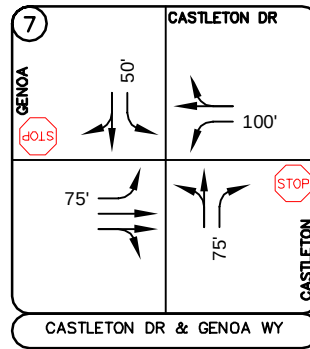
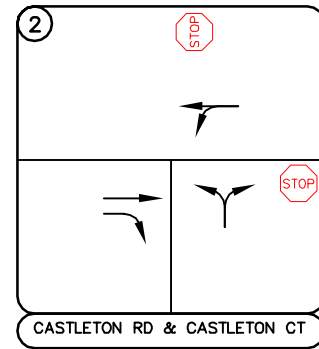
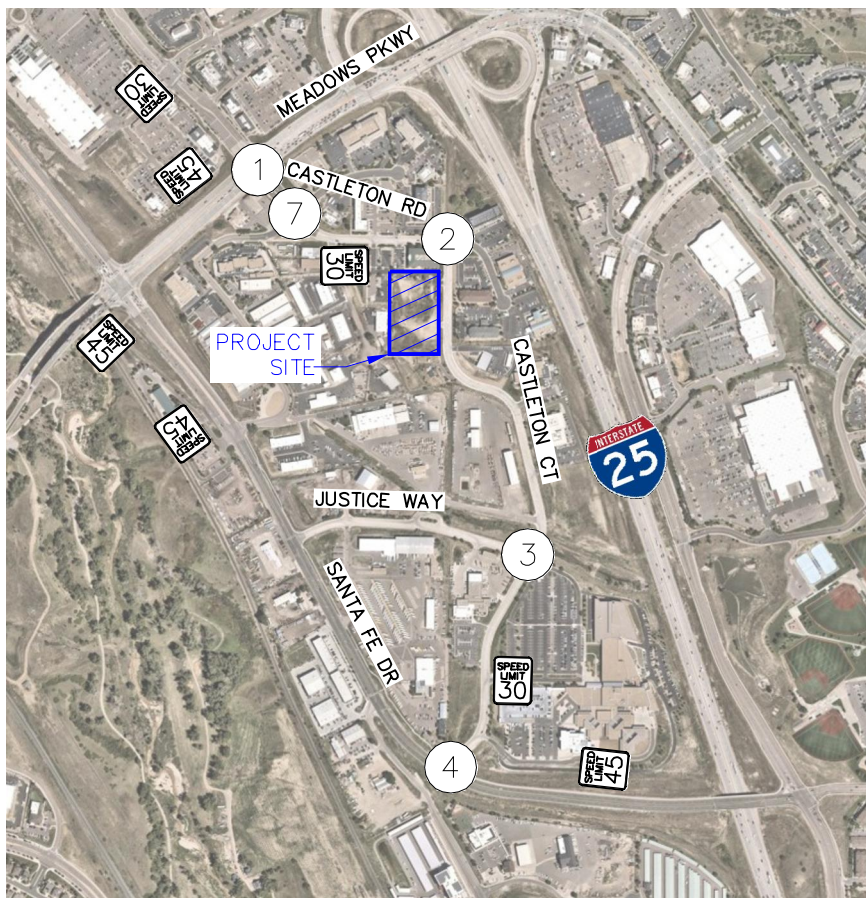
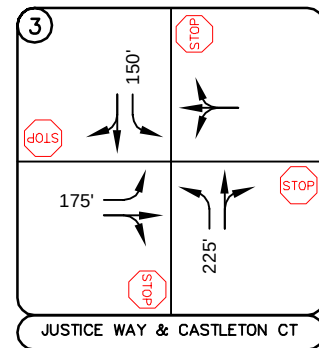
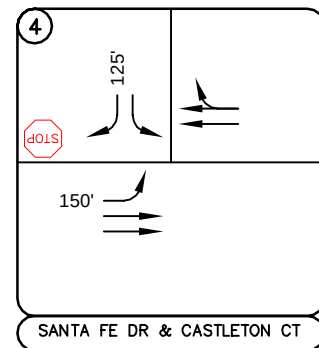
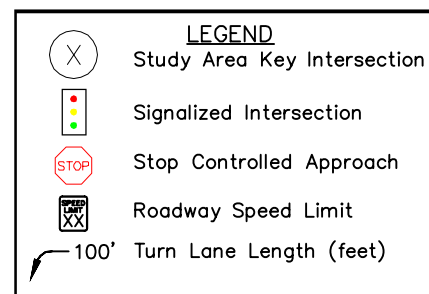


FIGURE 2
 CASTLETON HEIGHTS
 CASTLE ROCK, CO
 EXISTING GEOMETRY AND CONTROL



3.3 Existing Traffic Volumes

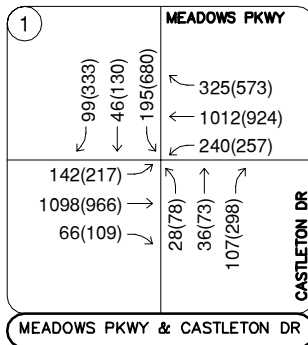
Existing turning movement counts were collected at the Genoa Way and Castleton Drive intersection on Wednesday April 2, 2025 during the weekday morning and afternoon peak hours. Turning movement counts were conducted at the remaining study area key intersections on Thursday, November 21, 2024, during the weekday morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on the count dates. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix B**.

Of note, traffic volumes for the Genoa Way and Castleton Drive intersection were also collected in December 2021 as provided in the Castleton Drive Intersection Control Evaluation Memorandum. The more recent count data collected at the Genoa Way and Castleton Drive intersection in 2025 had slightly higher traffic volumes compared to the volumes in the Castleton Drive Intersection Control Evaluation Memorandum; therefore, the most recent and higher traffic volumes were utilized in this study. The existing traffic volumes between the Meadows Parkway/Castleton Drive and Genoa Way/Castleton Drive intersections do not balance because the data was collected on different dates. As such, the higher volumes extending from the Meadows Parkway/Castleton Drive intersection were balanced through the intersection of Genoa Way/Castleton Drive to provide a conservative analysis.

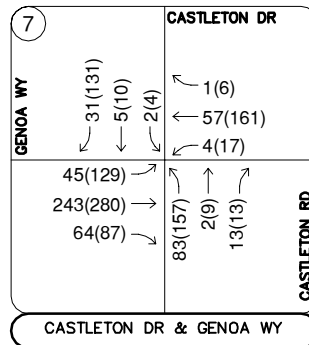
3.4 Unspecified Development Traffic Growth

According to traffic projections from the Denver Regional Council of Governments (DRCOG) traffic model, the area surrounding the site is expected to have an average 30-year growth factor of 1.43. This growth factor equates to an annual growth rate of 1.19 percent. Future traffic volume projections and growth rate calculations are provided in **Appendix C**. This annual growth rate was used to estimate short-term 2028 and long-term 2045 traffic volume projections at the key intersections. The calculated background traffic volumes for 2028 and 2045 are shown in **Figure 4** and **Figure 5**, respectively.

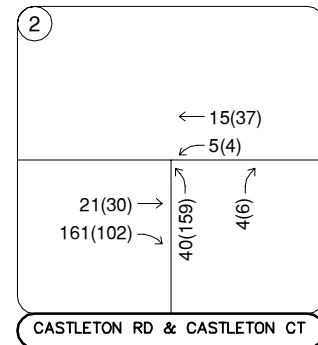
Wed, April 2, 2025*
7:45 to 8:45AM (4:45 to 5:5PM)



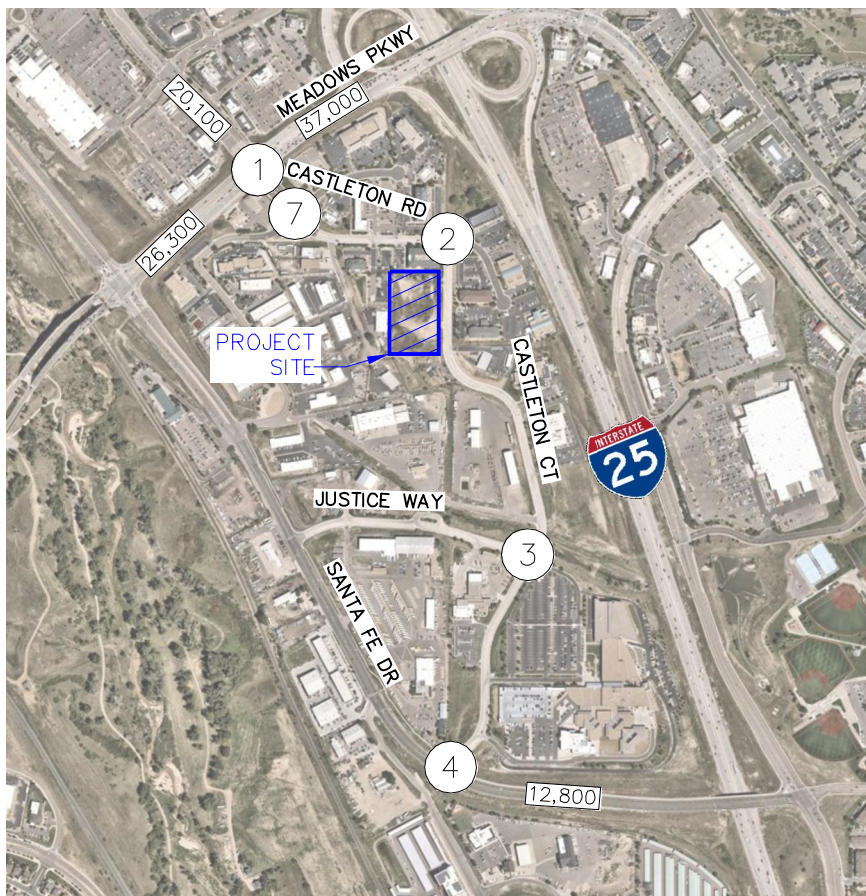
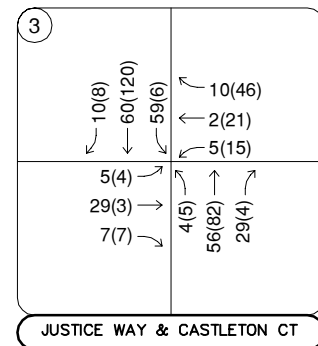
Thurs, November 21, 2024
7:15 to 8:15AM (4:00 to 5:00PM)



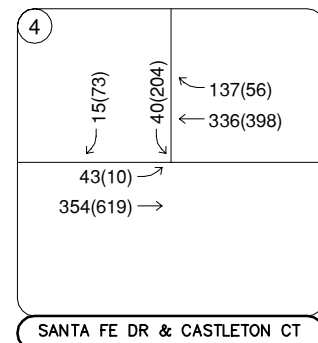
*THROUGH VOLUMES WERE
BALANCED BETWEEN
COUNT DATES



Thurs, November 21, 2024
7:45 to 8:45AM (4:15 to 5:15PM)



Thurs, November 21, 2024
7:45 to 8:45AM (4:15 to 5:15PM)

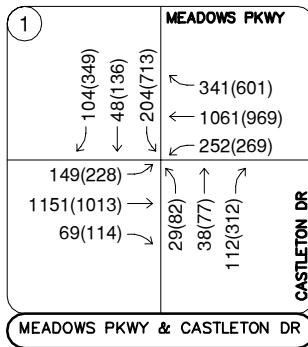
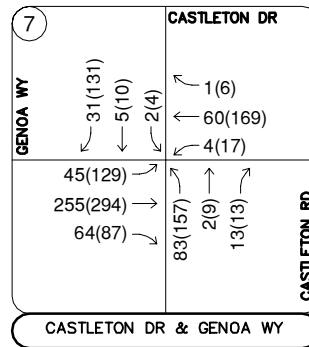
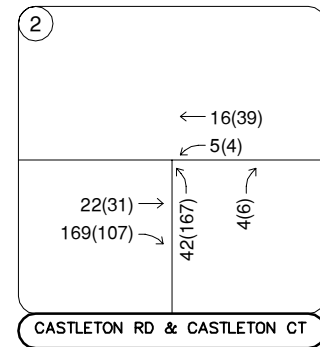
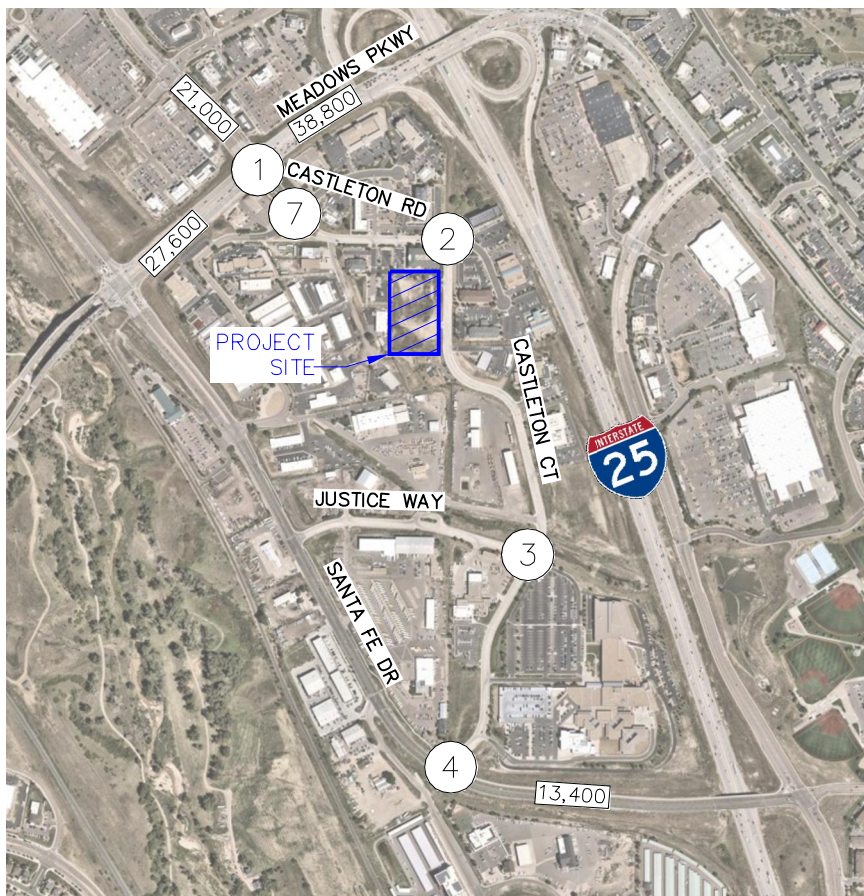
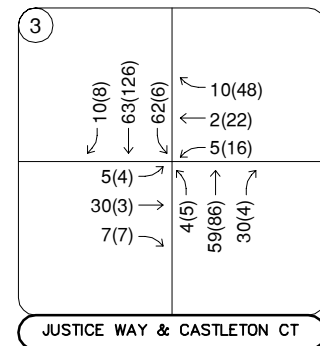
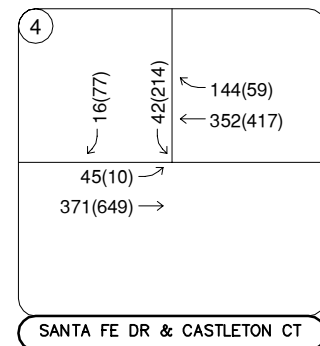


Thurs, November 21, 2024
7:45 to 8:45AM (4:15 to 5:15PM)

LEGEND

- (X) Study Area Key Intersection
- xxx(xxx) Weekday AM(PM)
Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume

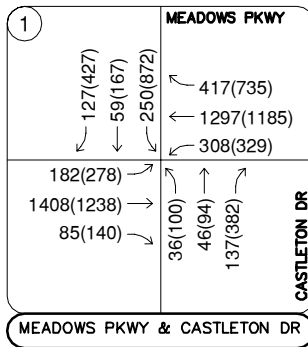
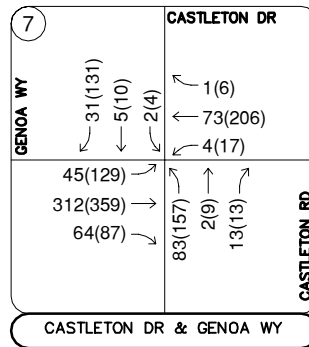
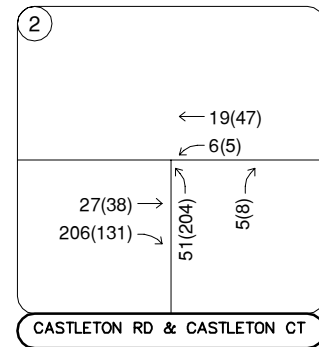
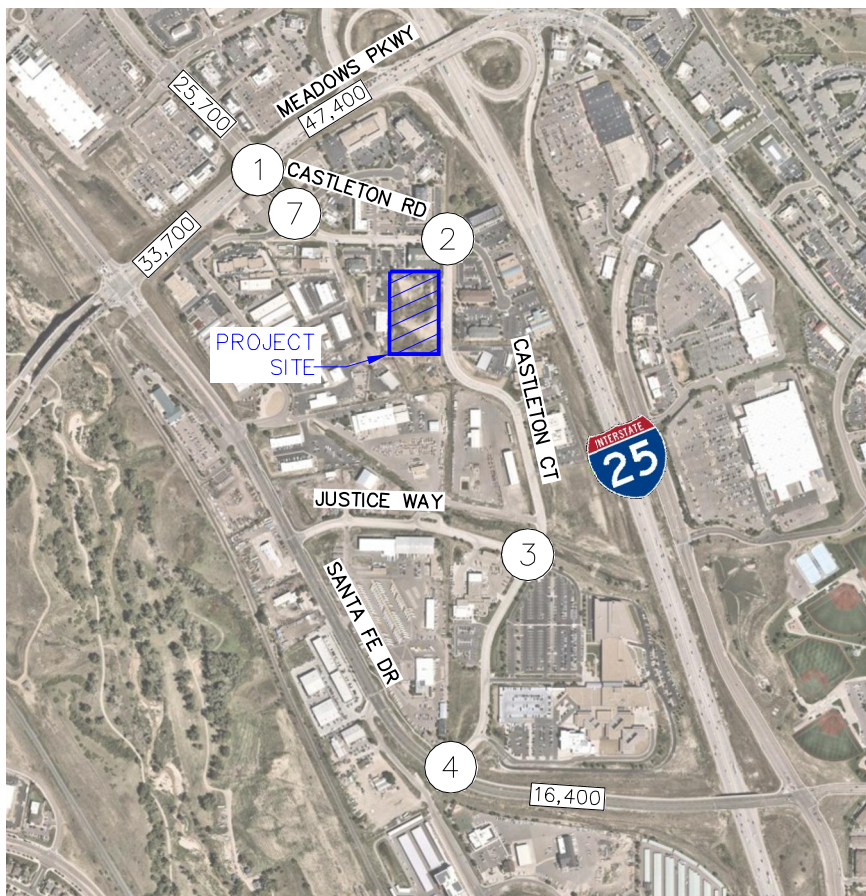
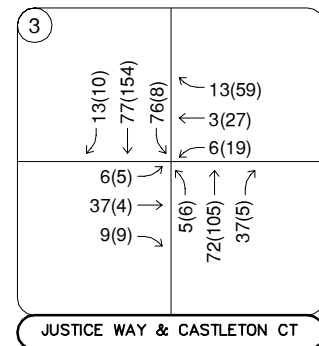
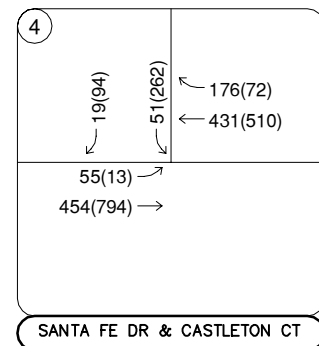
FIGURE 3
CASTLETON HEIGHTS
CASTLE ROCK, CO
2024 EXISTING TRAFFIC VOLUMES



LEGEND

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

FIGURE 4
 CASTLETON HEIGHTS
 CASTLE ROCK, CO
 2028 BACKGROUND TRAFFIC VOLUMES



LEGEND

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

FIGURE 5
 CASTLETON HEIGHTS
 CASTLE ROCK, CO
 2045 BACKGROUND TRAFFIC VOLUMES

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates that apply to Affordable Housing (ITE Land Use Code 223) for traffic associated with the development.

Castleton Heights is expected to generate approximately 386 weekday daily trips, with 29 of these trips occurring during the morning peak hour and 37 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User's Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for the site. The trip generation worksheets are included in **Appendix D**.

Table 1 – Castleton Heights Traffic Generation

Land Use and Size	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Affordable Housing (ITE 223) – 80 Dwelling Units	386	8	21	29	22	15	37

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and

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

departs the site back to the original source. The project trip distribution for the proposed development is illustrated in **Figure 6**.

4.3 Traffic Assignment

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

4.4 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2028 buildout horizon and long-term 2045 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2028 and 2045 horizon years in **Figures 8** and **9**, respectively.

1	MEADOWS PKWY	7	CASTLETON DR	5		2
10% ←	55% ↗	← 75%		← [70%]		
10% ↘	[10%] ↗ [10%] ↗ [55%] ↗	[75%] →		70% → 5% ↘		70% ↘ [70%] ↗
MEADOWS PKWY & CASTLETON DR		CASTLETON DR & GENOA WAY		CASTLETON RD ACCESS		CASTLETON RD & CASTLETON CT



6		
70% ↘		
[70%] ↗ [25%] ↘		25% ↗
CASTLETON CT ACCESS		
3		
↓ [25%]		
		25% →
JUSTICE WAY & CASTLETON CT		
4		
↓ [25%]		25% ↗
SANTA FE DR & CASTLETON CT		

FIGURE 6
 CASTLETON HEIGHTS
 CASTLE ROCK, CO
 PROJECT TRIP DISTRIBUTION

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

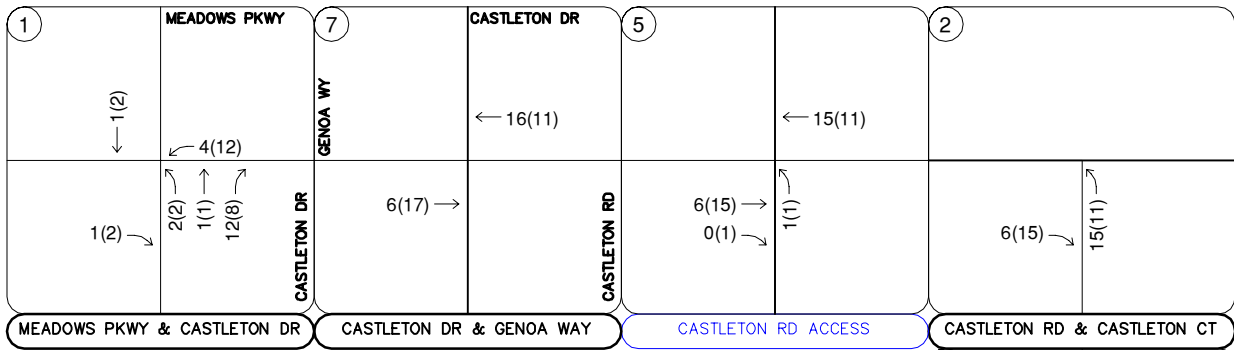
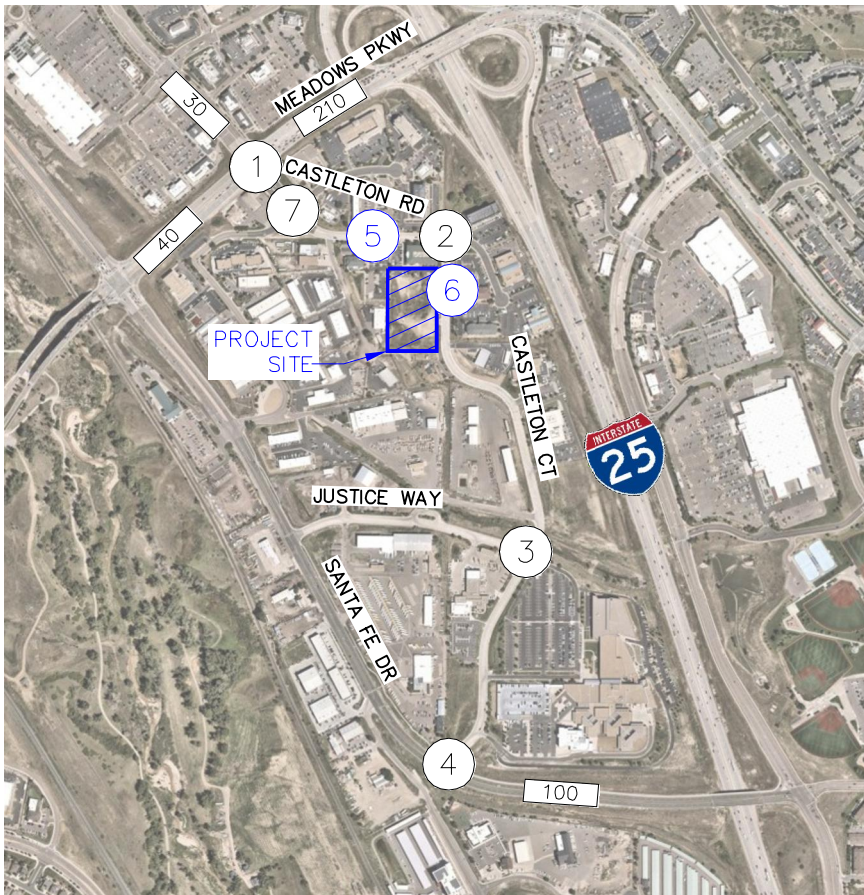
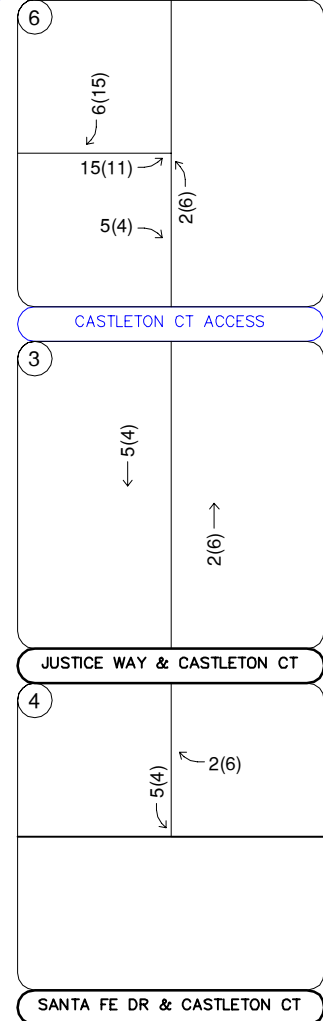


FIGURE 7
CASTLETON HEIGHTS
CASTLE ROCK, CO
PROJECT TRAFFIC ASSIGNMENT

LEGEND

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

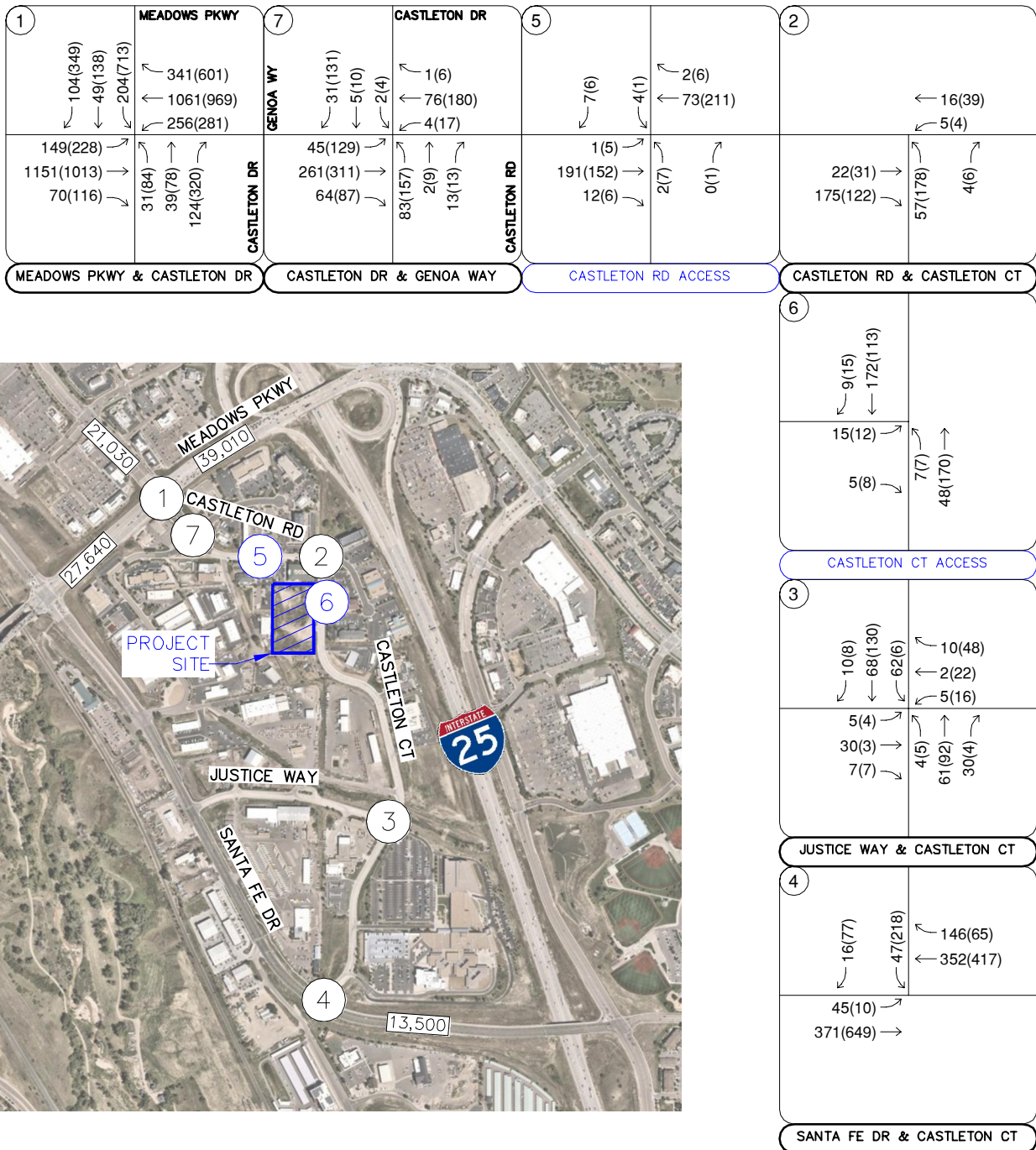


FIGURE 8
CASTLETON HEIGHTS
CASTLE ROCK, CO
2028 TOTAL TRAFFIC VOLUMES

LEGEND

⊗ Study Area Key Intersection

⊗ Project Access Intersection

XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume



5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2028 and 2045 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

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

Table 2 – Level of Service Definitions

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

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

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

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

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the existing, 2028, and 2045 horizon analysis years. The existing heavy vehicle percentages obtained from the turning movement counts were also used in each horizon year. The signalized intersection analysis utilizes the observed cycle lengths with optimized phasing and timing. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

Meadows Parkway & Castleton Drive (#1)

The signalized intersection of Meadows Parkway and Castleton Drive/Factory Shops Boulevard (#1) operates with protected-only left turn phasing on all four approaches. The intersection operates acceptably at LOS C during the morning peak hour and at LOS D during the afternoon peak hour under existing conditions. With project traffic, the intersection is anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – Meadows Parkway & Castleton Drive LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	23.4	C	40.0	D
2028 Background	23.7	C	41.2	D
2028 Background Plus Project	23.9	C	41.5	D
2045 Background	25.5	C	48.6	D
2045 Background Plus Project	25.7	C	48.9	D

Castleton Road/Castleton Way & Castleton Court (#2)

The T-intersection of Castleton Road/Castleton Way and Castleton Court (#2) currently operates with stop control on the northbound and westbound approaches. This stop control configuration does not conform to the Highway Capacity Manual (HCM) standards and cannot be evaluated in its current state. Therefore, this intersection was analyzed under two scenarios: all-way stop control (AWSC) and with stop control only on the northbound Castleton Court approach (removal of stop control on the westbound Castleton Way approach) in order to provide analysis results. The intersection movements currently operate acceptably at LOS B or better in both the AWSC and northbound stop control setup. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon under both stop control scenarios. Therefore, no additional lane improvements are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis; however, the Town of Castle Rock has the discretion to modify the intersection stop sign control configuration to meet HCM standards and to minimize driver confusion. **Table 4** provides the results of the LOS analysis conducted at this intersection.

Table 4 – Castleton Road/Castleton Way & Castleton Court LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing (AWSC)	7.8	A	8.5	A
2024 Existing (NB Stop Control)				
Northbound Approach	9.0	A	10.0	B
Westbound Left	7.7	A	7.5	A
2028 Background (AWSC)	7.8	A	8.6	A
2028 Background (NB Stop Control)				
Northbound Approach	9.0	A	10.1	B
Westbound Left	7.7	A	7.6	A
2028 Background Plus Project (AWSC)	8.0	A	8.7	A
2028 Background Plus Project (NB Stop)				
Northbound Approach	9.1	A	10.2	B
Westbound Left	7.7	A	7.6	A
2045 Background (AWSC)	8.1	A	9.1	A
2045 Background (NB Stop Control)				
Northbound Approach	9.2	A	10.6	B
Westbound Left	7.8	A	7.6	A
2045 Background Plus Project (AWSC)	8.3	A	9.4	A
2045 Background Plus Project (NB Stop)				
Northbound Approach	9.3	A	10.8	B
Westbound Left	7.8	A	7.7	A

Justice Way & Castleton Court (#3)

The intersection of Justice Way and Castleton Court (#3) operates with stop control on all four approaches. The intersection operates acceptably at LOS A during both peak hours under existing conditions. With project traffic, the intersection is anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 5** provides the results of the LOS analysis conducted at this intersection.

Table 5 – Justice Way & Castleton Court LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing	8.1	A	8.7	A
2028 Background	8.2	A	8.8	A
2028 Background Plus Project	8.2	A	8.9	A
2045 Background	8.5	A	9.3	A
2045 Background Plus Project	8.5	A	9.4	A

Santa Fe Drive & Castleton Court (#4)

The intersection of Santa Fe Drive and Castleton Court (#4) operates with stop control on the southbound Castleton Court approach. This is a High-T intersection with the southbound to eastbound left turn movement being protected from eastbound through traffic with a left turn acceleration lane. The intersection movements operate acceptably at LOS B or better during the morning peak hour and at LOS C or better during the afternoon peak hour under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. However, it is understood that the existing Liggett Road alignment to the south of this intersection may be realigned to become a new south leg at this intersection in the future. As such, a 2045 long-term analysis has assessed this intersection as both a four-leg roundabout and a four-leg signalized intersection, with details regarding this condition provided later in Section 5.5 **Table 6** provides the results of the LOS analysis conducted at this intersection.

Table 6 – Santa Fe Drive & Castleton Court LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Eastbound Left	8.6	A	8.5	A
Southbound Left	12.2	B	16.5	C
Southbound Right	10.0	B	10.5	B
2028 Background				
Eastbound Left	8.7	A	8.6	A
Southbound Left	12.5	B	17.6	C
Southbound Right	10.1	B	10.7	B
2028 Background Plus Project				
Eastbound Left	8.7	A	8.6	A
Southbound Left	12.6	B	17.9	C
Southbound Right	10.1	B	10.7	B
2045 Background				
Eastbound Left	9.2	A	9.0	A
Southbound Left	14.0	B	26.5	D
Southbound Right	10.7	B	11.5	B
2045 Background Plus Project				
Eastbound Left	9.2	A	9.0	A
Southbound Left	14.1	B	27.3	D
Southbound Right	10.7	B	11.5	B

Castleton Drive and Genoa Way (#7)

The unsignalized intersection of Castleton Drive and Genoa Way (#7) operates with stop control on the northeastbound Castleton Road and southwestbound Genoa Way approach. The intersection movements operate acceptably with the exception of the northeastbound shared left/through movement. This movement is anticipated to continue operating unacceptably with or without the project traffic through the long-term horizon. Of note, this intersection will likely convert from allowing full movements to being restricted to allowing three-quarter movements only as referenced previously from Castleton Drive Intersection Control Evaluation Memorandum completed in February 2022 and finalized in March 2023 with an improvement recommendation. As such, an alternative analysis has been provided later in Section 5.5 with this intersection being alternatively evaluated with three-quarter turning movements. **Table 7** provides the results of the LOS analysis conducted at this intersection.

Table 7 – Castleton Drive & Genoa Way LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2024 Existing				
Northbound Left/Through	15.0	B	99.4	F
Northbound Right	9.3	A	9.5	A
Eastbound Left	7.4	A	7.9	A
Westbound Left	8.0	A	8.2	A
Southbound Left	11.0	B	16.9	C
Southbound Through/Right	9.4	A	11.2	B
2028 Background				
Northbound Left/Through	15.3	C	112.2	F
Northbound Right	9.4	A	9.6	A
Eastbound Left	7.4	A	7.9	A
Westbound Left	8.0	A	8.2	A
Southbound Left	11.1	B	17.3	C
Southbound Through/Right	9.4	A	11.3	B
2028 Background Plus Project				
Northbound Left/Through	15.9	C	131.3	F
Northbound Right	9.4	A	9.6	A
Eastbound Left	7.5	A	7.9	A
Westbound Left	8.0	A	8.3	A
Southbound Left	11.3	B	17.7	C
Southbound Through/Right	9.6	A	11.5	B
2045 Background				
Northbound Left/Through	17.1	C	194.1	F
Northbound Right	9.6	A	9.8	A
Eastbound Left	7.5	A	8.0	A
Westbound Left	8.1	A	8.4	A
Southbound Left	11.5	B	19.0	C
Southbound Through/Right	9.6	A	12.0	B

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2045 Background Plus Project				
Northbound Left/Through	17.7	C	223.1	F
Northbound Right	9.6	A	9.9	A
Eastbound Left	7.5	A	8.0	A
Westbound Left	8.2	A	8.5	A
Southbound Left	11.8	B	19.5	C
Southbound Through/Right	9.8	A	12.2	B

Project Accesses

With completion of Castleton Heights, the existing accesses along Castleton Road and Castleton Court will be used to serve the development. The existing driveways proposed to be shared accesses with the project are currently uncontrolled; therefore, R1-1 “STOP” signs could be installed on the exiting approaches of both shared access locations to enforce stop control on the minor approaches. Otherwise, these driveway approaches are assumed to operate with stop control on the minor private access approaches. **Table 8** provides the results of the level of service for the project accesses. As shown in the table, the project access intersections are anticipated to have all movements operating with acceptable LOS B or better during the peak hours in both the buildout year 2028 and the 2045 long-term horizons.

Table 8 – Project Accesses Level of Service Results

Intersection	2028 Total				2045 Total			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Castleton Road Access								
Northbound Approach	10.3	B	11.1	B	10.8	B	12.0	B
Castleton Court Access								
Northbound Left	7.7	A	7.5	A	7.8	A	7.6	A
Eastbound Approach	9.7	A	9.7	A	9.9	B	10.0	B

5.3 CDOT Access Permit

The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on all legs of Castleton Drive at Meadows Parkway is not anticipated to increase existing access traffic volumes by more than 20 percent, with the maximum expected increase at 4.2 percent during the

morning peak hour on the south leg (22 project volumes / 523 existing volumes). Therefore, a CDOT access permit is not anticipated to be required in association with this project.

5.4 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 9** with calculations provided within the level of service operational sheets of **Appendix E** for unsignalized intersections and **Appendix F** for signalized intersections. Additionally, as requested by the Town, a comparison of the background and total reported queues are provided for the Meadows Parkway & Castleton Drive and Castleton Drive and Genoa Way intersections in Table 9.

Table 9 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length (feet)	2028 Calculated Queue		2028 Recommended Length	2045 Calculated Queue		2045 Recommended Length
Meadows Pkwy & Castleton Dr (#1)							
Eastbound Left	425'	127'	127'	425'	153'	153'	425'
Eastbound Right	225'	33'	33'	225'	36'	37'	225'
Westbound Left	450'	144'	147'	450'	171'	178'	450'
Northbound Left	250'	60'	61'	250'	70'	71'	250'
Northbound Right	250'	242'	250'	250'	326'	337'	250'
Southbound Left	350'	232'	232'	350'	287'	287'	350'
Justice Way & Castleton Ct (#3)							
Eastbound Left	175'	25'		175'	25'		175'
Northbound Left	75'	25'		75'	25'		75'
Southbound Left	225'	25'		225'	25'		225'
Santa Fe Dr & Castleton Ct (#4)							
Eastbound Left	150'	25'		150'	25'		150'
Southbound Left	C	75'		C	125'		C
Southbound Right	125'	25'		125'	25'		125'
Castleton Ct Access (#6)							
Northbound Left	TWLTL	25'		TWLTL	25'		TWLTL
Castleton Dr & Genoa Wy (#7)							
Eastbound Left	75'	25'	25'	75'	25'	25'	75'
Westbound Left	100'	25'	25'	100'	25'	25'	100'

TWLTL = Two-Way Left-Turn Lane; C = Continuous Lane; **Red** Text = Turn Lane Constraint; **XX** = Background Queue

All vehicle queues are anticipated to remain within the existing or recommended turn lane lengths through 2045 except the northbound right turn queue at the intersection of Meadows Parkway and Castleton Drive. The northbound right turn lane cannot be extended due to the constraint with the intersection of Genoa Way and Castleton Drive which is 250 feet south of Meadows Parkway

and Castleton Drive. As shown, the project traffic has negligible impacts to the spillover of vehicle queues in the northbound right turn lane at the Meadows Parkway and Castleton Drive intersection.

5.5 Alternative Analysis

The intersection of Castleton Drive and Genoa Way has been identified as an intersection of concern by the Town and was further studied in the Castleton Drive Intersection Control Evaluation (ICE) Memorandum in February 2022. Further, the Town reviewed the findings in the ICE assessment and determined the greatest benefit to cost is to convert the full movement intersection to three-quarters by restricting the lefts/throughs on the minor approaches. Therefore, the intersection has additionally been analyzed as a three-quarter intersection for both the Genoa Way and Castleton Road approaches. The Meadows Parkway and Castleton Drive intersection was included in the alternative analysis since this intersection will be impacted by converting the Castleton Drive/Genoa Way intersection. The remaining study area key intersections to the east will be nominally impacted and therefore were not included in the diversion.

Additionally, the Santa Fe Drive and Castleton Court intersection may be realigned to provide a four-leg intersection in the long-term horizon. The Town has requested this intersection be studied under both roundabout and signal control with the south leg of Liggett Road. The traffic volumes for the south leg were taken from the Pine Canyon Traffic Impact Study prepared by Kimley-Horn in November 2021. The alternative analysis for both scenarios is provided in **Table 10**. Based on these results, the Castleton Drive and Genoa Way intersection is recommended to be restricted to right-in/right-out only movements by the 2028 short-term horizon. The four-leg roundabout or signal-controlled intersection at Santa Fe Drive and Castleton Court with Liggett Road realignment is anticipated to be completed after the 2028 horizon but prior to 2045.

Table 10 – Alternative Analysis Level of Service Results

Intersection	2045 Total			
	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Castleton Dr & Genoa Way Re-Route				
Castleton Drive & Genoa Way				
Northbound Right	9.6	A	10.0	A
Eastbound Left	7.5	A	8.0	A
Westbound Left	8.2	A	8.5	A
Southbound Right	8.9	A	10.5	B
Meadows Pkwy & Castleton Drive	24.4	C	39.5	D
Santa Fe Drive & Castleton Court/Liggett Road Realignment				
Roundabout	7.7	A	39.6	E
Signalized	18.3	B	31.6	C

As shown in the table, the two intersections operate acceptably in 2045 if the Castleton Drive and Genoa Way intersection converts to three-quarter movements on the minor approaches. Likewise, the Santa Fe Drive and Castleton Court intersection is expected to operate at LOS A during the morning peak hour and LOS E during the afternoon peak hour in 2045 under roundabout control. The roundabout configuration is nearing capacity if 2045 volumes are realized. However, under signal control, this intersection would be expected to operate at LOS C or better through the 2045 horizon. If signalized, the eastbound and westbound left turn lanes would be expected to accommodate vehicle queues within a 150-foot left turn lane in each direction, while the northbound left would need to provide a 325-foot left turn lane and the southbound left would need to provide a 225-foot left turn lane.

The applicable background studies, level of service, and figures illustrating the total traffic volumes and lane geometry are provided in **Appendix G** for the alternative analysis.

5.6 Improvement Summary

Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 10** for the 2028 short-term horizon and **Figure 11** for the 2045 long-term horizon.

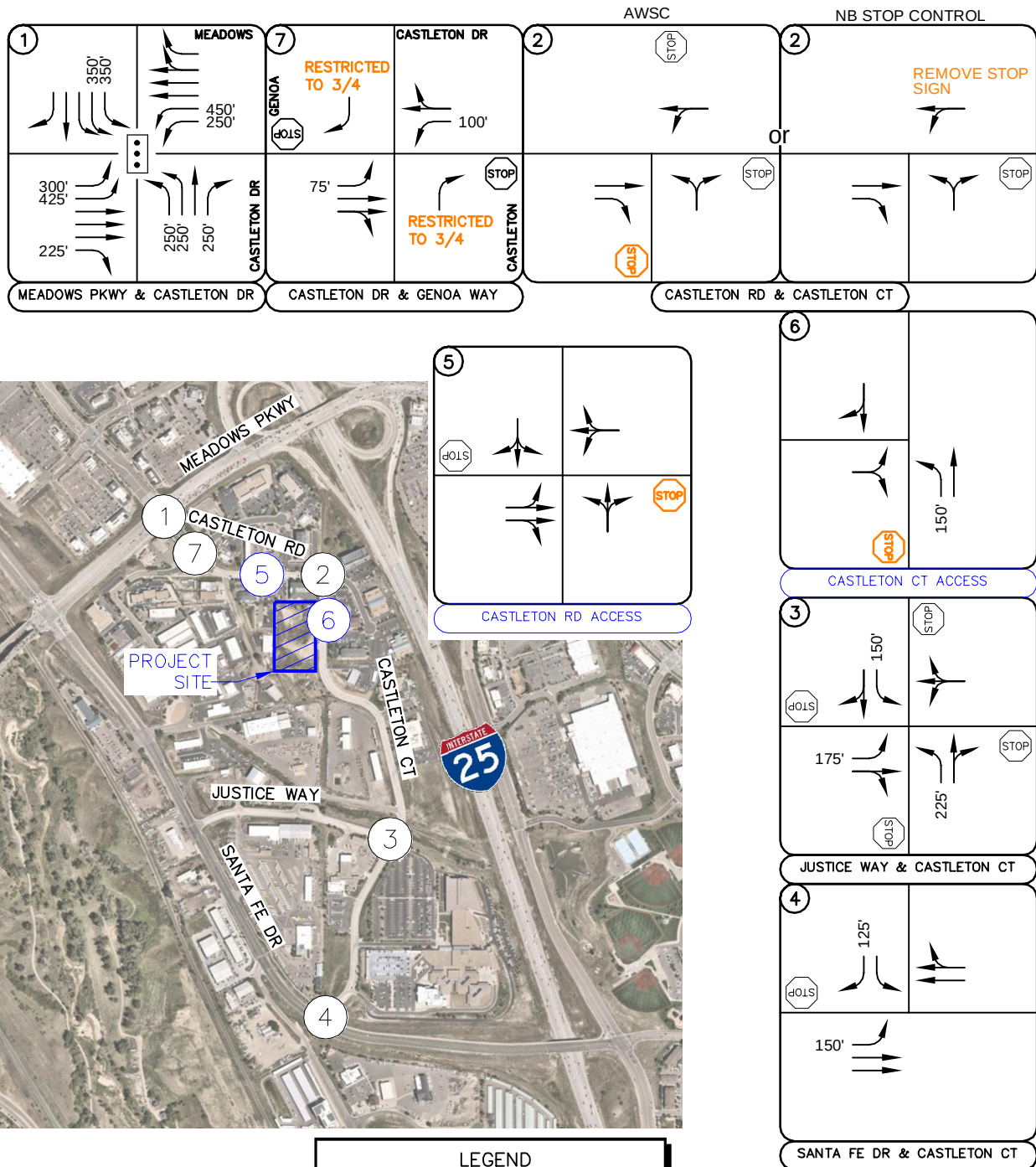


FIGURE 10
CASTLETON HEIGHTS
CASTLE ROCK, CO
2028 RECOMMENDED
GEOMETRY AND CONTROL

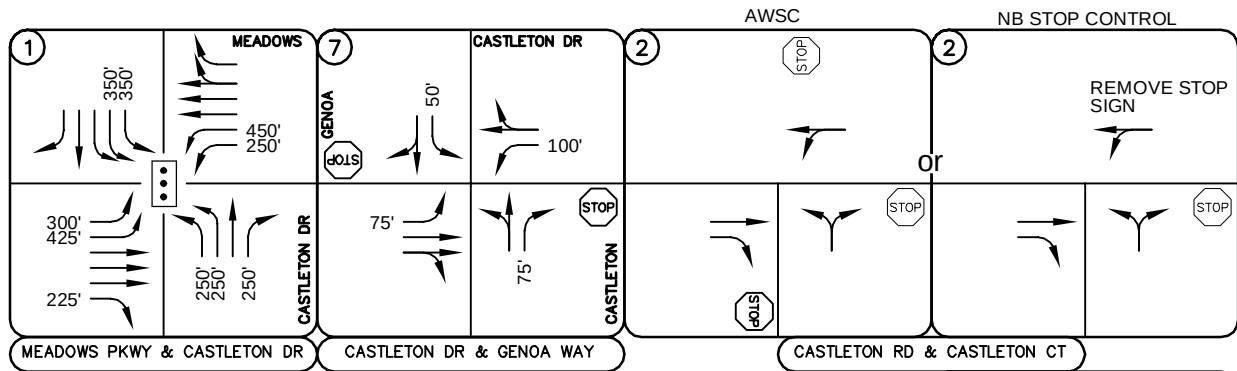
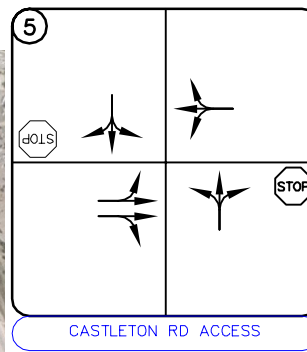
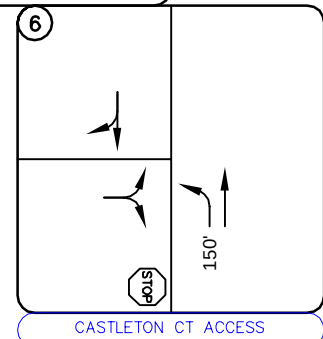
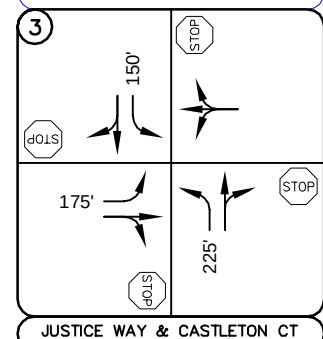
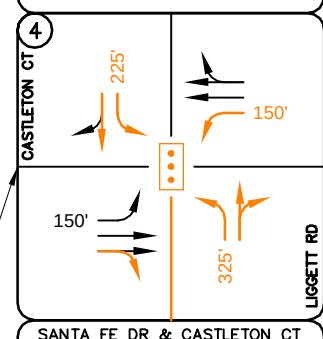
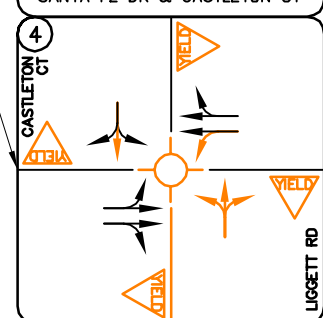
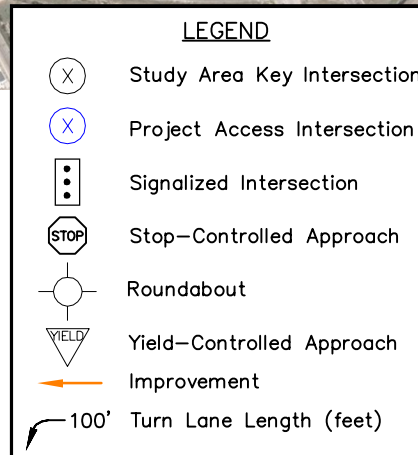


FIGURE 11
CASTLETON HEIGHTS
CASTLE ROCK, CO
2045 RECOMMENDED
GEOMETRY AND CONTROL

6.0 CONCLUSIONS AND RECOMMENDATIONS

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

- With completion of Castleton Heights, the existing accesses along Castleton Road and Castleton Court will be used to serve the development. The existing driveways proposed to be shared accesses with the project are currently uncontrolled; therefore, R1-1 “STOP” signs could be installed on the exiting approaches of both shared access locations.
- The T-intersection of Castleton Road/Castleton Way and Castleton Court (#2) currently operates with stop control on the northbound and westbound approaches. This stop control configuration does not conform to the Highway Capacity Manual (HCM) standards and cannot be evaluated in its current state. Therefore, this intersection was analyzed under two scenarios: all-way stop control (AWSC) and with stop control only on the northbound Castleton Court approach (removal of stop control on the westbound Castleton Way approach) in order to provide analysis results. With project traffic, all movements are anticipated to continue operating at an acceptable level of service throughout the 2045 horizon under both stop control scenarios. Therefore, no additional lane improvements are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis; however, the Town of Castle Rock has the discretion to modify the intersection stop sign control configuration to meet HCM standards and to minimize driver confusion.
- By 2045, the Liggett Road and Santa Fe Drive T-intersection is expected to be relocated to align with the Castleton Court and Santa Fe Drive T-intersection as one combined four-leg intersection. It is anticipated that new four-legged intersection will operate under either roundabout or signal control.
- The intersection of Castleton Drive and Genoa Way has been identified as an intersection of concern by the Town of Castle Rock and was further studied in the Castleton Drive Intersection Control Evaluation (ICE) Memorandum in February 2022. Further, the Town of



Castle Rock reviewed the findings in the ICE assessment and determined the greatest benefit to cost is to convert the full movement intersection to three-quarter movement by restricting the left/through movements on the minor approaches. Therefore, the intersection has additionally been analyzed as a three-quarter movement intersection for both the Genoa Way and Castleton Road minor approaches in the 2045 planning level horizon. However, due to the existing intersection delay and safety concerns, it is recommended this restriction be put in place prior to the 2028 short-term horizon. It should be noted that the project has negligible impacts to the vehicle delays and vehicle queues into this intersection.

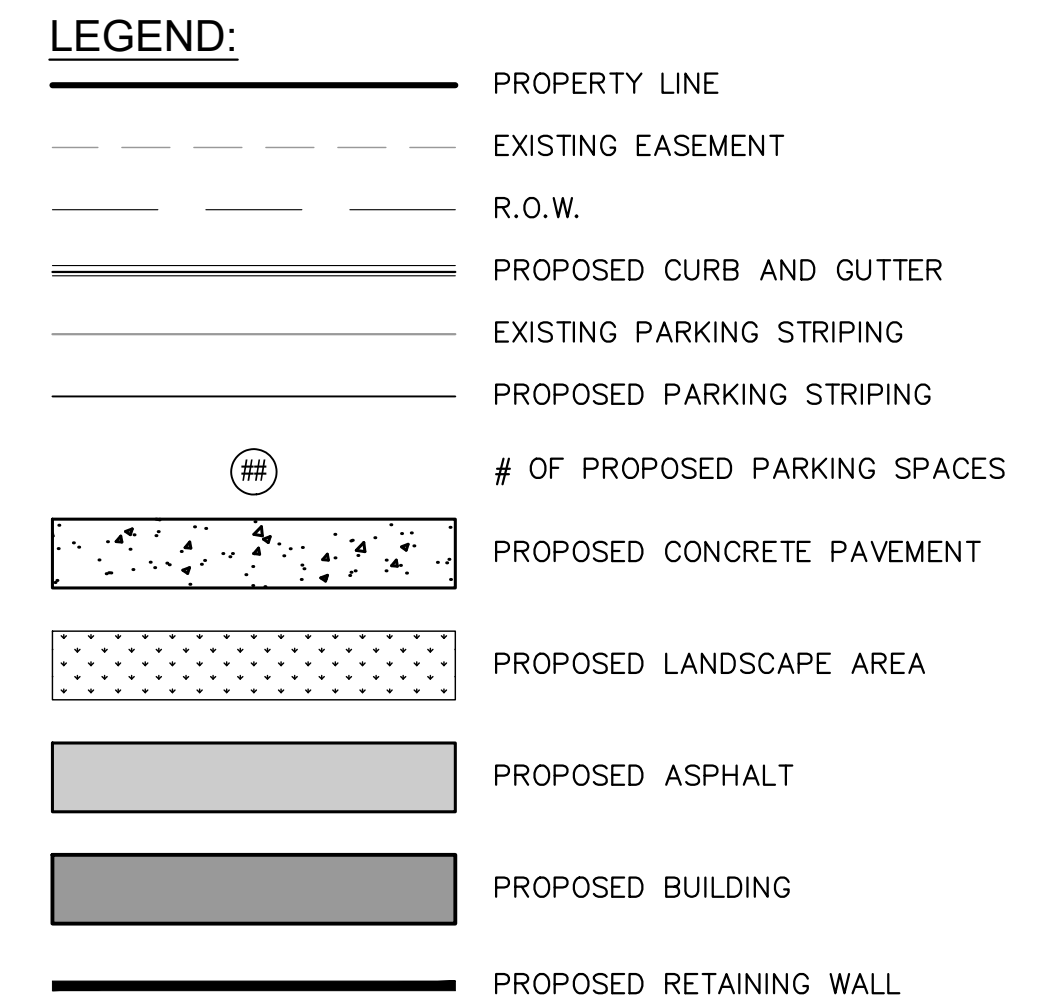
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the Town of Castle Rock and the Manual on Uniform Traffic Control Devices (MUTCD) – 11th Edition, 2023.

APPENDICES

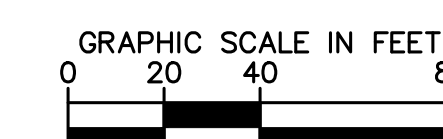
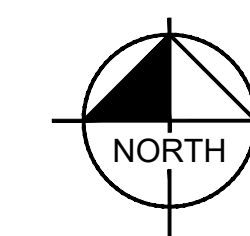
APPENDIX A

Conceptual Site Plan

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TWIG
DEVELOPMENT, LLC



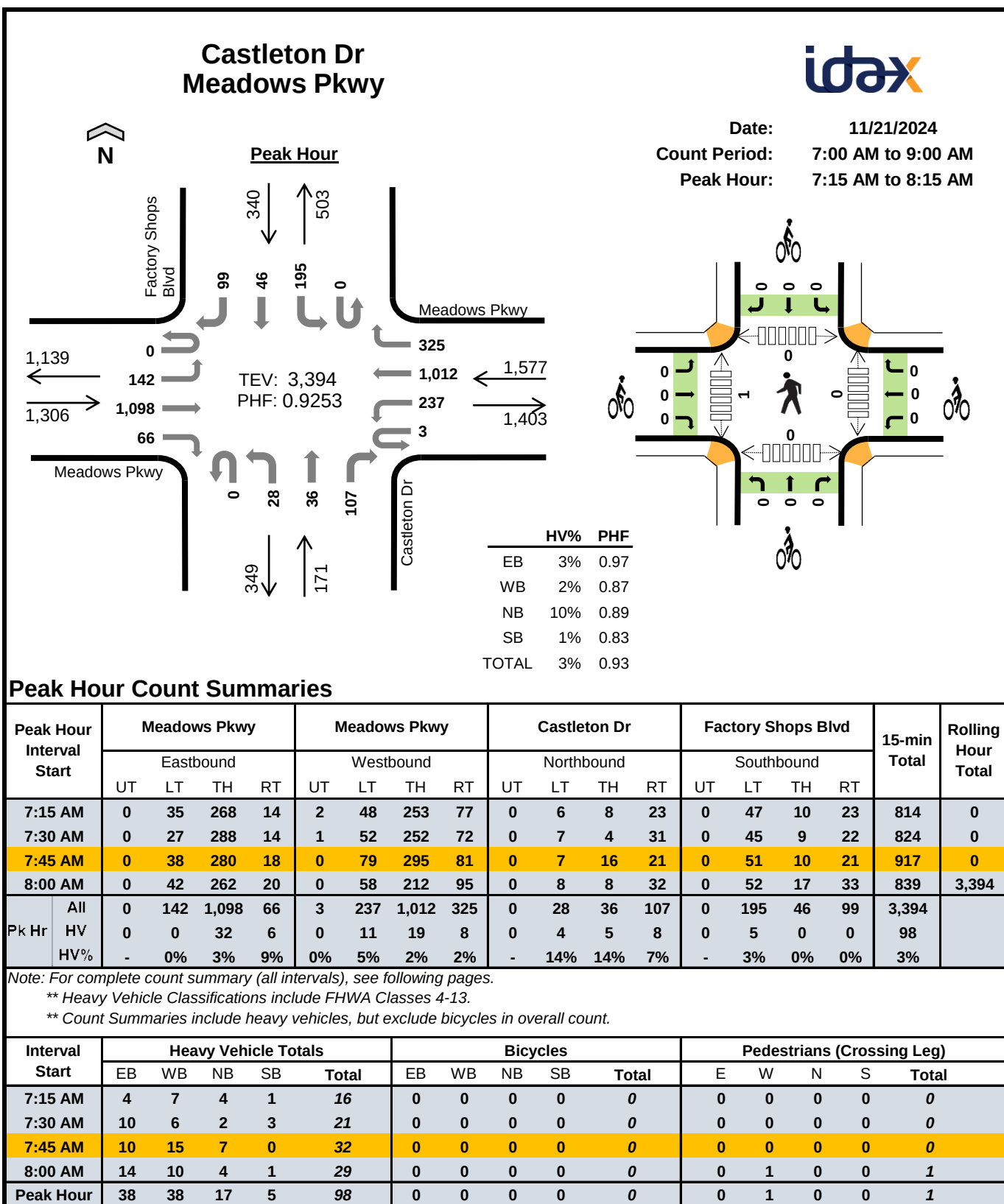
OWNER | TWG Development, LLC
1301 E. Washington Street, Suite 100 Indianapolis, IN 46202

CONSULTANT | STUDIO | Architect Designer
3575 Ringsby Court 300A - Denver, CO - 80216

SITE PLAN
2 OF XX

APPENDIX B

Intersection Count Sheets



Count Summaries - All Vehicles

Interval Start		Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	27	244	12	2	31	227	51	0	9	7	30	0	35	15	23	713	0
7:15 AM		0	35	268	14	2	48	253	77	0	6	8	23	0	47	10	23	814	0
7:30 AM		0	27	288	14	1	52	252	72	0	7	4	31	0	45	9	22	824	0
7:45 AM		0	38	280	18	0	79	295	81	0	7	16	21	0	51	10	21	917	3,268
8:00 AM		0	42	262	20	0	58	212	95	0	8	8	32	0	52	17	33	839	3,394
8:15 AM		0	51	219	16	0	70	184	97	0	15	5	30	0	63	17	40	807	3,387
8:30 AM		0	33	233	9	1	56	212	78	0	8	14	29	0	70	21	33	797	3,360
8:45 AM		0	44	198	17	0	57	193	109	0	3	13	32	1	49	10	45	771	3,214
Count Total		0	297	1,992	120	6	451	1,828	660	0	63	75	228	1	412	109	240	6,482	
Pk Hr	All	0	142	1,098	66	3	237	1,012	325	0	28	36	107	0	195	46	99	3,394	
	HV	0	0	32	6	0	11	19	8	0	4	5	8	0	5	0	0	98	
	HV%	-	0%	3%	9%	0%	5%	2%	2%	-	14%	14%	7%	-	3%	0%	0%	3%	

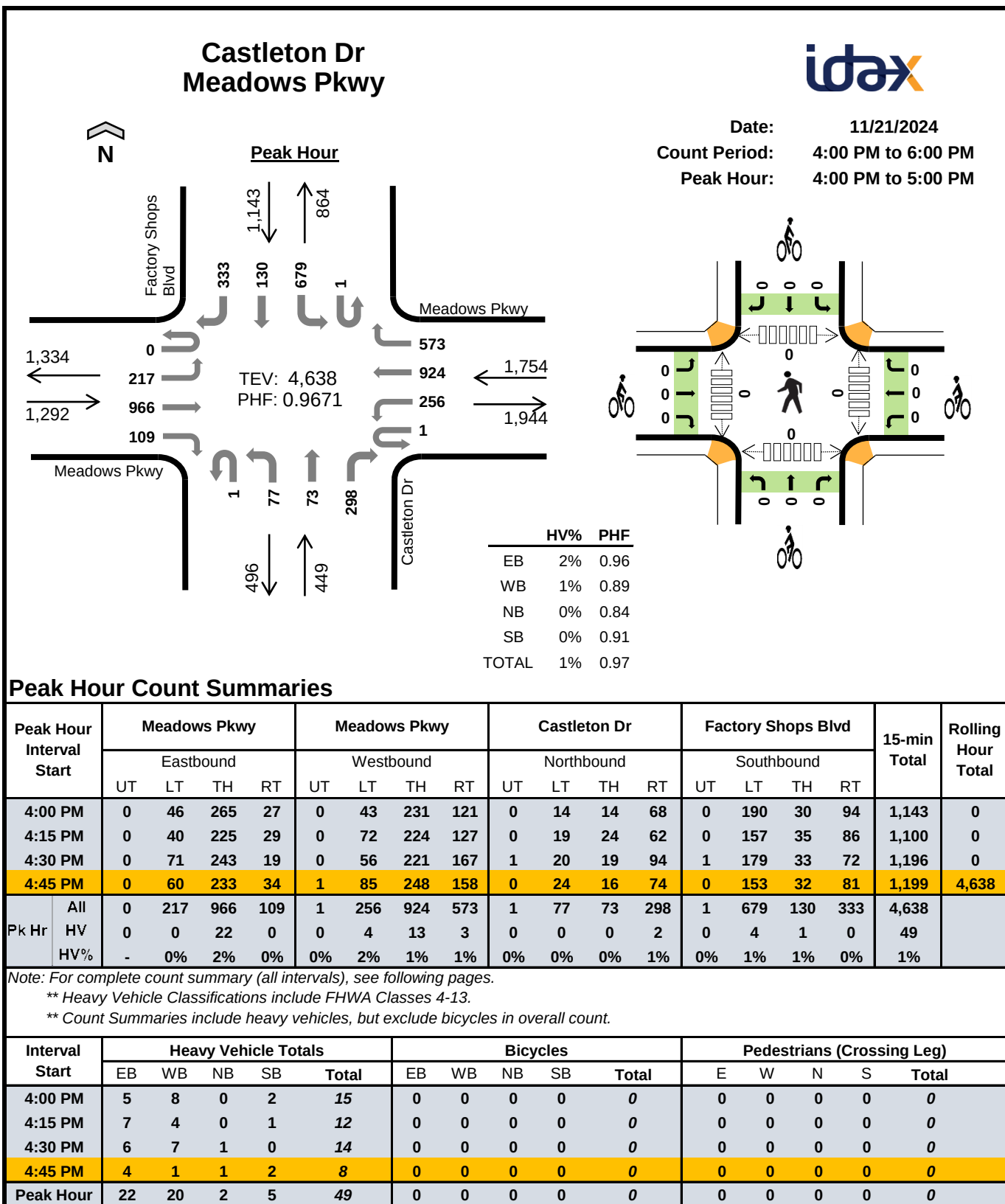
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	9	11	1	3	24	0	0	0	0	0	0	0	0	0	0
7:15 AM	4	7	4	1	16	0	0	0	0	0	0	0	0	0	0
7:30 AM	10	6	2	3	21	0	0	0	0	0	0	0	0	0	0
7:45 AM	10	15	7	0	32	0	0	0	0	0	0	0	0	0	0
8:00 AM	14	10	4	1	29	0	0	0	0	0	0	1	0	0	1
8:15 AM	8	9	2	2	21	0	0	0	0	0	0	1	0	0	1
8:30 AM	13	19	5	4	41	0	0	0	0	0	0	0	0	0	0
8:45 AM	14	19	2	1	36	0	0	0	0	0	0	0	0	0	0
Count Total	82	96	27	15	220	0	0	0	0	0	0	2	0	0	2
Peak Hour	38	38	17	5	98	0	0	0	0	0	0	1	0	0	1

Count Summaries - Heavy Vehicles

Interval Start	Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	9	0	0	2	7	2	0	0	0	1	0	1	1	1	24	0
7:15 AM	0	0	4	0	0	1	4	2	0	1	1	2	0	1	0	0	16	0
7:30 AM	0	0	7	3	0	3	2	1	0	0	1	1	0	3	0	0	21	0
7:45 AM	0	0	10	0	0	5	7	3	0	3	3	1	0	0	0	0	32	93
8:00 AM	0	0	11	3	0	2	6	2	0	0	0	4	0	1	0	0	29	98
8:15 AM	0	0	8	0	0	3	5	1	0	1	0	1	0	0	0	2	21	103
8:30 AM	0	1	11	1	0	3	11	5	0	2	0	3	0	2	0	2	41	123
8:45 AM	0	1	13	0	0	4	11	4	0	0	0	2	0	0	1	0	36	127
Count Total	0	2	73	7	0	23	53	20	0	7	5	15	0	8	2	5	220	
Pk Hr Heavy	0	0	32	6	0	11	19	8	0	4	5	8	0	5	0	0	98	

Count Summaries - Bikes

Interval Start	Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



Count Summaries - All Vehicles																			
Interval Start		Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	46	265	27	0	43	231	121	0	14	14	68	0	190	30	94	1,143	0
4:15 PM		0	40	225	29	0	72	224	127	0	19	24	62	0	157	35	86	1,100	0
4:30 PM		0	71	243	19	0	56	221	167	1	20	19	94	1	179	33	72	1,196	0
4:45 PM		0	60	233	34	1	85	248	158	0	24	16	74	0	153	32	81	1,199	4,638
5:00 PM		0	76	227	28	0	50	208	130	0	19	23	84	0	157	26	76	1,104	4,599
5:15 PM		0	63	204	27	0	52	203	153	2	22	22	79	0	169	26	73	1,095	4,594
5:30 PM		0	60	205	40	0	55	207	141	0	26	11	68	0	143	23	78	1,057	4,455
5:45 PM		0	41	169	14	1	63	173	123	0	25	24	45	0	148	27	105	958	4,214
Count Total		0	457	1,771	218	2	476	1,715	1,120	3	169	153	574	1	1,296	232	665	8,852	
Pk Hr	All	0	217	966	109	1	256	924	573	1	77	73	298	1	679	130	333	4,638	
	HV	0	0	22	0	0	4	13	3	0	0	0	2	0	4	1	0	49	
	HV%	-	0%	2%	0%	0%	2%	1%	1%	0%	0%	0%	1%	0%	1%	1%	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	5	8	0	2	15	0	0	0	0	0	0	0	0	0	0
4:15 PM	7	4	0	1	12	0	0	0	0	0	0	0	0	0	0
4:30 PM	6	7	1	0	14	0	0	0	0	0	0	0	0	0	0
4:45 PM	4	1	1	2	8	0	0	0	0	0	0	0	0	0	0
5:00 PM	2	1	0	2	5	0	0	0	1	1	0	0	0	0	0
5:15 PM	1	2	0	1	4	0	0	0	0	0	0	0	0	1	1
5:30 PM	1	3	0	1	5	0	0	0	0	0	0	0	0	0	0
5:45 PM	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0
Count Total	29	27	2	9	67	0	0	0	1	1	0	0	0	1	1
Peak Hour	22	20	2	5	49	0	0	0	0	0	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	5	0	0	0	7	1	0	0	0	0	0	2	0	0	15	0
4:15 PM	0	0	7	0	0	1	3	0	0	0	0	0	0	0	1	0	12	0
4:30 PM	0	0	6	0	0	2	3	2	0	0	0	1	0	0	0	0	14	0
4:45 PM	0	0	4	0	0	1	0	0	0	0	0	1	0	2	0	0	8	49
5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	2	0	0	5	39
5:15 PM	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	4	31
5:30 PM	0	0	1	0	0	2	1	0	0	0	0	0	0	1	0	0	5	22
5:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	18
Count Total	0	0	29	0	0	7	16	4	0	0	0	2	0	7	2	0	67	
Pk Hr Heavy	0	0	22	0	0	4	13	3	0	0	0	2	0	4	1	0	49	

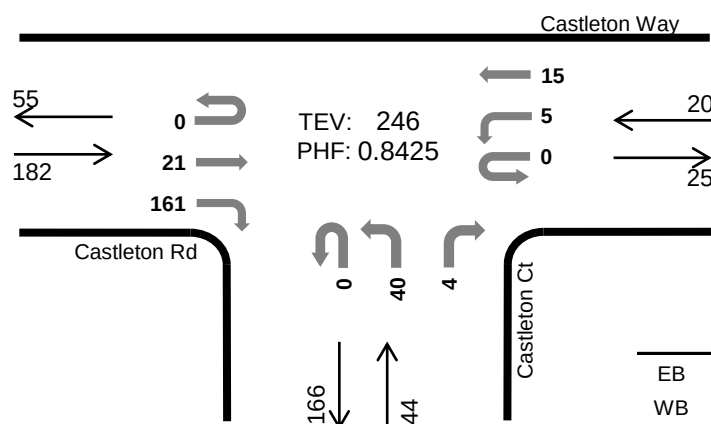
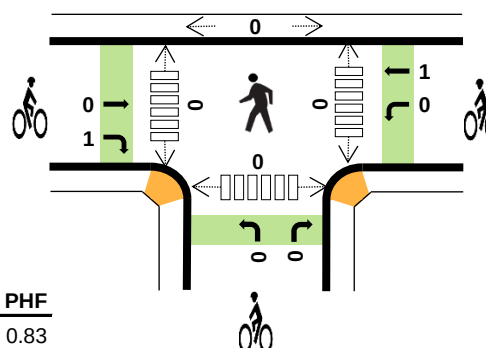
Count Summaries - Bikes																		
Interval Start	Meadows Pkwy				Meadows Pkwy				Castleton Dr				Factory Shops Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Castleton Ct Castleton Way



Peak Hour

Date: 11/21/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	3%	0.83
WB	0%	0.63
NB	5%	0.85
SB	--	--
TOTAL	3%	0.84

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	2	42	0	0	1	0	0	11	0	2	0	0	0	0	58	0
8:00 AM		0	0	6	49	0	1	7	0	0	10	0	0	0	0	0	0	73	0
8:15 AM		0	0	7	37	0	4	4	0	0	9	0	2	0	0	0	0	63	0
8:30 AM		0	0	6	33	0	0	3	0	0	10	0	0	0	0	0	0	52	246
Pk Hr	All	0	0	21	161	0	5	15	0	0	40	0	4	0	0	0	0	246	
	HV	0	0	0	6	0	0	0	0	0	2	0	0	0	0	0	0	8	
	HV%	-	-	0%	4%	-	0%	0%	-	-	5%	-	0%	-	-	-	-	3%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0
8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
8:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Peak Hour	6	0	2	0	8	1	1	0	0	2	0	0	0	0	0

Count Summaries - All Vehicles

Interval Start		Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	5	19	0	3	9	0	0	6	0	2	0	0	0	0	44	0
7:15 AM		0	0	7	23	0	0	1	0	0	8	0	2	0	0	0	0	41	0
7:30 AM		0	0	7	26	0	0	6	0	0	8	0	0	0	0	0	0	47	0
7:45 AM		0	0	2	42	0	0	1	0	0	11	0	2	0	0	0	0	58	190
8:00 AM		0	0	6	49	0	1	7	0	0	10	0	0	0	0	0	0	73	219
8:15 AM		0	0	7	37	0	4	4	0	0	9	0	2	0	0	0	0	63	241
8:30 AM		0	0	6	33	0	0	3	0	0	10	0	0	0	0	0	0	52	246
8:45 AM		0	0	13	26	0	1	5	0	0	11	0	2	0	0	0	0	58	246
Count Total		0	0	53	255	0	9	36	0	0	73	0	10	0	0	0	0	436	
Pk Hr	All	0	0	21	161	0	5	15	0	0	40	0	4	0	0	0	0	246	
	HV	0	0	0	6	0	0	0	0	0	2	0	0	0	0	0	0	8	
	HV%	-	-	0%	4%	-	0%	0%	-	-	5%	-	0%	-	-	-	-	3%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0
8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
8:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0
Count Total	13	2	5	0	20	1	1	0	0	2	0	0	0	0	0
Peak Hour	6	0	2	0	8	1	1	0	0	2	0	0	0	0	0

Count Summaries - Heavy Vehicles

Interval Start	Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3	0
7:30 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0
7:45 AM	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3	9
8:00 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	10
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	8
8:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	8
8:45 AM	0	0	2	3	0	1	0	0	0	0	0	0	0	0	0	0	6	11
Count Total	0	0	2	11	0	1	1	0	0	5	0	0	0	0	0	0	20	
Pk Hr Heavy	0	0	0	6	0	0	0	0	0	2	0	0	0	0	0	0	8	

Count Summaries - Bikes

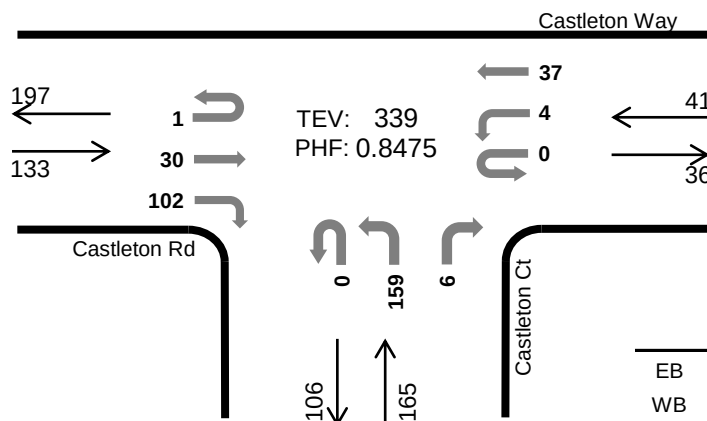
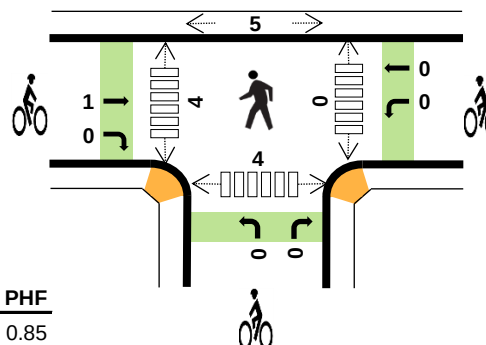
Interval Start	Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	
Pk Hr Bike	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	

Castleton Ct Castleton Way



Peak Hour

Date: 11/21/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV%	PHF
EB	2%	0.85
WB	0%	0.79
NB	1%	0.79
SB	--	--
TOTAL	1%	0.85

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	5	24	0	0	12	0	0	31	0	1	0	0	0	0	73	0
4:30 PM		0	0	7	22	0	0	13	0	0	44	0	2	0	0	0	0	88	0
4:45 PM		1	0	9	26	0	3	4	0	0	35	0	0	0	0	0	0	78	0
5:00 PM		0	0	9	30	0	1	8	0	0	49	0	3	0	0	0	0	100	339
Pk Hr	All	1	0	30	102	0	4	37	0	0	159	0	6	0	0	0	0	339	
	HV	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3	
	HV%	0%	-	3%	1%	-	0%	0%	-	-	1%	-	0%	-	-	-	-	1%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2
4:30 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	3	4	11
5:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Peak Hour	2	0	1	0	3	1	0	0	0	1	0	4	5	4	13

Count Summaries - All Vehicles																			
Interval Start		Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	4	25	0	2	7	0	0	30	0	0	0	0	0	0	68	0
4:15 PM		0	0	5	24	0	0	12	0	0	31	0	1	0	0	0	0	73	0
4:30 PM		0	0	7	22	0	0	13	0	0	44	0	2	0	0	0	0	88	0
4:45 PM		1	0	9	26	0	3	4	0	0	35	0	0	0	0	0	0	78	307
5:00 PM		0	0	9	30	0	1	8	0	0	49	0	3	0	0	0	0	100	339
5:15 PM		0	0	3	11	0	1	6	0	0	21	0	0	0	0	0	0	42	308
5:30 PM		0	0	4	19	0	1	10	0	0	15	0	3	0	0	0	0	52	272
5:45 PM		0	0	8	27	0	0	6	0	0	7	0	3	0	0	0	0	51	245
Count Total		1	0	49	184	0	8	66	0	0	232	0	12	0	0	0	0	552	
Pk Hr	All	1	0	30	102	0	4	37	0	0	159	0	6	0	0	0	0	339	
	HV	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3	
	HV%	0%	-	3%	1%	-	0%	0%	-	-	1%	-	0%	-	-	-	-	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2
4:30 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	3	4	11
5:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	3	0	1	0	4	1	0	0	0	1	0	4	5	4	13
Peak Hour	2	0	1	0	3	1	0	0	0	1	0	4	5	4	13

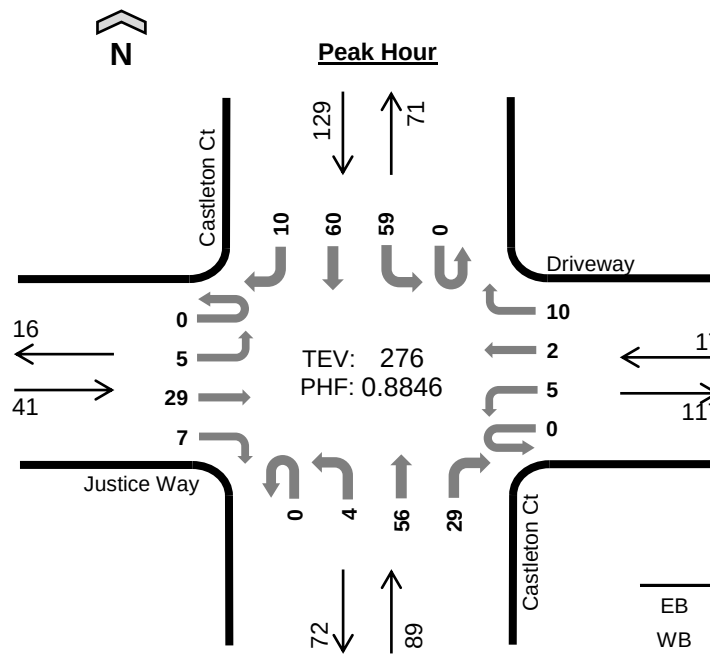
Count Summaries - Heavy Vehicles

Interval Start	Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	4	
Pk Hr Heavy	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3	

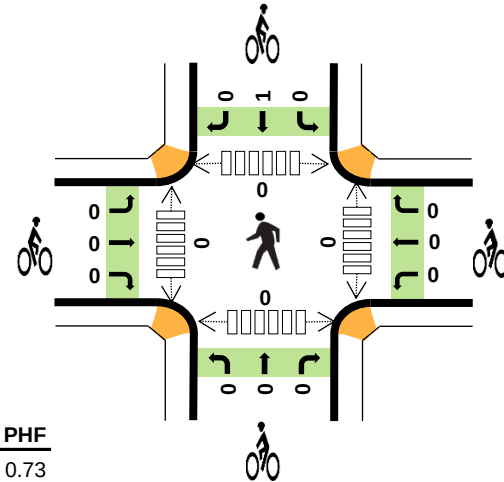
Count Summaries - Bikes

Interval Start	Castleton Rd				Castleton Way				Castleton Ct				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Pk Hr Bike	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

Castleton Ct Justice Way



	HV%	PHF
EB	0%	0.73
WB	0%	0.47
NB	3%	0.72
SB	8%	0.85
TOTAL	5%	0.88



Peak Hour Count Summaries

Peak Hour Interval Start		Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	2	7	2	0	0	0	1	0	0	18	13	0	16	14	5	78	0
8:00 AM		0	3	7	0	0	2	0	3	0	2	16	7	0	22	14	2	78	0
8:15 AM		0	0	11	3	0	0	0	2	0	1	12	7	0	12	16	2	66	0
8:30 AM		0	0	4	2	0	3	2	4	0	1	10	2	0	9	16	1	54	276
Pk Hr	All	0	5	29	7	0	5	2	10	0	4	56	29	0	59	60	10	276	
	HV	0	0	0	0	0	0	0	0	0	2	1	0	0	1	2	7	13	
	HV%	-	0%	0%	0%	-	0%	0%	0%	-	50%	2%	0%	-	2%	3%	70%	5%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	0	0	1	7	8	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	3	10	13	0	0	0	1	1	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start		Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	1	3	0	1	1	2	0	0	9	5	0	3	10	0	35	0
7:15 AM		0	0	3	4	0	1	0	2	0	1	6	5	0	8	7	3	40	0
7:30 AM		0	1	7	2	0	0	0	0	0	0	6	4	0	11	6	5	42	0
7:45 AM		0	2	7	2	0	0	0	1	0	0	18	13	0	16	14	5	78	195
8:00 AM		0	3	7	0	0	2	0	3	0	2	16	7	0	22	14	2	78	238
8:15 AM		0	0	11	3	0	0	0	2	0	1	12	7	0	12	16	2	66	264
8:30 AM		0	0	4	2	0	3	2	4	0	1	10	2	0	9	16	1	54	276
8:45 AM		0	2	3	4	0	0	3	2	0	0	11	2	0	10	5	4	46	244
Count Total		0	8	43	20	0	7	6	16	0	5	88	45	0	91	88	22	439	
Pk Hr	All	0	5	29	7	0	5	2	10	0	4	56	29	0	59	60	10	276	
	HV	0	0	0	0	0	0	0	0	0	2	1	0	0	1	2	7	13	
	HV%	-	0%	0%	0%	-	0%	0%	0%	-	50%	2%	0%	-	2%	3%	70%	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	3	4	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	7	8	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0
Count Total	1	0	5	18	24	0	0	0	1	1	0	0	0	0	0
Peak Hour	0	0	3	10	13	0	0	0	1	1	0	0	0	0	0

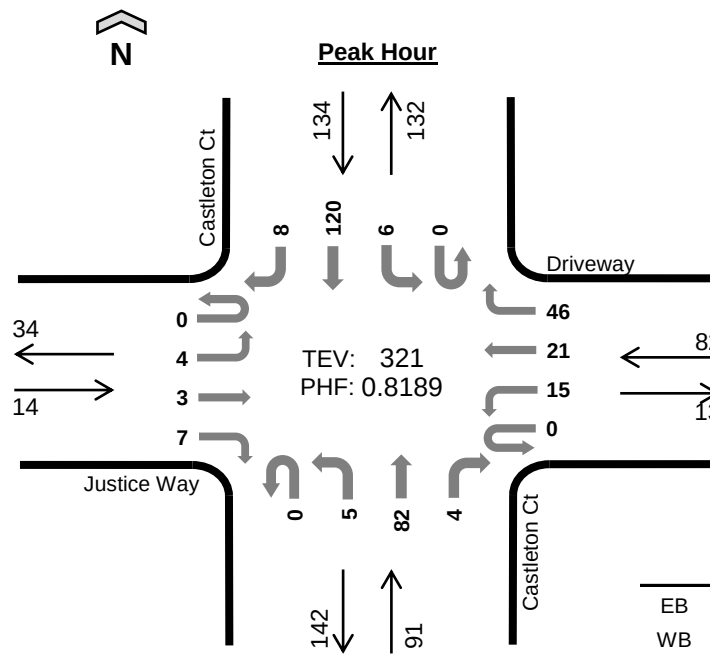
Count Summaries - Heavy Vehicles

Interval Start	Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5	14
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3	17
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	16
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	13
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	2	10
Count Total	0	1	0	0	0	0	0	0	0	0	2	3	0	0	1	4	13	
Pk Hr Heavy	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	2	7	

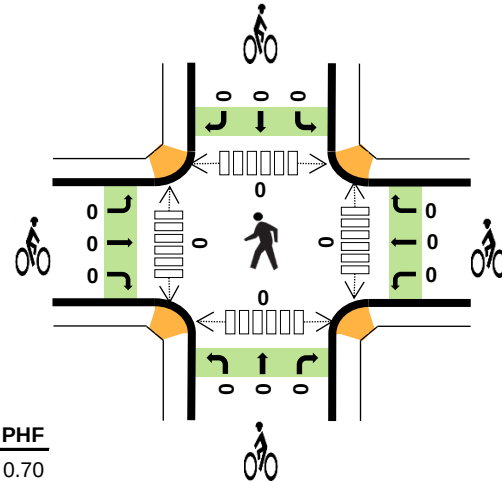
Count Summaries - Bikes

Interval Start	Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	

Castleton Ct Justice Way



	HV%	PHF
EB	0%	0.70
WB	0%	0.73
NB	0%	0.81
SB	1%	0.76
TOTAL	0%	0.82



Peak Hour Count Summaries

Peak Hour Interval Start		Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	1	1	0	0	5	2	11	0	1	12	2	0	1	25	2	63	0
4:30 PM		0	1	1	2	0	3	9	16	0	2	23	2	0	3	22	3	87	0
4:45 PM		0	1	0	2	0	3	4	8	0	2	19	0	0	2	32	0	73	0
5:00 PM		0	1	1	3	0	4	6	11	0	0	28	0	0	0	41	3	98	321
P k H r	All	0	4	3	7	0	15	21	46	0	5	82	4	0	6	120	8	321	
	HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	HV%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	13%	0%	

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

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

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

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

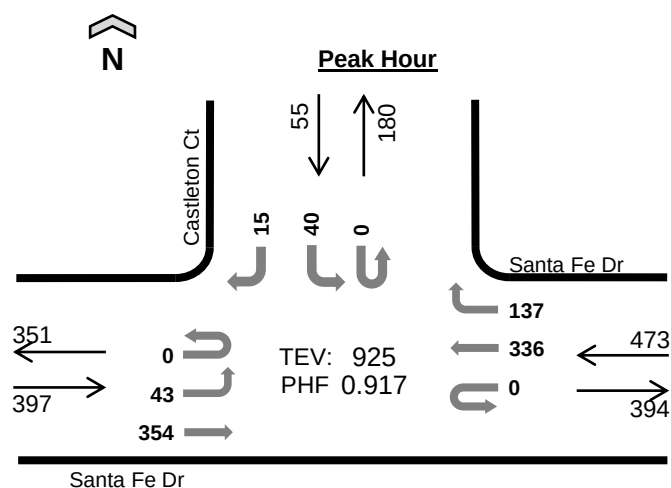
Count Summaries - All Vehicles																			
Interval Start		Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	1	1	1	0	0	2	12	0	0	16	0	0	4	29	0	66	0
4:15 PM		0	1	1	0	0	5	2	11	0	1	12	2	0	1	25	2	63	0
4:30 PM		0	1	1	2	0	3	9	16	0	2	23	2	0	3	22	3	87	0
4:45 PM		0	1	0	2	0	3	4	8	0	2	19	0	0	2	32	0	73	289
5:00 PM		0	1	1	3	0	4	6	11	0	0	28	0	0	0	41	3	98	321
5:15 PM		0	0	0	1	0	3	2	4	0	0	12	0	0	1	11	1	35	293
5:30 PM		0	2	0	0	0	1	2	3	0	1	8	1	0	0	24	0	42	248
5:45 PM		0	0	0	0	0	1	1	2	0	2	8	0	0	0	30	0	44	219
Count Total		0	7	4	9	0	20	28	67	0	8	126	5	0	11	214	9	508	
Pk Hr	All	0	4	3	7	0	15	21	46	0	5	82	4	0	6	120	8	321	
	HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	HV%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	0%	-	0%	0%	13%	0%	

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

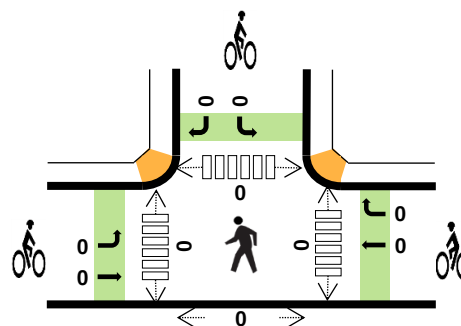
Count Summaries - Heavy Vehicles																		
Interval Start	Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	4	
Pk Hr Heavy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	

Count Summaries - Bikes																		
Interval Start	Justice Way				Driveway				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Castleton Ct Santa Fe Dr



Date: 11/21/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	2%	0.81
WB	2%	0.80
NB	--	--
SB	4%	0.81
TOTAL	2%	0.92

Peak Hour Count Summaries

Peak Hour Interval Start		Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	13	74	0	0	0	96	51	0	0	0	0	0	10	0	5	249	0
8:00 AM		0	10	85	0	0	0	62	32	0	0	0	0	0	5	0	2	196	0
8:15 AM		0	10	113	0	0	0	85	27	0	0	0	0	0	13	0	4	252	0
8:30 AM		0	10	82	0	0	0	93	27	0	0	0	0	0	12	0	4	228	925
Pk Hr	All	0	43	354	0	0	0	336	137	0	0	0	0	0	40	0	15	925	
	HV	0	1	8	0	0	0	6	4	0	0	0	0	0	2	0	0	21	
	HV%	-	2%	2%	-	-	-	2%	3%	-	-	-	-	-	5%	-	0%	2%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0
8:00 AM	4	2	0	1	7	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	3	0	1	5	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
Peak Hour	9	10	0	2	21	0	0	0	0	0	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start		Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	6	47	0	0	0	72	35	0	0	0	0	0	8	0	1	169	0
7:15 AM		0	10	51	0	0	0	95	15	0	0	0	0	0	5	0	6	182	0
7:30 AM		0	6	65	0	0	0	88	18	0	0	0	0	0	6	0	6	189	0
7:45 AM		0	13	74	0	0	0	96	51	0	0	0	0	0	10	0	5	249	789
8:00 AM		0	10	85	0	0	0	62	32	0	0	0	0	0	5	0	2	196	816
8:15 AM		0	10	113	0	0	0	85	27	0	0	0	0	0	13	0	4	252	886
8:30 AM		0	10	82	0	0	0	93	27	0	0	0	0	0	12	0	4	228	925
8:45 AM		0	9	90	0	0	0	82	16	0	0	0	0	0	11	0	6	214	890
Count Total		0	74	607	0	0	0	673	221	0	0	0	0	0	70	0	34	1,679	
Pk Hr	All	0	43	354	0	0	0	336	137	0	0	0	0	0	40	0	15	925	
	HV	0	1	8	0	0	0	6	4	0	0	0	0	0	2	0	0	21	
	HV%	-	2%	2%	-	-	-	2%	3%	-	-	-	-	-	5%	-	0%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
7:30 AM	5	2	0	1	8	0	0	0	0	0	0	0	1	0	1
7:45 AM	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0
8:00 AM	4	2	0	1	7	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	3	0	1	5	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	3	0	1	5	0	0	0	0	0	0	0	0	0	0
Count Total	17	17	0	4	38	0	0	0	0	0	0	0	1	0	1
Peak Hour	9	10	0	2	21	0	0	0	0	0	0	0	0	0	0

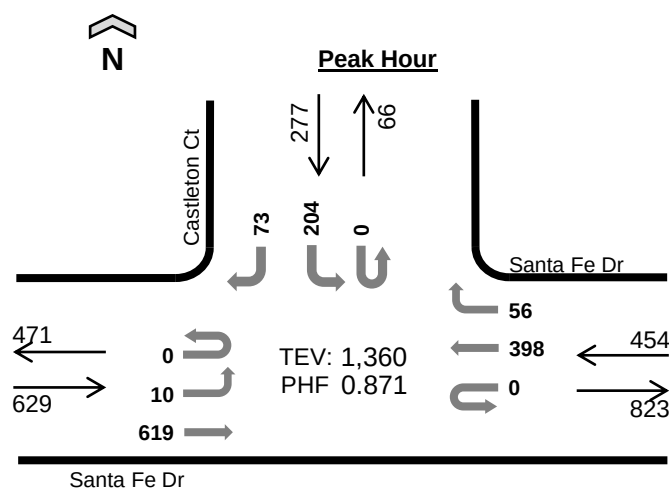
Count Summaries - Heavy Vehicles

Interval Start	Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0
7:30 AM	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0	1	8	0
7:45 AM	0	0	4	0	0	0	1	1	0	0	0	0	0	0	0	0	6	18
8:00 AM	0	1	3	0	0	0	2	0	0	0	0	0	0	1	0	0	7	23
8:15 AM	0	0	1	0	0	0	2	1	0	0	0	0	0	1	0	0	5	26
8:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	21
8:45 AM	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	1	5	20
Count Total	0	1	16	0	0	0	11	6	0	0	0	0	0	2	0	2	38	
Pk Hr Heavy	0	1	8	0	0	0	6	4	0	0	0	0	0	2	0	0	21	

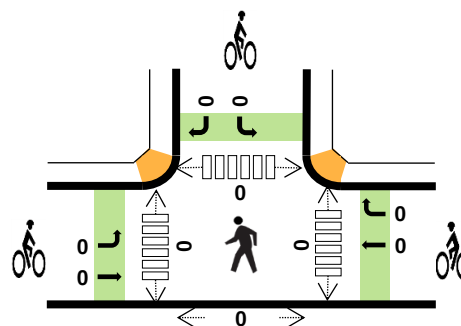
Count Summaries - Bikes

Interval Start	Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Castleton Ct Santa Fe Dr



Date: 11/21/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV%	PHF
EB	0%	0.92
WB	1%	0.67
NB	--	--
SB	0%	0.71
TOTAL	1%	0.87

Peak Hour Count Summaries

Peak Hour Interval Start		Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	4	167	0	0	0	74	16	0	0	0	0	0	29	0	11	301	0
4:30 PM		0	5	138	0	0	0	155	14	0	0	0	0	0	50	0	28	390	0
4:45 PM		0	0	163	0	0	0	85	12	0	0	0	0	0	48	0	13	321	0
5:00 PM		0	1	151	0	0	0	84	14	0	0	0	0	0	77	0	21	348	1,360
P k H r	All	0	10	619	0	0	0	398	56	0	0	0	0	0	204	0	73	1,360	
	HV	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	7	
	HV%	-	0%	0%	-	-	-	2%	0%	-	-	-	-	-	0%	-	0%	1%	

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

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

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

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

Count Summaries - All Vehicles																			
Interval Start		Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	135	0	0	0	85	12	0	0	0	0	0	53	0	11	301	0
4:15 PM		0	4	167	0	0	0	74	16	0	0	0	0	0	29	0	11	301	0
4:30 PM		0	5	138	0	0	0	155	14	0	0	0	0	0	50	0	28	390	0
4:45 PM		0	0	163	0	0	0	85	12	0	0	0	0	0	48	0	13	321	1,313
5:00 PM		0	1	151	0	0	0	84	14	0	0	0	0	0	77	0	21	348	1,360
5:15 PM		0	5	140	0	0	0	70	12	0	0	0	0	0	21	0	8	256	1,315
5:30 PM		0	12	129	0	0	0	72	8	0	0	0	0	0	31	0	10	262	1,187
5:45 PM		0	1	106	0	0	0	64	11	0	0	0	0	0	33	0	7	222	1,088
Count Total		0	33	1,129	0	0	0	689	99	0	0	0	0	0	342	0	109	2,401	
Pk Hr	All	0	10	619	0	0	0	398	56	0	0	0	0	0	204	0	73	1,360	
	HV	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	7	
	HV%	-	0%	0%	-	-	-	2%	0%	-	-	-	-	-	0%	-	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	1	7	0	2	10	0	0	0	0	0	0	0	0	0	0
Peak Hour	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0

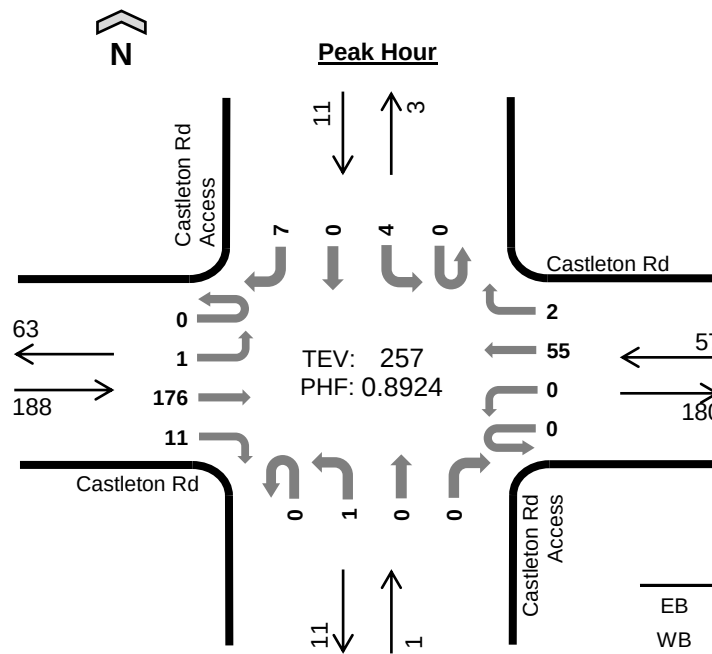
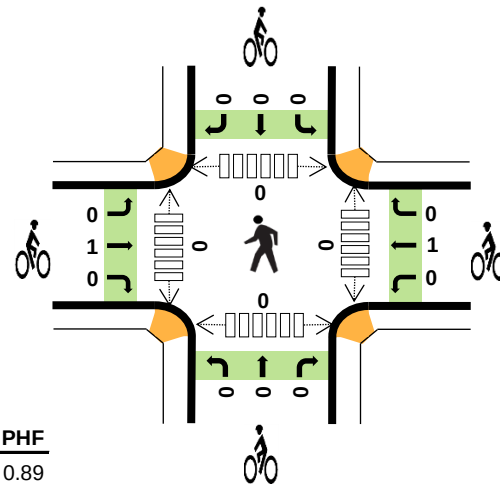
Count Summaries - Heavy Vehicles

Interval Start	Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0
4:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	8
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	1	0	0	0	7	0	0	0	0	0	0	2	0	0	10	
Pk Hr Heavy	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	7	

Count Summaries - Bikes

Interval Start	Santa Fe Dr				Santa Fe Dr				n/a				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Castleton Rd Access Castleton Rd



	HV%	PHF
EB	3%	0.89
WB	4%	0.84
NB	0%	0.25
SB	0%	0.55
TOTAL	3%	0.89

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	44	2	0	0	12	2	0	0	0	0	0	3	0	2	65	0
8:00 AM		0	0	52	1	0	0	17	0	0	0	0	0	0	0	0	2	72	0
8:15 AM		0	0	42	7	0	0	12	0	0	1	0	0	0	1	0	0	63	0
8:30 AM		0	1	38	1	0	0	14	0	0	0	0	0	0	0	0	3	57	257
Pk Hr	All	0	1	176	11	0	0	55	2	0	1	0	0	0	4	0	7	257	
	HV	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	8	
	HV%	-	0%	3%	0%	-	-	4%	0%	-	0%	-	-	-	0%	-	0%	3%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0
8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
8:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Peak Hour	6	2	0	0	8	1	1	0	0	2	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start		Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	23	5	0	0	15	0	0	0	0	1	0	0	0	4	50	0
7:15 AM		0	0	32	4	0	0	8	0	0	0	0	0	0	1	0	1	46	0
7:30 AM		0	0	30	3	0	0	12	1	0	2	0	0	0	0	0	2	50	0
7:45 AM		0	0	44	2	0	0	12	2	0	0	0	0	0	3	0	2	65	211
8:00 AM		0	0	52	1	0	0	17	0	0	0	0	0	0	0	0	2	72	233
8:15 AM		0	0	42	7	0	0	12	0	0	1	0	0	0	1	0	0	63	250
8:30 AM		0	1	38	1	0	0	14	0	0	0	0	0	0	0	0	3	57	257
8:45 AM		0	0	41	3	0	1	15	1	0	0	0	1	0	0	0	2	64	256
Count Total		0	3	302	26	0	1	105	4	0	3	0	2	0	5	0	16	467	
Pk Hr	All	0	1	176	11	0	0	55	2	0	1	0	0	0	4	0	7	257	
	HV	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	8	
	HV%	-	0%	3%	0%	-	-	4%	0%	-	0%	-	-	-	0%	-	0%	3%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0
8:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
8:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
8:45 AM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Count Total	13	6	0	0	19	1	1	0	0	2	0	0	0	0	0
Peak Hour	6	2	0	0	8	1	1	0	0	2	0	0	0	0	0

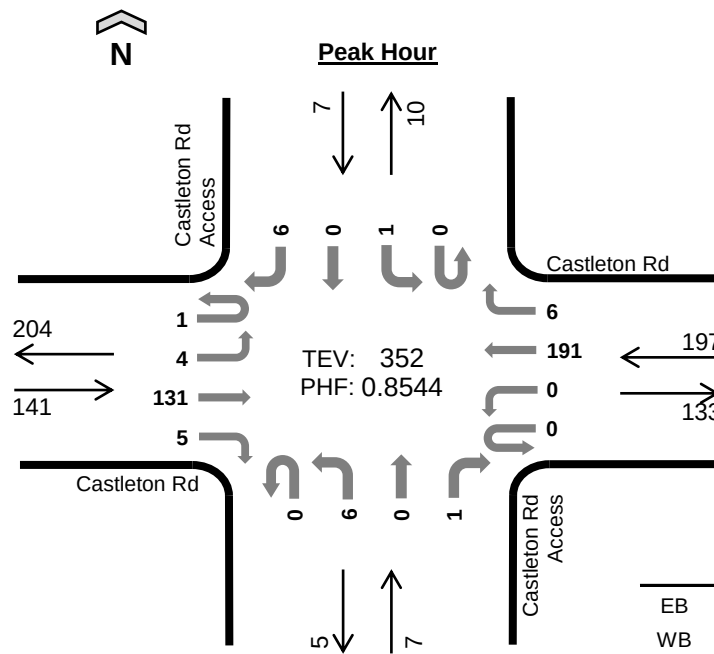
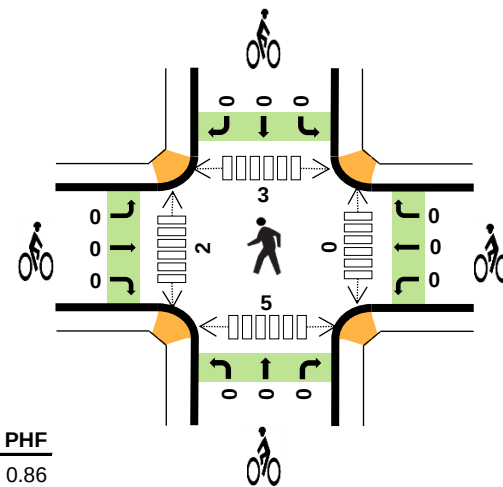
Count Summaries - Heavy Vehicles

Interval Start	Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
7:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	9
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	10
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
8:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8
8:45 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	10
Count Total	0	0	13	0	0	0	6	0	0	0	0	0	0	0	0	0	19	
Pk Hr Heavy	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	8	

Count Summaries - Bikes

Interval Start	Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
Pk Hr Bike	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	

Castleton Rd Access Castleton Rd



	HV%	PHF
EB	1%	0.86
WB	1%	0.88
NB	0%	0.58
SB	0%	0.58
TOTAL	1%	0.85

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	27	3	0	0	43	2	0	1	0	1	0	1	0	1	79	0
4:30 PM		1	0	31	0	0	0	55	0	0	1	0	0	0	0	0	2	90	0
4:45 PM		0	2	34	2	0	0	39	2	0	1	0	0	0	0	0	0	80	0
5:00 PM		0	2	39	0	0	0	54	2	0	3	0	0	0	0	0	3	103	352
Pk Hr	All	1	4	131	5	0	0	191	6	0	6	0	1	0	1	0	6	352	
	HV	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	
	HV%	0%	0%	2%	0%	-	-	1%	0%	-	0%	-	0%	-	0%	-	0%	1%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2
4:30 PM	1	1	0	0	2	0	0	0	0	0	0	2	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Peak Hour	2	1	0	0	3	0	0	0	0	0	0	2	3	5	10

Count Summaries - All Vehicles																			
Interval Start		Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	28	0	0	0	37	0	0	3	0	0	0	1	0	3	72	0
4:15 PM		0	0	27	3	0	0	43	2	0	1	0	1	0	1	0	1	79	0
4:30 PM		1	0	31	0	0	0	55	0	0	1	0	0	0	0	0	2	90	0
4:45 PM		0	2	34	2	0	0	39	2	0	1	0	0	0	0	0	0	80	321
5:00 PM		0	2	39	0	0	0	54	2	0	3	0	0	0	0	0	3	103	352
5:15 PM		1	2	14	2	0	0	26	1	0	5	0	0	0	0	0	6	57	330
5:30 PM		0	5	23	5	0	0	23	2	0	7	0	0	0	0	0	7	72	312
5:45 PM		0	0	34	0	0	0	13	0	0	1	0	1	0	0	0	1	50	282
Count Total		2	11	230	12	0	0	290	9	0	22	0	2	0	2	0	23	603	
Pk Hr	All	1	4	131	5	0	0	191	6	0	6	0	1	0	1	0	6	352	
	HV	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	
	HV%	0%	0%	2%	0%	-	-	1%	0%	-	0%	-	0%	-	0%	-	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2
4:30 PM	1	1	0	0	2	0	0	0	0	0	0	2	1	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	2	2	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Count Total	3	1	0	0	4	0	0	0	0	0	0	8	5	6	19
Peak Hour	2	1	0	0	3	0	0	0	0	0	0	2	3	5	10

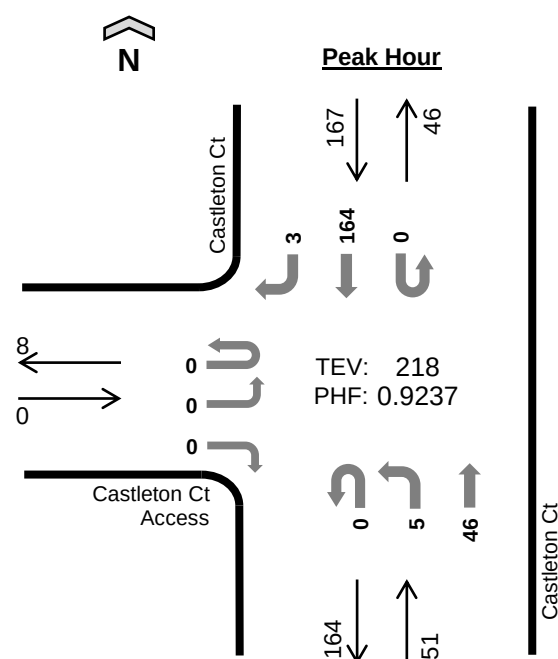
Count Summaries - Heavy Vehicles

Interval Start	Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	
Pk Hr Heavy	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	

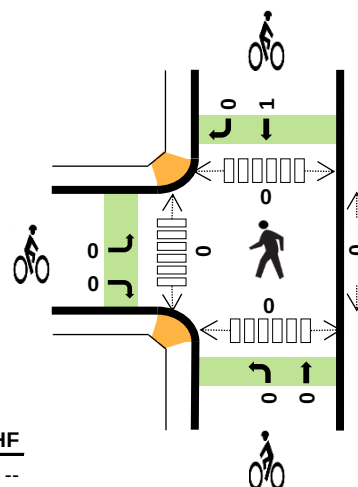
Count Summaries - Bikes

Interval Start	Castleton Rd				Castleton Rd				Castleton Rd Access				Castleton Rd Access				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Castleton Ct Castleton Ct Access



Date: 11/21/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	--	--
WB	--	--
NB	4%	0.85
SB	4%	0.87
TOTAL	4%	0.92

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	0	0	0	0	0	0	0	0	15	0	0	0	41	0	56	0
8:00 AM		0	0	0	0	0	0	0	0	0	1	10	0	0	0	47	1	59	0
8:15 AM		0	0	0	0	0	0	0	0	0	2	12	0	0	0	40	1	55	0
8:30 AM		0	0	0	0	0	0	0	0	0	2	9	0	0	0	36	1	48	218
Pk Hr	All	0	0	0	0	0	0	0	0	0	5	46	0	0	0	164	3	218	
	HV	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	8	
	HV%	-	-	-	-	-	-	-	-	-	0%	4%	-	-	-	4%	0%	4%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
8:30 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	2	6	8	0	0	0	1	1	0	0	0	0	0

Count Summaries - All Vehicles

Interval Start		Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	0	0	0	0	2	8	0	0	0	23	1	34	0
7:15 AM		0	0	0	0	0	0	0	0	0	0	9	0	0	0	23	0	32	0
7:30 AM		0	0	0	0	0	0	0	0	0	0	6	0	0	0	24	0	30	0
7:45 AM		0	0	0	0	0	0	0	0	0	0	15	0	0	0	41	0	56	152
8:00 AM		0	0	0	0	0	0	0	0	0	1	10	0	0	0	47	1	59	177
8:15 AM		0	0	0	0	0	0	0	0	0	2	12	0	0	0	40	1	55	200
8:30 AM		0	0	0	0	0	0	0	0	0	2	9	0	0	0	36	1	48	218
8:45 AM		0	1	0	0	0	0	0	0	0	0	12	0	0	0	27	0	40	202
Count Total		0	1	0	0	0	0	0	0	0	7	81	0	0	0	261	4	354	
Pk Hr	All	0	0	0	0	0	0	0	0	0	5	46	0	0	0	164	3	218	
	HV	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	8	
	HV%	-	-	-	-	-	-	-	-	-	0%	4%	-	-	-	4%	0%	4%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
8:30 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	5	12	17	0	0	0	1	1	0	0	0	0	0
Peak Hour	0	0	2	6	8	0	0	0	1	1	0	0	0	0	0

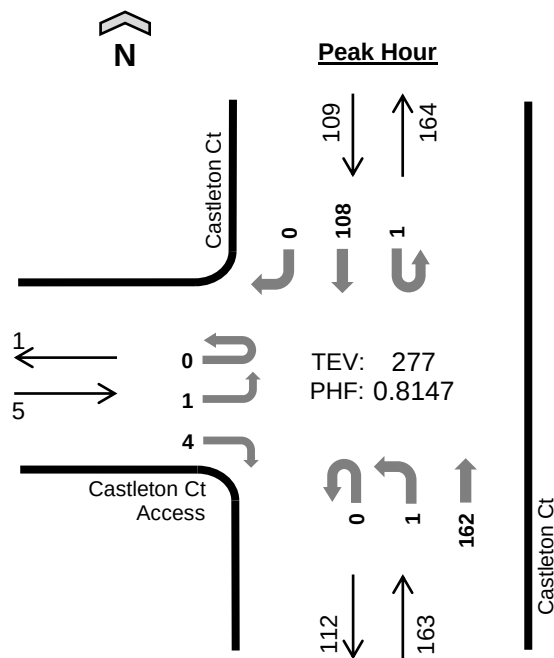
Count Summaries - Heavy Vehicles

Interval Start	Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	8
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	8
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	9
Count Total	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	12	0	17	
Pk Hr Heavy	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	8	

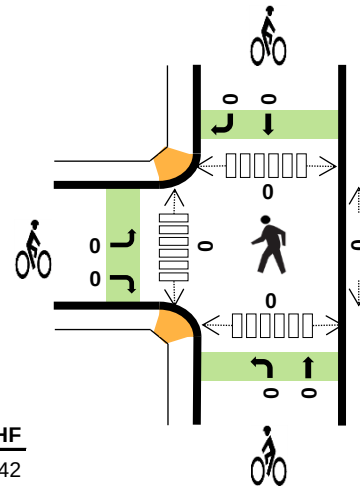
Count Summaries - Bikes

Interval Start	Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	

Castleton Ct Castleton Ct Access



Date: 11/21/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV%	PHF
EB	0%	0.42
WB	--	--
NB	1%	0.80
SB	1%	0.88
TOTAL	1%	0.81

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	0	0	0	0	0	0	0	0	32	0	0	0	27	0	59	0
4:30 PM		0	0	0	1	0	0	0	0	0	0	45	0	1	0	19	0	66	0
4:45 PM		0	1	0	0	0	0	0	0	0	0	35	0	0	0	31	0	67	0
5:00 PM		0	0	0	3	0	0	0	0	0	1	50	0	0	0	31	0	85	277
Pk Hr	All	0	1	0	4	0	0	0	0	0	1	162	0	1	0	108	0	277	
	HV	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	
	HV%	-	0%	-	0%	-	-	-	-	-	0%	1%	-	0%	-	1%	-	1%	

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

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

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

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

Count Summaries - All Vehicles																			
Interval Start		Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	1	0	2	0	0	0	0	0	0	28	0	0	0	25	0	56	0
4:15 PM		0	0	0	0	0	0	0	0	0	0	32	0	0	0	27	0	59	0
4:30 PM		0	0	0	1	0	0	0	0	0	0	45	0	1	0	19	0	66	0
4:45 PM		0	1	0	0	0	0	0	0	0	0	35	0	0	0	31	0	67	248
5:00 PM		0	0	0	3	0	0	0	0	0	1	50	0	0	0	31	0	85	277
5:15 PM		0	1	0	1	0	0	0	0	0	1	22	0	0	0	12	0	37	255
5:30 PM		0	0	0	2	0	0	0	0	0	0	18	0	0	0	19	0	39	228
5:45 PM		0	0	0	0	0	0	0	0	0	0	11	0	0	0	28	0	39	200
Count Total		0	3	0	9	0	0	0	0	0	2	241	0	1	0	192	0	448	
P k H r	All	0	1	0	4	0	0	0	0	0	1	162	0	1	0	108	0	277	
	HV	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	
	HV%	-	0%	-	0%	-	-	-	-	-	-	0%	1%	-	0%	-	1%	-	1%

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

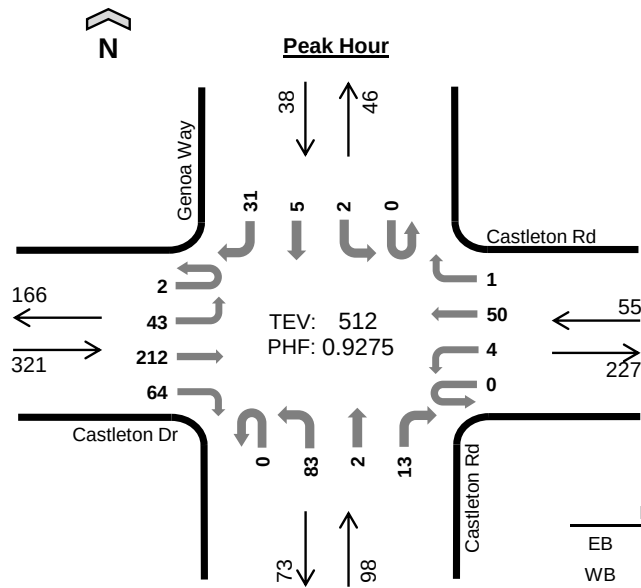
Count Summaries - Heavy Vehicles

Interval Start	Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	
Pk Hr Heavy	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	

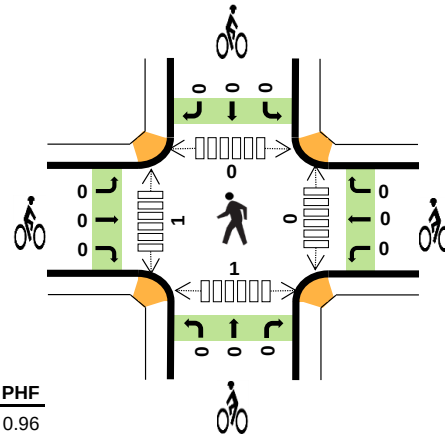
Count Summaries - Bikes

Interval Start	Castleton Ct Access				n/a				Castleton Ct				Castleton Ct				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Genoa Way Castleton Rd



Date: 4/2/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	2%	0.96
WB	9%	0.72
NB	4%	0.84
SB	8%	0.68
TOTAL	4%	0.93

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	4	68	12	0	2	9	0	0	13	1	4	0	0	2	5	120	0
8:00 AM		0	7	50	22	0	1	8	0	0	22	1	0	0	0	1	7	119	0
8:15 AM		0	9	54	19	0	0	15	1	0	22	0	6	0	2	0	7	135	0
8:30 AM		2	23	40	11	0	1	18	0	0	26	0	3	0	0	2	12	138	512
Pk Hr	All	2	43	212	64	0	4	50	1	0	83	2	13	0	2	5	31	512	
	HV	0	0	6	0	0	0	5	0	0	2	1	1	0	0	1	2	18	
	HV%	0%	0%	3%	0%	-	0%	10%	0%	-	2%	50%	8%	-	0%	20%	6%	4%	

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

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

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

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	0	2	2	6	0	0	0	0	0	0	1	0	0	1
8:15 AM	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0
8:30 AM	2	1	0	1	4	0	0	0	0	0	0	0	0	1	1
Peak Hour	6	5	4	3	18	0	0	0	0	0	0	1	0	1	2

Count Summaries - All Vehicles

Interval Start		Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		1	8	33	9	0	3	14	1	0	24	0	1	0	0	0	10	104	0
7:15 AM		0	4	46	11	0	2	17	0	0	17	0	2	0	0	0	4	103	0
7:30 AM		0	5	53	17	0	2	9	0	0	22	0	3	0	0	0	3	114	0
7:45 AM		0	4	68	12	0	2	9	0	0	13	1	4	0	0	2	5	120	441
8:00 AM		0	7	50	22	0	1	8	0	0	22	1	0	0	0	1	7	119	456
8:15 AM		0	9	54	19	0	0	15	1	0	22	0	6	0	2	0	7	135	488
8:30 AM		2	23	40	11	0	1	18	0	0	26	0	3	0	0	2	12	138	512
8:45 AM		2	15	33	15	0	3	19	0	0	11	1	4	0	0	0	1	104	496
Count Total		5	75	377	116	0	14	109	2	0	157	3	23	0	2	5	49	937	
Pk Hr	All	2	43	212	64	0	4	50	1	0	83	2	13	0	2	5	31	512	
	HV	0	0	6	0	0	0	5	0	0	2	1	1	0	0	1	2	18	
	HV%	0%	0%	3%	0%	-	0%	10%	0%	-	2%	50%	8%	-	0%	20%	6%	4%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	0	2	2	6	0	0	0	0	0	0	1	0	0	1
8:15 AM	1	2	1	0	4	0	0	0	0	0	0	0	0	0	0
8:30 AM	2	1	0	1	4	0	0	0	0	0	0	0	0	1	1
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Count Total	7	7	9	3	26	0	0	0	0	0	0	1	0	1	2
Peak Hour	6	5	4	3	18	0	0	0	0	0	0	1	0	1	2

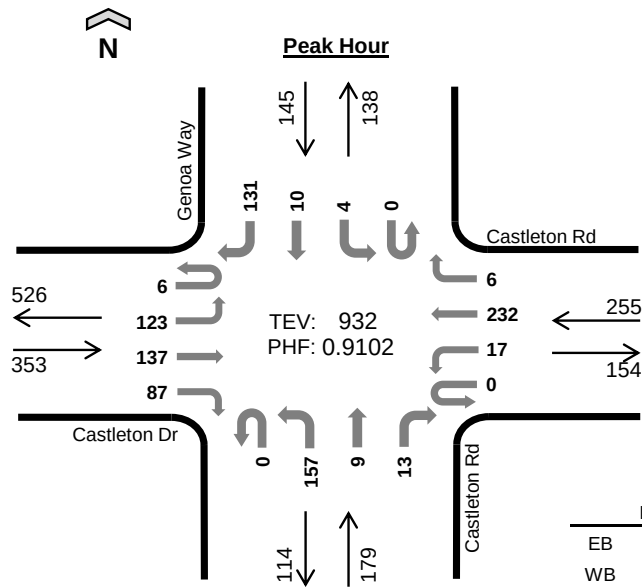
Count Summaries - Heavy Vehicles

Interval Start	Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0
7:30 AM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0
7:45 AM	0	0	1	0	0	0	2	0	0	1	0	0	0	0	0	0	4	11
8:00 AM	0	0	2	0	0	0	0	0	0	1	1	0	0	0	1	1	6	15
8:15 AM	0	0	1	0	0	0	2	0	0	0	0	1	0	0	0	0	4	17
8:30 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	4	18
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	15
Count Total	0	0	7	0	0	0	7	0	0	7	1	1	0	0	1	2	26	
Pk Hr Heavy	0	0	6	0	0	0	5	0	0	2	1	1	0	0	1	2	18	

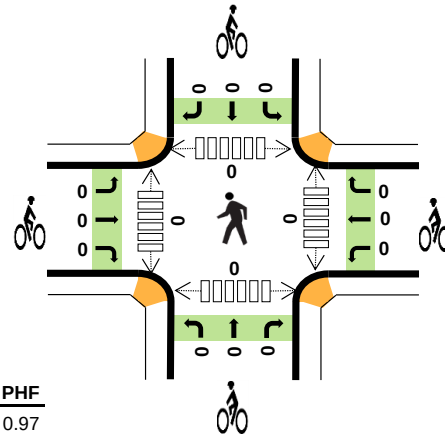
Count Summaries - Bikes

Interval Start	Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Genoa Way Castleton Rd



Date: 4/2/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV%	PHF
EB	1%	0.97
WB	0%	0.72
NB	1%	0.65
SB	0%	0.81
TOTAL	1%	0.91

Peak Hour Count Summaries

Peak Hour Interval Start		Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:45 PM		2	31	38	18	0	2	44	1	0	39	2	4	0	1	4	28	214	0
5:00 PM		1	26	42	19	0	6	80	2	0	20	1	5	0	2	4	39	247	0
5:15 PM		2	32	27	24	0	3	59	0	0	37	2	0	0	1	0	28	215	0
5:30 PM		1	34	30	26	0	6	49	3	0	61	4	4	0	0	2	36	256	932
Pk Hr	All	6	123	137	87	0	17	232	6	0	157	9	13	0	4	10	131	932	
	HV	0	0	3	1	0	0	1	0	0	1	0	0	0	0	0	0	6	
	HV%	0%	0%	2%	1%	-	0%	0%	0%	-	1%	0%	0%	-	0%	0%	0%	1%	

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

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

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

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

Count Summaries - All Vehicles

Interval Start		Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		3	38	45	22	0	6	48	2	0	23	3	4	0	1	1	26	222	0
4:15 PM		0	37	41	42	0	2	35	3	0	32	2	3	0	1	4	29	231	0
4:30 PM		0	26	33	16	0	5	61	1	0	34	5	7	0	0	1	29	218	0
4:45 PM		2	31	38	18	0	2	44	1	0	39	2	4	0	1	4	28	214	885
5:00 PM		1	26	42	19	0	6	80	2	0	20	1	5	0	2	4	39	247	910
5:15 PM		2	32	27	24	0	3	59	0	0	37	2	0	0	1	0	28	215	894
5:30 PM		1	34	30	26	0	6	49	3	0	61	4	4	0	0	2	36	256	932
5:45 PM		0	36	28	18	0	4	33	1	0	31	4	2	0	1	1	33	192	910
Count Total		9	260	284	185	0	34	409	13	0	277	23	29	0	7	17	248	1,795	
Pk Hr	All	6	123	137	87	0	17	232	6	0	157	9	13	0	4	10	131	932	
	HV	0	0	3	1	0	0	1	0	0	1	0	0	0	0	0	0	6	
	HV%	0%	0%	2%	1%	-	0%	0%	0%	-	1%	0%	0%	-	0%	0%	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1
4:15 PM	3	0	1	0	4	0	0	0	0	0	2	0	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Count Total	8	2	2	0	12	0	0	0	0	0	2	1	0	1	4
Peak Hour	4	1	1	0	6	0	0	0	0	0	0	0	0	0	0

Count Summaries - Heavy Vehicles

Interval Start	Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	8
5:00 PM	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4
Count Total	0	0	7	1	0	0	2	0	0	2	0	0	0	0	0	0	12	
Pk Hr Heavy	0	0	3	1	0	0	1	0	0	1	0	0	0	0	0	0	6	

Count Summaries - Bikes

Interval Start	Castleton Dr				Castleton Rd				Castleton Rd				Genoa Way				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

APPENDIX C

Future Traffic Projections

DRCOG Traffic Projections:

Castleton Heights Castle Rock

Location	2020	2050	Growth Factor	Annual Growth
Meadows btwn I-25 and Castleton	28,000	38,000	1.36	1.02%
Meadows btwn I-25 and Santa Fe	19,000	28,000	1.47	1.30%
Santa Fe btwn Meadows and Castleton	4,000	6,000	1.50	1.36%
Santa Fe btwn Castleton and Front	3,000	5,000	1.67	1.72%
Total	54,000	77,000	1.43	1.19%

APPENDIX D

Trip Generation Worksheets

Project Castleton Heights Castle Rock
 Subject Trip Generation for Affordable Housing (Income Limits)
 Designed by PAC Date November 08, 2024 Job No. 196273005
 Checked by _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Affordable Housing (Income Limits) (ITE 223)

Independent Variable - Dwelling Units (X)

$$X = 80$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 342)

Average Weekday

$$T = 0.36 (X)$$

$$T = 0.36 * 80$$

Directional Distribution: 29% ent. 71% exit.

$$T = 29 \text{ Average Vehicle Trip Ends}$$

$$8 \text{ entering} \quad 21 \text{ exiting}$$

$$8 + 21 = 29$$

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 343)

Average Weekday

$$(T) = 0.46 (X)$$

$$T = 0.46 * 80$$

Directional Distribution: 59% ent. 41% exit.

$$T = 37 \text{ Average Vehicle Trip Ends}$$

$$22 \text{ entering} \quad 15 \text{ exiting}$$

$$22 + 15 (*) = 37$$

Weekday (Page 341)

Average Weekday

$$(T) = 4.81 (X)$$

$$T = 4.81 * 80$$

Directional Distribution: 50% ent. 50% exit.

$$T = 386 \text{ Average Vehicle Trip Ends}$$

$$193 \text{ entering} \quad 193 \text{ exiting}$$

$$193 + 193 = 386$$



APPENDIX E

Intersection Analysis Worksheets

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Existing (2024)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (vph)	142	1098	66	240	1012	325	28	36	107	195	46	99
Future Volume (vph)	142	1098	66	240	1012	325	28	36	107	195	46	99
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	18.0	57.0	11.0	25.0	64.0	24.0	11.0	14.0	25.0	24.0	27.0	18.0
Total Split (%)	15.0%	47.5%	9.2%	20.8%	53.3%	20.0%	9.2%	11.7%	20.8%	20.0%	22.5%	15.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	10.7	71.6	82.7	14.3	75.1	91.9	6.6	8.2	22.7	12.3	11.5	26.8
Actuated g/C Ratio	0.09	0.60	0.69	0.12	0.63	0.77	0.06	0.07	0.19	0.10	0.10	0.22
v/c Ratio	0.50	0.39	0.06	0.63	0.37	0.28	0.17	0.33	0.32	0.41	0.27	0.24
Control Delay (s/veh)	57.6	14.7	0.1	57.2	12.6	1.3	55.9	60.1	12.3	52.9	52.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	14.7	0.1	57.2	12.6	1.3	55.9	60.1	12.3	52.9	52.6	7.6
LOS	E	B	A	E	B	A	E	E	B	D	D	A
Approach Delay (s/veh)		18.6			17.3			29.6			39.7	
Approach LOS		B			B			C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay (s/veh): 20.7

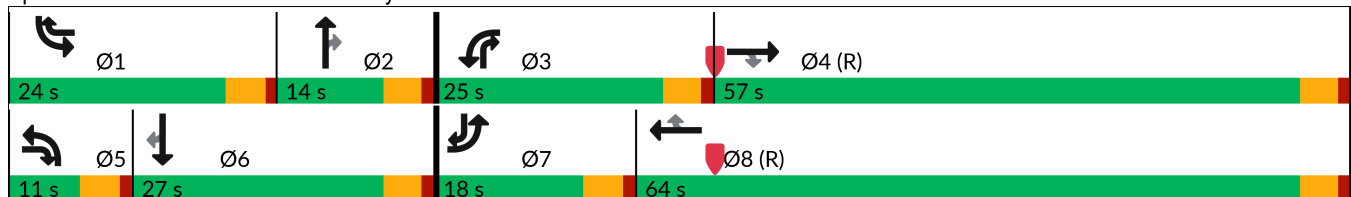
Intersection LOS: C

Intersection Capacity Utilization 49.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Existing (2024)
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1098	66	240	1012	325	28	36	107	195	46	99
Future Volume (veh/h)	142	1098	66	240	1012	325	28	36	107	195	46	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	153	1181	71	258	1088	0	30	39	115	210	49	106
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	212	3120	1002	330	3628		68	139	255	313	225	289
Arrive On Green	0.06	0.62	0.62	0.09	0.65	0.00	0.02	0.08	0.08	0.06	0.12	0.12
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	153	1181	71	258	1088	0	30	39	115	210	49	106
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	5.3	14.0	2.1	8.5	10.2	0.0	1.1	2.5	8.3	4.9	2.8	7.0
Cycle Q Clear(g_c), s	5.3	14.0	2.1	8.5	10.2	0.0	1.1	2.5	8.3	4.9	2.8	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	3120	1002	330	3628		68	139	255	313	225	289
V/C Ratio(X)	0.72	0.38	0.07	0.78	0.30		0.44	0.28	0.45	0.67	0.22	0.37
Avail Cap(c_a), veh/h	386	3120	1002	609	3628		175	139	255	816	351	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	11.5	8.3	53.3	9.3	0.0	58.0	52.0	44.6	55.1	47.7	43.0
Incr Delay (d2), s/veh	4.5	0.4	0.1	4.1	0.2	0.0	4.4	1.1	1.2	2.5	0.5	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	2.4	5.2	0.7	4.0	4.1	0.0	0.5	1.2	3.2	2.1	1.4	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.8	11.9	8.4	57.3	9.5	0.0	62.4	53.1	45.9	57.6	48.2	43.8
LnGrp LOS	E	B	A	E	A		E	D	D	E	D	D
Approach Vol, veh/h	1405			1346			184			365		
Approach Delay, s/veh	16.9			18.7			50.1			52.3		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	14.0	15.6	78.4	7.0	18.9	11.9	82.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	20.5	52.5	6.5	22.5	13.5	59.5				
Max Q Clear Time (g_c+l1), s	6.9	10.3	10.5	16.0	3.1	9.0	7.3	12.2				
Green Ext Time (p_c), s	0.6	0.0	0.6	11.3	0.0	0.4	0.2	10.2				

Intersection Summary

HCM 7th Control Delay, s/veh	23.4
HCM 7th LOS	C

Notes

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

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Existing (2024)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	966	109	257	924	573	78	73	298	680	130	333
Future Volume (vph)	217	966	109	257	924	573	78	73	298	680	130	333
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	24.0	47.0	12.0	27.0	50.0	30.0	12.0	16.0	27.0	30.0	34.0	24.0
Total Split (%)	20.0%	39.2%	10.0%	22.5%	41.7%	25.0%	10.0%	13.3%	22.5%	25.0%	28.3%	20.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	13.2	56.1	68.2	15.4	58.3	85.8	7.6	9.7	27.4	23.0	22.9	40.6
Actuated g/C Ratio	0.11	0.47	0.57	0.13	0.49	0.72	0.06	0.08	0.23	0.19	0.19	0.34
v/c Ratio	0.59	0.42	0.12	0.60	0.52	0.33	0.37	0.50	0.71	0.73	0.38	0.60
Control Delay (s/veh)	57.0	23.7	3.4	55.0	23.0	3.1	58.6	64.1	36.9	50.4	43.6	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.0	23.7	3.4	55.0	23.0	3.1	58.6	64.1	36.9	50.4	43.6	29.5
LOS	E	C	A	D	C	A	E	E	D	D	D	C
Approach Delay (s/veh)		27.6			23.9			45.1			43.6	
Approach LOS		C			C			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay (s/veh): 31.8

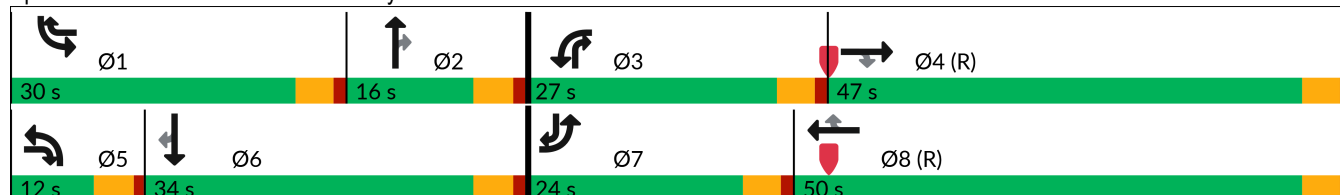
Intersection LOS: C

Intersection Capacity Utilization 61.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Existing (2024)
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (veh/h)	217	966	109	257	924	573	78	73	298	680	130	333
Future Volume (veh/h)	217	966	109	257	924	573	78	73	298	680	130	333
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	996	112	265	840	0	80	75	307	701	134	343
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	2515	839	339	1883		128	179	303	837	421	491
Arrive On Green	0.08	0.49	0.49	0.10	0.50	0.00	0.04	0.10	0.10	0.17	0.23	0.23
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	224	996	112	265	840	0	80	75	307	701	134	343
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	7.6	14.8	4.3	8.7	17.3	0.0	2.7	4.5	11.5	16.2	7.2	22.9
Cycle Q Clear(g_c), s	7.6	14.8	4.3	8.7	17.3	0.0	2.7	4.5	11.5	16.2	7.2	22.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	2515	839	339	1883		128	179	303	837	421	491
V/C Ratio(X)	0.77	0.40	0.13	0.78	0.45		0.62	0.42	1.01	0.84	0.32	0.70
Avail Cap(c_a), veh/h	562	2515	839	668	1883		216	179	303	1067	460	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	19.2	14.3	53.1	19.1	0.0	57.0	51.1	48.5	48.4	38.8	36.5
Incr Delay (d2), s/veh	4.3	0.5	0.3	3.9	0.8	0.0	4.9	1.6	55.4	4.8	0.4	3.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	5.9	1.6	4.1	7.6	0.0	1.3	2.2	13.7	7.1	3.4	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.0	19.7	14.6	57.0	19.9	0.0	61.9	52.7	103.9	53.3	39.2	40.3
LnGrp LOS	E	B	B	E	B		E	D	F	D	D	D
Approach Vol, veh/h	1332			1105			462			1178		
Approach Delay, s/veh	25.7			28.8			88.3			47.9		
Approach LOS	C			C			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.5	16.0	15.9	63.6	8.9	31.5	14.6	64.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	11.5	22.5	42.5	7.5	29.5	19.5	45.5				
Max Q Clear Time (g_c+I1), s	18.2	13.5	10.7	16.8	4.7	24.9	9.6	19.3				
Green Ext Time (p_c), s	1.8	0.0	0.7	8.4	0.0	0.9	0.5	6.6				

Intersection Summary

HCM 7th Control Delay, s/veh	40.0
HCM 7th LOS	D

Notes

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

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2028)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	1151	69	252	1061	341	29	38	112	204	48	104
Future Volume (vph)	149	1151	69	252	1061	341	29	38	112	204	48	104
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	18.0	57.0	11.0	25.0	64.0	24.0	11.0	14.0	25.0	24.0	27.0	18.0
Total Split (%)	15.0%	47.5%	9.2%	20.8%	53.3%	20.0%	9.2%	11.7%	20.8%	20.0%	22.5%	15.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	11.0	70.2	81.3	14.7	73.9	89.2	6.7	8.3	25.5	10.8	12.4	27.9
Actuated g/C Ratio	0.09	0.59	0.68	0.12	0.62	0.74	0.06	0.07	0.21	0.09	0.10	0.23
v/c Ratio	0.52	0.42	0.07	0.65	0.40	0.30	0.18	0.34	0.31	0.49	0.27	0.25
Control Delay (s/veh)	57.6	15.7	0.1	57.2	13.4	1.4	55.9	60.3	12.5	55.4	51.8	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	15.7	0.1	57.2	13.4	1.4	55.9	60.3	12.5	55.4	51.8	9.5
LOS	E	B	A	E	B	A	E	E	B	E	D	A
Approach Delay (s/veh)		19.5			17.9			29.7			41.5	
Approach LOS		B			B			C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay (s/veh): 21.4

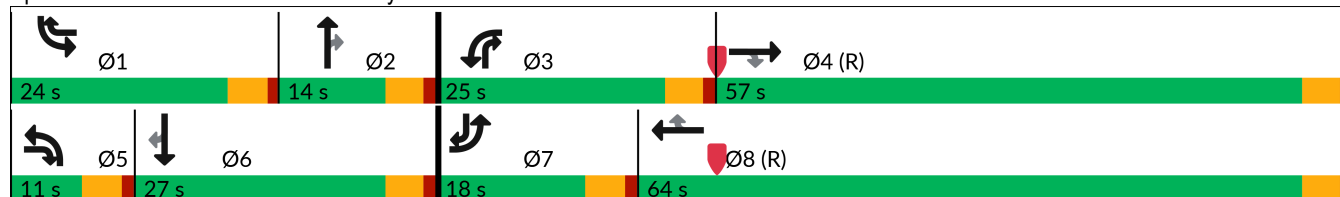
Intersection LOS: C

Intersection Capacity Utilization 51.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2028)
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	1151	69	252	1061	341	29	38	112	204	48	104
Future Volume (veh/h)	149	1151	69	252	1061	341	29	38	112	204	48	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	160	1238	74	271	1141	0	31	41	120	219	52	112
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	220	3091	993	343	3605		69	139	261	323	228	295
Arrive On Green	0.06	0.61	0.61	0.10	0.64	0.00	0.02	0.08	0.08	0.06	0.12	0.12
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	160	1238	74	271	1141	0	31	41	120	219	52	112
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	5.5	15.1	2.2	8.9	11.0	0.0	1.1	2.6	8.7	5.1	3.0	7.4
Cycle Q Clear(g_c), s	5.5	15.1	2.2	8.9	11.0	0.0	1.1	2.6	8.7	5.1	3.0	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	3091	993	343	3605		69	139	261	323	228	295
V/C Ratio(X)	0.73	0.40	0.07	0.79	0.32		0.45	0.30	0.46	0.68	0.23	0.38
Avail Cap(c_a), veh/h	386	3091	993	609	3605		175	139	261	816	351	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	12.1	8.5	53.0	9.6	0.0	58.0	52.1	44.4	54.9	47.6	42.8
Incr Delay (d2), s/veh	4.6	0.4	0.1	4.1	0.2	0.0	4.4	1.2	1.3	2.5	0.5	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	2.5	5.6	0.8	4.2	4.4	0.0	0.5	1.2	3.3	2.2	1.4	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.7	12.5	8.7	57.1	9.9	0.0	62.4	53.3	45.6	57.4	48.1	43.6
LnGrp LOS	E	B	A	E	A		E	D	D	E	D	D
Approach Vol, veh/h	1472			1412			192			383		
Approach Delay, s/veh	17.4			18.9			50.0			52.1		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	14.0	16.1	77.7	7.1	19.1	12.2	81.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	20.5	52.5	6.5	22.5	13.5	59.5				
Max Q Clear Time (g_c+l1), s	7.1	10.7	10.9	17.1	3.1	9.4	7.5	13.0				
Green Ext Time (p_c), s	0.6	0.0	0.6	11.9	0.0	0.5	0.2	10.9				

Intersection Summary

HCM 7th Control Delay, s/veh	23.7
HCM 7th LOS	C

Notes

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

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2028)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	1013	114	269	969	601	82	77	312	713	136	349
Future Volume (vph)	228	1013	114	269	969	601	82	77	312	713	136	349
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	24.0	47.0	12.0	27.0	50.0	30.0	12.0	16.0	27.0	30.0	34.0	24.0
Total Split (%)	20.0%	39.2%	10.0%	22.5%	41.7%	25.0%	10.0%	13.3%	22.5%	25.0%	28.3%	20.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	13.6	54.5	66.7	16.1	57.0	85.2	7.7	9.9	28.3	23.7	23.7	41.8
Actuated g/C Ratio	0.11	0.45	0.56	0.13	0.48	0.71	0.06	0.08	0.24	0.20	0.20	0.35
v/c Ratio	0.60	0.45	0.13	0.60	0.56	0.35	0.39	0.52	0.72	0.75	0.38	0.61
Control Delay (s/veh)	56.9	25.2	3.5	54.2	24.5	3.8	59.0	64.5	37.8	50.3	43.0	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.9	25.2	3.5	54.2	24.5	3.8	59.0	64.5	37.8	50.3	43.0	30.4
LOS	E	C	A	D	C	A	E	E	D	D	D	C
Approach Delay (s/veh)		28.7			24.9			45.8			43.7	
Approach LOS		C			C			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay (s/veh): 32.6

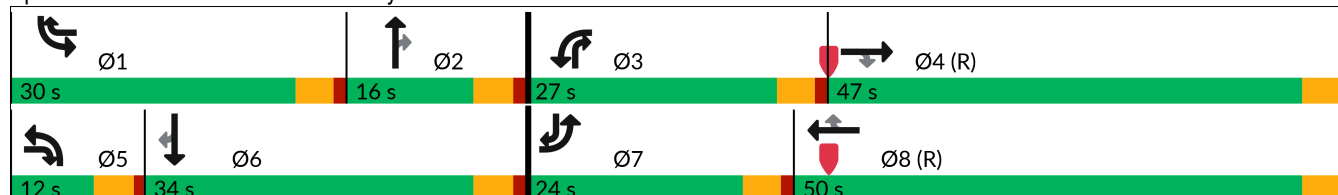
Intersection LOS: C

Intersection Capacity Utilization 63.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2028)

PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (veh/h)	228	1013	114	269	969	601	82	77	312	713	136	349
Future Volume (veh/h)	228	1013	114	269	969	601	82	77	312	713	136	349
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	1044	118	277	881	0	85	79	322	735	140	360
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	2465	827	352	1847		134	179	308	868	430	503
Arrive On Green	0.09	0.48	0.48	0.10	0.49	0.00	0.04	0.10	0.10	0.17	0.23	0.23
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	235	1044	118	277	881	0	85	79	322	735	140	360
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	8.0	16.0	4.6	9.1	18.7	0.0	2.9	4.8	11.5	17.0	7.5	24.1
Cycle Q Clear(g_c), s	8.0	16.0	4.6	9.1	18.7	0.0	2.9	4.8	11.5	17.0	7.5	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	2465	827	352	1847		134	179	308	868	430	503
V/C Ratio(X)	0.78	0.42	0.14	0.79	0.48		0.63	0.44	1.04	0.85	0.33	0.72
Avail Cap(c_a), veh/h	562	2465	827	668	1847		216	179	308	1067	460	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	20.2	14.8	52.9	20.1	0.0	56.8	51.2	48.3	48.1	38.5	36.2
Incr Delay (d2), s/veh	4.3	0.5	0.4	3.9	0.9	0.0	4.9	1.7	63.3	5.4	0.4	4.3
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	3.6	6.4	1.7	4.3	8.3	0.0	1.4	2.3	14.6	7.5	3.5	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	20.7	15.2	56.8	21.0	0.0	61.7	52.9	111.7	53.5	38.9	40.5
LnGrp LOS	E	C	B	E	C		E	D	F	D	D	D
Approach Vol, veh/h	1397			1158			486			1235		
Approach Delay, s/veh	26.5			29.6			93.4			48.1		
Approach LOS	C			C			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.2	16.0	16.3	62.4	9.2	32.1	15.0	63.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	11.5	22.5	42.5	7.5	29.5	19.5	45.5				
Max Q Clear Time (g_c+I1), s	19.0	13.5	11.1	18.0	4.9	26.1	10.0	20.7				
Green Ext Time (p_c), s	1.7	0.0	0.7	8.7	0.0	0.7	0.5	6.8				

Intersection Summary

HCM 7th Control Delay, s/veh	41.2
HCM 7th LOS	D

Notes

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

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (vph)	149	1151	70	256	1061	341	31	39	124	204	49	104
Future Volume (vph)	149	1151	70	256	1061	341	31	39	124	204	49	104
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	18.0	57.0	11.0	25.0	64.0	24.0	11.0	14.0	25.0	24.0	27.0	18.0
Total Split (%)	15.0%	47.5%	9.2%	20.8%	53.3%	20.0%	9.2%	11.7%	20.8%	20.0%	22.5%	15.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

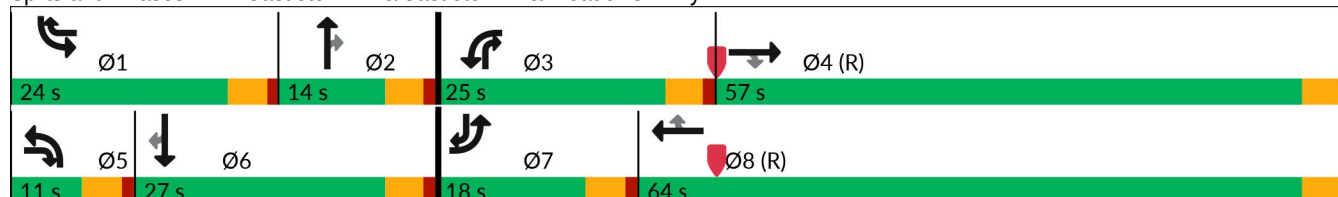
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	1151	70	256	1061	341	31	39	124	204	49	104
Future Volume (veh/h)	149	1151	70	256	1061	341	31	39	124	204	49	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	160	1238	75	275	1141	0	33	42	133	219	53	112
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	220	3085	993	347	3605		72	139	262	323	227	294
Arrive On Green	0.06	0.61	0.61	0.10	0.64	0.00	0.02	0.08	0.08	0.06	0.12	0.12
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	160	1238	75	275	1141	0	33	42	133	219	53	112
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	5.5	15.2	2.2	9.1	11.0	0.0	1.2	2.7	9.5	5.1	3.1	7.4
Cycle Q Clear(g_c), s	5.5	15.2	2.2	9.1	11.0	0.0	1.2	2.7	9.5	5.1	3.1	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	3085	993	347	3605		72	139	262	323	227	294
V/C Ratio(X)	0.73	0.40	0.08	0.79	0.32		0.46	0.30	0.51	0.68	0.23	0.38
Avail Cap(c_a), veh/h	386	3085	993	609	3605		175	139	262	816	351	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	12.1	8.6	53.0	9.6	0.0	58.0	52.1	44.7	54.9	47.7	42.9
Incr Delay (d2), s/veh	4.6	0.4	0.1	4.1	0.2	0.0	4.5	1.2	1.6	2.5	0.5	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	2.5	5.7	0.8	4.2	4.4	0.0	0.5	1.2	3.7	2.2	1.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.7	12.5	8.7	57.0	9.9	0.0	62.4	53.3	46.3	57.4	48.2	43.7
LnGrp LOS	E	B	A	E	A		E	D	D	E	D	D
Approach Vol, veh/h	1473				1416		208				384	
Approach Delay, s/veh	17.5				19.0		50.3				52.1	
Approach LOS	B				B		D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	14.0	16.2	77.6	7.2	19.0	12.2	81.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	20.5	52.5	6.5	22.5	13.5	59.5				
Max Q Clear Time (g_c+I1), s	7.1	11.5	11.1	17.2	3.2	9.4	7.5	13.0				
Green Ext Time (p_c), s	0.6	0.0	0.6	11.9	0.0	0.5	0.2	10.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			23.9									
HCM 7th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	1013	116	281	969	601	84	78	320	713	138	349
Future Volume (vph)	228	1013	116	281	969	601	84	78	320	713	138	349
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	24.0	47.0	12.0	27.0	50.0	30.0	12.0	16.0	27.0	30.0	34.0	24.0
Total Split (%)	20.0%	39.2%	10.0%	22.5%	41.7%	25.0%	10.0%	13.3%	22.5%	25.0%	28.3%	20.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

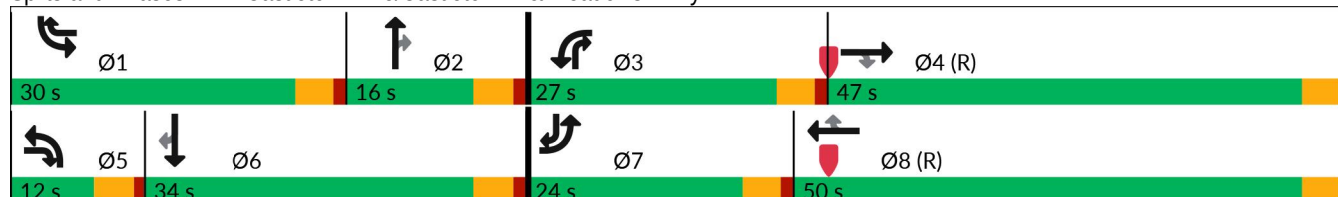
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (veh/h)	228	1013	116	281	969	601	84	78	320	713	138	349
Future Volume (veh/h)	228	1013	116	281	969	601	84	78	320	713	138	349
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	1044	120	290	881	0	87	80	330	735	142	360
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	2445	822	365	1847		137	179	314	868	429	502
Arrive On Green	0.09	0.48	0.48	0.10	0.49	0.00	0.04	0.10	0.10	0.17	0.23	0.23
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	235	1044	120	290	881	0	87	80	330	735	142	360
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	8.0	16.1	4.7	9.5	18.7	0.0	3.0	4.8	11.5	17.0	7.6	24.1
Cycle Q Clear(g_c), s	8.0	16.1	4.7	9.5	18.7	0.0	3.0	4.8	11.5	17.0	7.6	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	2445	822	365	1847		137	179	314	868	429	502
V/C Ratio(X)	0.78	0.43	0.15	0.79	0.48		0.64	0.45	1.05	0.85	0.33	0.72
Avail Cap(c_a), veh/h	562	2445	822	668	1847		216	179	314	1067	460	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	20.5	15.1	52.6	20.1	0.0	56.8	51.2	48.1	48.1	38.6	36.2
Incr Delay (d2), s/veh	4.3	0.5	0.4	4.0	0.9	0.0	4.8	1.7	64.5	5.4	0.4	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	6.5	1.8	4.5	8.3	0.0	1.4	2.4	15.0	7.5	3.6	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	21.0	15.4	56.6	21.0	0.0	61.6	53.0	112.6	53.5	39.0	40.6
LnGrp LOS	E	C	B	E	C		E	D	F	D	D	D
Approach Vol, veh/h	1399				1171				497			
Approach Delay, s/veh	26.7				29.8				94.1			
Approach LOS	C				C				F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.2	16.0	16.8	62.0	9.2	32.0	15.0	63.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	11.5	22.5	42.5	7.5	29.5	19.5	45.5				
Max Q Clear Time (g_c+I1), s	19.0	13.5	11.5	18.1	5.0	26.1	10.0	20.7				
Green Ext Time (p_c), s	1.7	0.0	0.8	8.7	0.0	0.7	0.5	6.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	41.5											
HCM 7th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2045)

AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	1408	85	308	1297	417	36	46	137	250	59	127
Future Volume (vph)	182	1408	85	308	1297	417	36	46	137	250	59	127
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	17.0	58.0	9.1	24.0	65.0	24.0	9.1	14.0	24.0	24.0	28.9	17.0
Total Split (%)	14.2%	48.3%	7.6%	20.0%	54.2%	20.0%	7.6%	11.7%	20.0%	20.0%	24.1%	14.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	11.9	66.3	77.7	16.7	71.2	87.8	6.9	8.8	28.0	12.2	14.1	28.4
Actuated g/C Ratio	0.10	0.55	0.65	0.14	0.59	0.73	0.06	0.07	0.23	0.10	0.12	0.24
v/c Ratio	0.58	0.54	0.09	0.69	0.51	0.38	0.21	0.39	0.35	0.53	0.29	0.31
Control Delay (s/veh)	58.6	19.9	0.8	56.8	16.4	3.5	57.8	61.1	15.5	54.8	49.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.6	19.9	0.8	56.8	16.4	3.5	57.8	61.1	15.5	54.8	49.2	13.0
LOS	E	B	A	E	B	A	E	E	B	D	D	B
Approach Delay (s/veh)		23.1			20.2			32.0			41.8	
Approach LOS		C			C			C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay (s/veh): 24.1

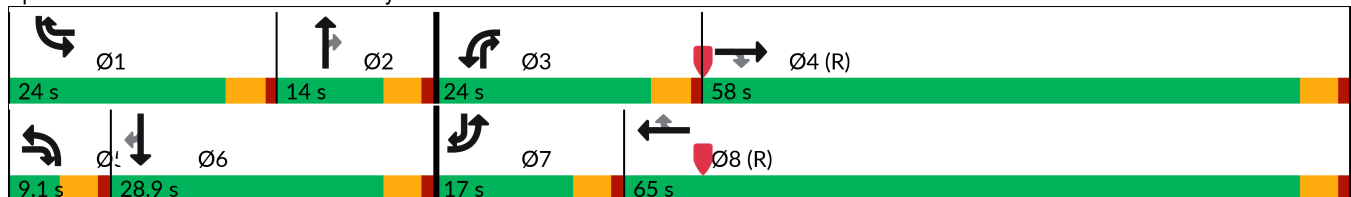
Intersection LOS: C

Intersection Capacity Utilization 58.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2045)

AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (veh/h)	182	1408	85	308	1297	417	36	46	137	250	59	127
Future Volume (veh/h)	182	1408	85	308	1297	417	36	46	137	250	59	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	196	1514	91	331	1395	0	39	49	147	269	63	137
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	255	2952	955	403	3486		78	139	285	377	243	324
Arrive On Green	0.07	0.58	0.58	0.11	0.62	0.00	0.02	0.08	0.08	0.08	0.13	0.13
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	196	1514	91	331	1395	0	39	49	147	269	63	137
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	6.7	21.3	2.9	10.9	15.0	0.0	1.4	3.2	9.5	6.3	3.6	9.0
Cycle Q Clear(g_c), s	6.7	21.3	2.9	10.9	15.0	0.0	1.4	3.2	9.5	6.3	3.6	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	2952	955	403	3486		78	139	285	377	243	324
V/C Ratio(X)	0.77	0.51	0.10	0.82	0.40		0.50	0.35	0.52	0.71	0.26	0.42
Avail Cap(c_a), veh/h	357	2952	955	579	3486		124	139	285	816	380	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	14.9	9.8	52.0	11.5	0.0	57.8	52.3	43.5	54.2	47.0	41.6
Incr Delay (d2), s/veh	6.4	0.6	0.2	6.3	0.3	0.0	4.8	1.5	1.6	2.5	0.6	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	3.1	8.1	1.0	5.2	6.1	0.0	0.6	1.5	4.0	2.7	1.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.9	15.5	10.0	58.3	11.8	0.0	62.6	53.9	45.1	56.8	47.6	42.4
LnGrp LOS	E	B	B	E	B		E	D	D	E	D	D
Approach Vol, veh/h	1801			1726			235			469		
Approach Delay, s/veh	20.2			20.7			49.8			51.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	14.0	18.1	74.4	7.4	20.1	13.4	79.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	19.5	53.5	4.6	24.4	12.5	60.5				
Max Q Clear Time (g_c+I1), s	8.3	11.5	12.9	23.3	3.4	11.0	8.7	17.0				
Green Ext Time (p_c), s	0.7	0.0	0.7	14.7	0.0	0.6	0.2	14.5				

Intersection Summary

HCM 7th Control Delay, s/veh	25.5
HCM 7th LOS	C

Notes

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

Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2045)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 			  		
Traffic Volume (vph)	278	1238	140	329	1185	735	100	94	382	872	167	427
Future Volume (vph)	278	1238	140	329	1185	735	100	94	382	872	167	427
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	23.0	47.0	12.2	27.0	51.0	31.0	12.2	15.0	27.0	31.0	33.8	23.0
Total Split (%)	19.2%	39.2%	10.2%	22.5%	42.5%	25.8%	10.2%	12.5%	22.5%	25.8%	28.2%	19.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effect Green (s)	15.5	48.0	60.0	18.4	51.0	81.3	7.5	9.7	32.7	25.8	28.0	48.0
Actuated g/C Ratio	0.13	0.40	0.50	0.15	0.43	0.68	0.06	0.08	0.27	0.22	0.23	0.40
v/c Ratio	0.65	0.63	0.17	0.64	0.76	0.46	0.48	0.64	0.79	0.84	0.40	0.66
Control Delay (s/veh)	56.5	31.5	3.5	53.0	32.1	7.8	62.1	72.9	41.8	53.0	41.5	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.5	31.5	3.5	53.0	32.1	7.8	62.1	72.9	41.8	53.0	41.5	30.2
LOS	E	C	A	D	C	A	E	E	D	D	D	C
Approach Delay (s/veh)		33.4			30.5			50.4			45.0	
Approach LOS		C			C			D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay (s/veh): 36.8

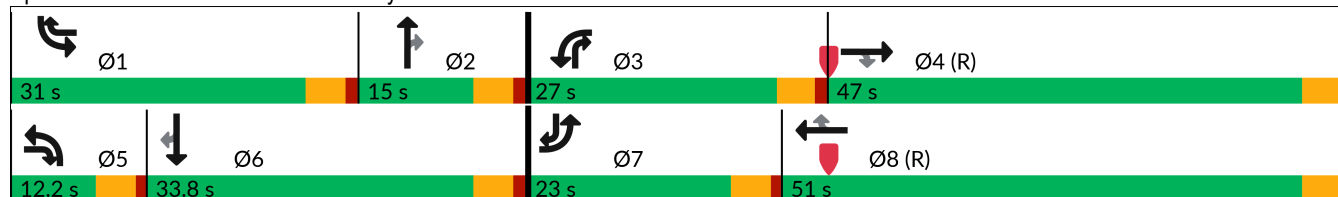
Intersection LOS: D

Intersection Capacity Utilization 75.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Meadows Pkwy & Castleton Dr



Castleton Heights Castle Rock
1: Meadows Pkwy & Castleton Dr

Background (2045)

PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	1238	140	329	1185	735	100	94	382	872	167	427
Future Volume (veh/h)	278	1238	140	329	1185	735	100	94	382	872	167	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	1276	144	339	1078	0	103	97	394	899	172	440
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	2266	775	415	1712		155	164	323	1016	458	551
Arrive On Green	0.10	0.44	0.44	0.12	0.46	0.00	0.04	0.09	0.09	0.20	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	287	1276	144	339	1078	0	103	97	394	899	172	440
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	9.8	22.2	6.1	11.1	26.3	0.0	3.5	6.0	10.5	20.9	9.2	29.4
Cycle Q Clear(g_c), s	9.8	22.2	6.1	11.1	26.3	0.0	3.5	6.0	10.5	20.9	9.2	29.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	2266	775	415	1712		155	164	323	1016	458	551
V/C Ratio(X)	0.81	0.56	0.19	0.82	0.63		0.66	0.59	1.22	0.88	0.38	0.80
Avail Cap(c_a), veh/h	533	2266	775	668	1712		222	164	323	1109	458	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	24.8	17.3	51.8	24.8	0.0	56.4	52.7	47.8	46.5	37.7	35.4
Incr Delay (d2), s/veh	5.6	1.0	0.5	4.2	1.8	0.0	4.8	5.6	123.0	8.3	0.5	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	4.5	9.1	2.4	5.2	11.9	0.0	1.6	3.1	20.7	9.4	4.3	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.3	25.8	17.8	55.9	26.6	0.0	61.2	58.3	170.8	54.8	38.2	43.5
LnGrp LOS	E	C	B	E	C		E	E	F	D	D	D
Approach Vol, veh/h	1707			1417			594			1511		
Approach Delay, s/veh	30.6			33.6			133.4			49.6		
Approach LOS	C			C			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	15.0	18.5	57.7	9.9	33.9	16.8	59.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	26.5	10.5	22.5	42.5	7.7	29.3	18.5	46.5				
Max Q Clear Time (g_c+I1), s	22.9	12.5	13.1	24.2	5.5	31.4	11.8	28.3				
Green Ext Time (p_c), s	1.4	0.0	0.8	9.4	0.0	0.0	0.6	7.6				

Intersection Summary

HCM 7th Control Delay, s/veh	48.6
HCM 7th LOS	D

Notes

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

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	1408	86	312	1297	417	38	47	149	250	60	127
Future Volume (vph)	182	1408	86	312	1297	417	38	47	149	250	60	127
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	17.0	58.0	9.1	24.0	65.0	24.0	9.1	14.0	24.0	24.0	28.9	17.0
Total Split (%)	14.2%	48.3%	7.6%	20.0%	54.2%	20.0%	7.6%	11.7%	20.0%	20.0%	24.1%	14.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

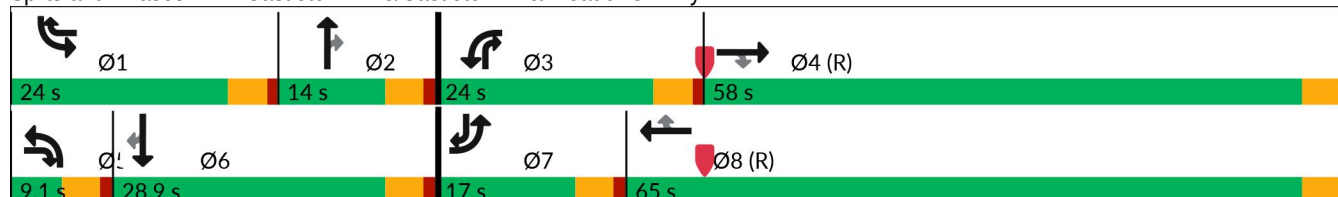
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	1408	86	312	1297	417	38	47	149	250	60	127
Future Volume (veh/h)	182	1408	86	312	1297	417	38	47	149	250	60	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	196	1514	92	335	1395	0	41	51	160	269	65	137
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	255	2947	954	406	3486		80	139	287	377	242	323
Arrive On Green	0.07	0.58	0.58	0.11	0.62	0.00	0.02	0.08	0.08	0.08	0.13	0.13
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	196	1514	92	335	1395	0	41	51	160	269	65	137
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	6.7	21.4	2.9	11.0	15.0	0.0	1.5	3.3	9.5	6.3	3.8	9.0
Cycle Q Clear(g_c), s	6.7	21.4	2.9	11.0	15.0	0.0	1.5	3.3	9.5	6.3	3.8	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	2947	954	406	3486		80	139	287	377	242	323
V/C Ratio(X)	0.77	0.51	0.10	0.82	0.40		0.51	0.37	0.56	0.71	0.27	0.42
Avail Cap(c_a), veh/h	357	2947	954	579	3486		124	139	287	816	380	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	15.0	9.9	52.0	11.5	0.0	57.8	52.4	43.8	54.2	47.1	41.6
Incr Delay (d2), s/veh	6.4	0.6	0.2	6.5	0.3	0.0	4.9	1.6	2.4	2.5	0.6	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	3.1	8.1	1.1	5.3	6.1	0.0	0.7	1.5	4.5	2.7	1.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.9	15.6	10.1	58.5	11.8	0.0	62.7	54.0	46.2	56.8	47.7	42.5
LnGrp LOS	E	B	B	E	B		E	D	D	E	D	D
Approach Vol, veh/h	1802				1730		252				471	
Approach Delay, s/veh	20.3				20.8		50.4				51.4	
Approach LOS	C				C		D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	14.0	18.2	74.3	7.5	20.0	13.4	79.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	19.5	53.5	4.6	24.4	12.5	60.5				
Max Q Clear Time (g_c+I1), s	8.3	11.5	13.0	23.4	3.5	11.0	8.7	17.0				
Green Ext Time (p_c), s	0.7	0.0	0.7	14.7	0.0	0.6	0.2	14.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			25.7									
HCM 7th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	1238	142	341	1185	735	102	95	390	872	169	427
Future Volume (vph)	278	1238	142	341	1185	735	102	95	390	872	169	427
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	23.0	47.0	12.2	27.0	51.0	31.0	12.2	15.0	27.0	31.0	33.8	23.0
Total Split (%)	19.2%	39.2%	10.2%	22.5%	42.5%	25.8%	10.2%	12.5%	22.5%	25.8%	28.2%	19.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

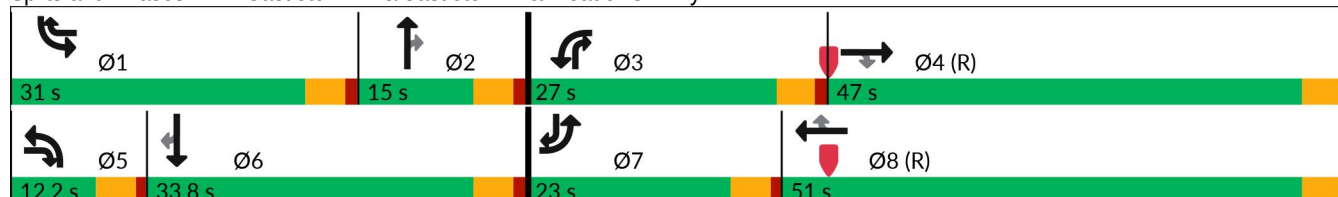
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	1238	142	341	1185	735	102	95	390	872	169	427
Future Volume (veh/h)	278	1238	142	341	1185	735	102	95	390	872	169	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	1276	146	352	1078	0	105	98	402	899	174	440
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	2247	770	428	1712		157	164	329	1016	457	550
Arrive On Green	0.10	0.44	0.44	0.12	0.46	0.00	0.05	0.09	0.09	0.20	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	287	1276	146	352	1078	0	105	98	402	899	174	440
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	9.8	22.4	6.3	11.6	26.3	0.0	3.6	6.1	10.5	20.9	9.3	29.3
Cycle Q Clear(g_c), s	9.8	22.4	6.3	11.6	26.3	0.0	3.6	6.1	10.5	20.9	9.3	29.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	2247	770	428	1712		157	164	329	1016	457	550
V/C Ratio(X)	0.81	0.57	0.19	0.82	0.63		0.67	0.60	1.22	0.88	0.38	0.80
Avail Cap(c_a), veh/h	533	2247	770	668	1712		222	164	329	1109	457	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	25.1	17.5	51.5	24.8	0.0	56.4	52.7	47.5	46.5	37.8	35.4
Incr Delay (d2), s/veh	5.6	1.0	0.5	4.7	1.8	0.0	4.8	5.9	123.7	8.3	0.5	8.3
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	4.5	9.2	0.1	5.4	11.9	0.0	1.7	3.1	21.1	9.4	4.3	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.3	26.1	18.0	56.3	26.6	0.0	61.2	58.6	171.2	54.8	38.3	43.7
LnGrp LOS	E	C	B	E	C		E	E	F	D	D	D
Approach Vol, veh/h	1709				1430		605				1513	
Approach Delay, s/veh	30.8				33.9		133.9				49.7	
Approach LOS	C				C		F				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	15.0	18.9	57.3	10.0	33.8	16.8	59.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	26.5	10.5	22.5	42.5	7.7	29.3	18.5	46.5				
Max Q Clear Time (g_c+I1), s	22.9	12.5	13.6	24.4	5.6	31.3	11.8	28.3				
Green Ext Time (p_c), s	1.4	0.0	0.9	9.4	0.0	0.0	0.6	7.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			48.9									
HCM 7th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Existing (2024)
AM Peak-Hour

Intersection

Intersection Delay, s/veh 7.8
Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	161	5	15	40	4
Future Vol, veh/h	21	161	5	15	40	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	25	192	6	18	48	5
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.8	7.5	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	91%	0%	0%	25%
Vol Thru, %	0%	100%	0%	75%
Vol Right, %	9%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	21	161	20
LT Vol	40	0	0	5
Through Vol	0	21	0	15
RT Vol	4	0	161	0
Lane Flow Rate	52	25	192	24
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.067	0.032	0.211	0.029
Departure Headway (Hd)	4.62	4.656	3.956	4.336
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	780	766	903	815
Service Time	2.62	2.401	1.7	2.418
HCM Lane V/C Ratio	0.067	0.033	0.213	0.029
HCM Control Delay, s/veh	8	7.6	7.8	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.8	0.1

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Existing (2024)
AM Peak-Hour

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	161	5	15	40	4
Future Vol, veh/h	21	161	5	15	40	4
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	84	84	84	84	84	84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	25	192	6	18	48	5

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	217
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1353
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1353
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.92	9.01
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	950	-	-	450	-
HCM Lane V/C Ratio	0.055	-	-	0.004	-
HCM Control Delay (s/veh)	9	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Existing (2024)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	102	4	37	159	6
Future Vol, veh/h	30	102	4	37	159	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	120	5	44	187	7
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.8	8	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	96%	0%	0%	10%
Vol Thru, %	0%	100%	0%	90%
Vol Right, %	4%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	30	102	41
LT Vol	159	0	0	4
Through Vol	0	30	0	37
RT Vol	6	0	102	0
Lane Flow Rate	194	35	120	48
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.246	0.05	0.145	0.063
Departure Headway (Hd)	4.566	5.054	4.35	4.699
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	788	711	827	764
Service Time	2.582	2.767	2.064	2.718
HCM Lane V/C Ratio	0.246	0.049	0.145	0.063
HCM Control Delay, s/veh	9.1	8	7.8	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.2	0.5	0.2

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Existing (2024)
PM Peak-Hour

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	30	102	4	37	159	6
Future Vol, veh/h	30	102	4	37	159	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	120	5	44	187	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	88	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1425	-	913	1037
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1425	-	909	1037
Mov Cap-2 Maneuver	-	-	-	-	909	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	966	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.74		10	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBL	WBT
Capacity (veh/h)	914		-	-	176	-
HCM Lane V/C Ratio	0.212		-	-	0.003	-
HCM Control Delay (s/veh)	10		-	-	7.5	0
HCM Lane LOS	B		-	-	A	A
HCM 95th %tile Q(veh)	0.8		-	-	0	-

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2028)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	169	5	16	42	4
Future Vol, veh/h	22	169	5	16	42	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	26	201	6	19	50	5
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.8	7.6	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	91%	0%	0%	24%
Vol Thru, %	0%	100%	0%	76%
Vol Right, %	9%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	46	22	169	21
LT Vol	42	0	0	5
Through Vol	0	22	0	16
RT Vol	4	0	169	0
Lane Flow Rate	55	26	201	25
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.071	0.034	0.221	0.03
Departure Headway (Hd)	4.647	4.661	3.96	4.346
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	775	765	901	812
Service Time	2.647	2.41	1.708	2.434
HCM Lane V/C Ratio	0.071	0.034	0.223	0.031
HCM Control Delay, s/veh	8	7.6	7.8	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.8	0.1

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	169	5	16	42	4
Future Vol, veh/h	22	169	5	16	42	4
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	84	84	84	84	84	84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	26	201	6	19	50	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	227	0	57	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.12	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1341	-	943	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1341	-	938	1041
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	979	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.83		9.04	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	947	-	-	429	-	
HCM Lane V/C Ratio	0.058	-	-	0.004	-	
HCM Control Delay (s/veh)	9	-	-	7.7	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2028)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	107	4	39	167	6
Future Vol, veh/h	31	107	4	39	167	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	126	5	46	196	7
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.9	8.1	9.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	97%	0%	0%	9%
Vol Thru, %	0%	100%	0%	91%
Vol Right, %	3%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	31	107	43
LT Vol	167	0	0	4
Through Vol	0	31	0	39
RT Vol	6	0	107	0
Lane Flow Rate	204	36	126	51
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.26	0.051	0.153	0.066
Departure Headway (Hd)	4.59	5.08	4.376	4.732
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	707	821	758
Service Time	2.604	2.798	2.094	2.754
HCM Lane V/C Ratio	0.26	0.051	0.153	0.067
HCM Control Delay, s/veh	9.2	8.1	7.9	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.2	0.5	0.2

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	31	107	4	39	167	6
Future Vol, veh/h	31	107	4	39	167	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	126	5	46	196	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	92	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	55	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1416	-	908	1036
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1416	-	905	1036
Mov Cap-2 Maneuver	-	-	-	-	905	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	964	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.7		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	909	-	-	167	-	
HCM Lane V/C Ratio	0.224	-	-	0.003	-	
HCM Control Delay (s/veh)	10.1	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.9	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2028)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	175	5	16	57	4
Future Vol, veh/h	22	175	5	16	57	4
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	26	208	6	19	68	5
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8	7.6	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	93%	0%	0%	24%
Vol Thru, %	0%	100%	0%	76%
Vol Right, %	7%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	22	175	21
LT Vol	57	0	0	5
Through Vol	0	22	0	16
RT Vol	4	0	175	0
Lane Flow Rate	73	26	208	25
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.094	0.034	0.231	0.031
Departure Headway (Hd)	4.682	4.693	3.992	4.486
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	770	757	892	802
Service Time	2.684	2.456	1.755	2.49
HCM Lane V/C Ratio	0.095	0.034	0.233	0.031
HCM Control Delay, s/veh	8.2	7.6	8	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.9	0.1

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	22	175	5	16	57	4
Future Vol, veh/h	22	175	5	16	57	4
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	84	84	84	84	84	84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	26	208	6	19	68	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	57	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.12	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1333	-	943	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1333	-	938	1041
Mov Cap-2 Maneuver	-	-	-	-	938	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	979	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		1.84		9.13	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	945	-	-	429	-	
HCM Lane V/C Ratio	0.077	-	-	0.004	-	
HCM Ctrl Dly (s/v)	9.1	-	-	7.7	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2028)
PM Peak-Hour

Intersection

Intersection Delay, s/veh 8.7
Intersection LOS A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	122	4	39	178	6
Future Vol, veh/h	31	122	4	39	178	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	144	5	46	209	7
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.1	8.2	9.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	97%	0%	0%	9%
Vol Thru, %	0%	100%	0%	91%
Vol Right, %	3%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	184	31	122	43
LT Vol	178	0	0	4
Through Vol	0	31	0	39
RT Vol	6	0	122	0
Lane Flow Rate	216	36	144	51
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.278	0.052	0.176	0.067
Departure Headway (Hd)	4.629	5.117	4.413	4.788
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	777	702	815	749
Service Time	2.651	2.835	2.131	2.812
HCM Lane V/C Ratio	0.278	0.051	0.177	0.068
HCM Control Delay, s/veh	9.4	8.1	8.1	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.2	0.6	0.2

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	31	122	4	39	178	6
Future Vol, veh/h	31	122	4	39	178	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	144	5	46	209	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	180	0	92	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	55	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1396	-	908	1036
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1396	-	905	1036
Mov Cap-2 Maneuver	-	-	-	-	905	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	964	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.71		10.19	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	909	-	-	167	-	
HCM Lane V/C Ratio	0.238	-	-	0.003	-	
HCM Ctrl Dly (s/v)	10.2	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.9	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2045)
AM Peak-Hour

Intersection

Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	27	206	6	19	51	5
Future Vol, veh/h	27	206	6	19	51	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	32	245	7	23	61	6
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.1	7.7	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	91%	0%	0%	24%
Vol Thru, %	0%	100%	0%	76%
Vol Right, %	9%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	27	206	25
LT Vol	51	0	0	6
Through Vol	0	27	0	19
RT Vol	5	0	206	0
Lane Flow Rate	67	32	245	30
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.088	0.042	0.271	0.037
Departure Headway (Hd)	4.759	4.683	3.982	4.512
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	757	759	893	798
Service Time	2.76	2.448	1.746	2.516
HCM Lane V/C Ratio	0.089	0.042	0.274	0.038
HCM Control Delay, s/veh	8.2	7.7	8.2	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	1.1	0.1

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2045)
AM Peak-Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	27	206	6	19	51	5
Future Vol, veh/h	27	206	6	19	51	5
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	84	84	84	84	84	84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	32	245	7	23	61	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	277	0	69	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.12	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1285	-	928	1033
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1285	-	923	1033
Mov Cap-2 Maneuver	-	-	-	-	923	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	972	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		1.88		9.16	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	932	-	-	432	-	
HCM Lane V/C Ratio	0.072	-	-	0.006	-	
HCM Control Delay (s/veh)	9.2	-	-	7.8	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2045)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	131	5	47	204	8
Future Vol, veh/h	38	131	5	47	204	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	154	6	55	240	9
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.3	8.4	10
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	96%	0%	0%	10%
Vol Thru, %	0%	100%	0%	90%
Vol Right, %	4%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	38	131	52
LT Vol	204	0	0	5
Through Vol	0	38	0	47
RT Vol	8	0	131	0
Lane Flow Rate	249	45	154	61
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.325	0.065	0.193	0.083
Departure Headway (Hd)	4.698	5.218	4.513	4.903
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	687	795	730
Service Time	2.725	2.943	2.238	2.937
HCM Lane V/C Ratio	0.325	0.066	0.194	0.084
HCM Control Delay, s/veh	10	8.3	8.3	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.4	0.2	0.7	0.3

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Background (2045)
PM Peak-Hour

Intersection

Int Delay, s/veh 5.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	131	5	47	204	8
Future Vol, veh/h	38	131	5	47	204	8
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	154	6	55	240	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	199
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1374
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1374
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.73	10.65
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	886	-	-	173	-
HCM Lane V/C Ratio	0.282	-	-	0.004	-
HCM Control Delay (s/veh)	10.6	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0	-

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2045)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	27	212	6	19	66	5
Future Vol, veh/h	27	212	6	19	66	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	32	252	7	23	79	6
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.3	7.8	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	93%	0%	0%	24%
Vol Thru, %	0%	100%	0%	76%
Vol Right, %	7%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	27	212	25
LT Vol	66	0	0	6
Through Vol	0	27	0	19
RT Vol	5	0	212	0
Lane Flow Rate	85	32	252	30
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.113	0.042	0.281	0.038
Departure Headway (Hd)	4.794	4.715	4.014	4.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	752	751	883	787
Service Time	2.795	2.499	1.797	2.578
HCM Lane V/C Ratio	0.113	0.043	0.285	0.038
HCM Control Delay, s/veh	8.4	7.7	8.4	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	1.2	0.1

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2045)
AM Peak-Hour

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	27	212	6	19	66	5
Future Vol, veh/h	27	212	6	19	66	5
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	84	84	84	84	84	84
Heavy Vehicles, %	3	3	2	2	5	5
Mvmt Flow	32	252	7	23	79	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	285	0	69	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.12	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1278	-	928	1033
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1278	-	923	1033
Mov Cap-2 Maneuver	-	-	-	-	923	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	972	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		1.88		9.26	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	930	-	-	432	-	
HCM Lane V/C Ratio	0.091	-	-	0.006	-	
HCM Ctrl Dly (s/v)	9.3	-	-	7.8	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2045)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	146	5	47	215	8
Future Vol, veh/h	38	146	5	47	215	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	172	6	55	253	9
Number of Lanes	1	1	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	8.5	8.5	10.3
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1
Vol Left, %	96%	0%	0%	10%
Vol Thru, %	0%	100%	0%	90%
Vol Right, %	4%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	223	38	146	52
LT Vol	215	0	0	5
Through Vol	0	38	0	47
RT Vol	8	0	146	0
Lane Flow Rate	262	45	172	61
Geometry Grp	2	5	5	4a
Degree of Util (X)	0.346	0.065	0.217	0.084
Departure Headway (Hd)	4.743	5.257	4.552	4.965
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	758	682	788	721
Service Time	2.771	2.987	2.282	3.003
HCM Lane V/C Ratio	0.346	0.066	0.218	0.085
HCM Control Delay, s/veh	10.3	8.4	8.5	8.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.5	0.2	0.8	0.3

Castleton Heights Castle Rock
2: Castleton Ct & Castleton Rd/Castleton Way

Total (2045)
PM Peak-Hour

Intersection						
Int Delay, s/veh	5.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	38	146	5	47	215	8
Future Vol, veh/h	38	146	5	47	215	8
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	172	6	55	253	9
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	216	0	112	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1353	-	885	1025
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1353	-	881	1025
Mov Cap-2 Maneuver	-	-	-	-	881	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	951	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0.74		10.77	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	886	-	-	173	-	
HCM Lane V/C Ratio	0.296	-	-	0.004	-	
HCM Ctrl Dly (s/v)	10.8	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1.2	-	-	0	-	

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Existing (2024)
AM Peak-Hour

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	5	29	7	5	2	10	4	56	29	59	60	10
Future Vol, veh/h	5	29	7	5	2	10	4	56	29	59	60	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	2	2	2	2	2	3	3	3	8	8	8
Mvmt Flow	6	33	8	6	2	11	5	64	33	67	68	11
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8	8	8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	29%	100%	0%
Vol Thru, %	0%	66%	0%	81%	12%	0%	86%
Vol Right, %	0%	34%	0%	19%	59%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	85	5	36	17	59	70
LT Vol	4	0	5	0	5	59	0
Through Vol	0	56	0	29	2	0	60
RT Vol	0	29	0	7	10	0	10
Lane Flow Rate	5	97	6	41	19	67	80
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.007	0.124	0.009	0.057	0.026	0.099	0.104
Departure Headway (Hd)	5.35	4.609	5.66	5.022	4.904	5.301	4.7
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	672	781	635	717	733	668	752
Service Time	3.056	2.316	3.367	2.728	2.911	3.094	2.492
HCM Lane V/C Ratio	0.007	0.124	0.009	0.057	0.026	0.1	0.106
HCM Control Delay, s/veh	8.1	8	8.4	8	8	8.7	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.4	0	0.2	0.1	0.3	0.3

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Existing (2024)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	3	7	15	21	46	5	82	4	6	120	8
Future Vol, veh/h	4	3	7	15	21	46	5	82	4	6	120	8
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	4	9	18	26	56	6	100	5	7	146	10
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	7.9	8.7	8.5	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	100%	0%
Vol Thru, %	0%	95%	0%	30%	26%	0%	94%
Vol Right, %	0%	5%	0%	70%	56%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	86	4	10	82	6	128
LT Vol	5	0	4	0	15	6	0
Through Vol	0	82	0	3	21	0	120
RT Vol	0	4	0	7	46	0	8
Lane Flow Rate	6	105	5	12	100	7	156
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.009	0.144	0.008	0.016	0.137	0.011	0.212
Departure Headway (Hd)	5.475	4.941	5.821	4.826	4.936	5.431	4.885
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	655	728	616	742	728	661	737
Service Time	3.194	2.659	3.545	2.55	2.955	3.148	2.602
HCM Lane V/C Ratio	0.009	0.144	0.008	0.016	0.137	0.011	0.212
HCM Control Delay, s/veh	8.2	8.5	8.6	7.6	8.7	8.2	8.9
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0	0	0.5	0	0.8

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Background (2028)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	30	7	5	2	10	4	59	30	62	63	10
Future Vol, veh/h	5	30	7	5	2	10	4	59	30	62	63	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	2	2	2	2	2	3	3	3	8	8	8
Mvmt Flow	6	34	8	6	2	11	5	67	34	70	72	11
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.1	8.1	8	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	29%	100%	0%
Vol Thru, %	0%	66%	0%	81%	12%	0%	86%
Vol Right, %	0%	34%	0%	19%	59%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	89	5	37	17	62	73
LT Vol	4	0	5	0	5	62	0
Through Vol	0	59	0	30	2	0	63
RT Vol	0	30	0	7	10	0	10
Lane Flow Rate	5	101	6	42	19	70	83
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.007	0.13	0.009	0.059	0.026	0.104	0.108
Departure Headway (Hd)	5.36	4.622	5.687	5.052	4.932	5.305	4.708
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	780	632	712	729	667	751
Service Time	3.066	2.328	3.393	2.758	2.939	3.102	2.504
HCM Lane V/C Ratio	0.007	0.129	0.009	0.059	0.026	0.105	0.111
HCM Control Delay, s/veh	8.1	8	8.4	8.1	8.1	8.7	8.1
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.4	0	0.2	0.1	0.3	0.4

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Background (2028)
PM Peak-Hour

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	4	3	7	16	22	48	5	86	4	6	126	8
Future Vol, veh/h	4	3	7	16	22	48	5	86	4	6	126	8
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	4	9	20	27	59	6	105	5	7	154	10
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8	8.8	8.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	19%	100%	0%
Vol Thru, %	0%	96%	0%	30%	26%	0%	94%
Vol Right, %	0%	4%	0%	70%	56%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	90	4	10	86	6	134
LT Vol	5	0	4	0	16	6	0
Through Vol	0	86	0	3	22	0	126
RT Vol	0	4	0	7	48	0	8
Lane Flow Rate	6	110	5	12	105	7	163
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.009	0.151	0.008	0.016	0.145	0.011	0.223
Departure Headway (Hd)	5.499	4.965	5.859	4.864	4.97	5.452	4.908
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	652	723	612	736	723	658	734
Service Time	3.218	2.685	3.586	2.591	2.99	3.169	2.625
HCM Lane V/C Ratio	0.009	0.152	0.008	0.016	0.145	0.011	0.222
HCM Control Delay, s/veh	8.3	8.6	8.6	7.7	8.8	8.2	9
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0	0	0.5	0	0.9

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Total (2028)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	30	7	5	2	10	4	61	30	62	68	10
Future Vol, veh/h	5	30	7	5	2	10	4	61	30	62	68	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	2	2	2	2	2	3	3	3	8	8	8
Mvmt Flow	6	34	8	6	2	11	5	69	34	70	77	11
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.1	8.1	8.1	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	29%	100%	0%
Vol Thru, %	0%	67%	0%	81%	12%	0%	87%
Vol Right, %	0%	33%	0%	19%	59%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	91	5	37	17	62	78
LT Vol	4	0	5	0	5	62	0
Through Vol	0	61	0	30	2	0	68
RT Vol	0	30	0	7	10	0	10
Lane Flow Rate	5	103	6	42	19	70	89
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.007	0.133	0.009	0.059	0.027	0.104	0.116
Departure Headway (Hd)	5.365	4.633	5.706	5.071	4.951	5.306	4.716
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	670	778	630	710	726	667	749
Service Time	3.074	2.341	3.413	2.778	2.958	3.105	2.514
HCM Lane V/C Ratio	0.007	0.132	0.01	0.059	0.026	0.105	0.119
HCM Control Delay, s/veh	8.1	8.1	8.5	8.1	8.1	8.7	8.1
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0	0.2	0.1	0.3	0.4

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Total (2028)
PM Peak-Hour

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	4	3	7	16	22	48	5	92	4	6	130	8
Future Vol, veh/h	4	3	7	16	22	48	5	92	4	6	130	8
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	4	9	20	27	59	6	112	5	7	159	10
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8	8.9	8.7	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	19%	100%	0%
Vol Thru, %	0%	96%	0%	30%	26%	0%	94%
Vol Right, %	0%	4%	0%	70%	56%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	96	4	10	86	6	138
LT Vol	5	0	4	0	16	6	0
Through Vol	0	92	0	3	22	0	130
RT Vol	0	4	0	7	48	0	8
Lane Flow Rate	6	117	5	12	105	7	168
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.009	0.162	0.008	0.017	0.146	0.011	0.23
Departure Headway (Hd)	5.503	4.972	5.89	4.894	4.999	5.458	4.915
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	651	722	608	731	718	657	732
Service Time	3.227	2.696	3.621	2.625	3.023	3.181	2.638
HCM Lane V/C Ratio	0.009	0.162	0.008	0.016	0.146	0.011	0.23
HCM Control Delay, s/veh	8.3	8.7	8.7	7.7	8.9	8.2	9.1
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.6	0	0.1	0.5	0	0.9

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Background (2045)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	37	9	6	3	13	5	72	37	76	77	13
Future Vol, veh/h	6	37	9	6	3	13	5	72	37	76	77	13
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	2	2	2	2	2	3	3	3	8	8	8
Mvmt Flow	7	42	10	7	3	15	6	82	42	86	88	15
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.3	8.3	8.3	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	27%	100%	0%
Vol Thru, %	0%	66%	0%	80%	14%	0%	86%
Vol Right, %	0%	34%	0%	20%	59%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	109	6	46	22	76	90
LT Vol	5	0	6	0	6	76	0
Through Vol	0	72	0	37	3	0	77
RT Vol	0	37	0	9	13	0	13
Lane Flow Rate	6	124	7	52	25	86	102
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.009	0.162	0.011	0.075	0.035	0.131	0.138
Departure Headway (Hd)	5.446	4.706	5.836	5.196	5.084	5.464	4.861
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	659	764	615	691	705	658	740
Service Time	3.161	2.42	3.559	2.919	3.107	3.178	2.575
HCM Lane V/C Ratio	0.009	0.162	0.011	0.075	0.035	0.131	0.138
HCM Control Delay, s/veh	8.2	8.3	8.6	8.3	8.3	9	8.4
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.6	0	0.2	0.1	0.4	0.5

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Background (2045)
PM Peak-Hour

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	4	9	19	27	59	6	105	5	8	154	10
Future Vol, veh/h	5	4	9	19	27	59	6	105	5	8	154	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	5	11	23	33	72	7	128	6	10	188	12
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.2	9.3	9	9.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	100%	0%
Vol Thru, %	0%	95%	0%	31%	26%	0%	94%
Vol Right, %	0%	5%	0%	69%	56%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	110	5	13	105	8	164
LT Vol	6	0	5	0	19	8	0
Through Vol	0	105	0	4	27	0	154
RT Vol	0	5	0	9	59	0	10
Lane Flow Rate	7	134	6	16	128	10	200
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.011	0.19	0.01	0.022	0.183	0.015	0.279
Departure Headway (Hd)	5.624	5.089	6.065	5.073	5.138	5.562	5.016
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	637	704	589	703	698	644	716
Service Time	3.357	2.823	3.811	2.819	3.173	3.292	2.747
HCM Lane V/C Ratio	0.011	0.19	0.01	0.023	0.183	0.016	0.279
HCM Control Delay, s/veh	8.4	9	8.9	7.9	9.3	8.4	9.7
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0	0.1	0.7	0	1.1

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Total (2045)
AM Peak-Hour

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	37	9	6	3	13	5	74	37	76	82	13
Future Vol, veh/h	6	37	9	6	3	13	5	74	37	76	82	13
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	2	2	2	2	2	3	3	3	8	8	8
Mvmt Flow	7	42	10	7	3	15	6	84	42	86	93	15
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.4	8.3	8.4	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	27%	100%	0%
Vol Thru, %	0%	67%	0%	80%	14%	0%	86%
Vol Right, %	0%	33%	0%	20%	59%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	111	6	46	22	76	95
LT Vol	5	0	6	0	6	76	0
Through Vol	0	74	0	37	3	0	82
RT Vol	0	37	0	9	13	0	13
Lane Flow Rate	6	126	7	52	25	86	108
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.009	0.165	0.011	0.076	0.035	0.131	0.146
Departure Headway (Hd)	5.452	4.716	5.855	5.215	5.102	5.465	4.868
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	658	763	613	688	703	658	738
Service Time	3.168	2.432	3.578	2.938	3.127	3.182	2.584
HCM Lane V/C Ratio	0.009	0.165	0.011	0.076	0.036	0.131	0.146
HCM Control Delay, s/veh	8.2	8.4	8.6	8.4	8.3	9	8.4
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.6	0	0.2	0.1	0.4	0.5

Castleton Heights Castle Rock
3: Castleton Ct & Justice Way

Total (2045)
PM Peak-Hour

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	5	4	9	19	27	59	6	111	5	8	158	10
Future Vol, veh/h	5	4	9	19	27	59	6	111	5	8	158	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	5	11	23	33	72	7	135	6	10	193	12
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay, s/veh	8.3	9.4	9.1	9.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	18%	100%	0%
Vol Thru, %	0%	96%	0%	31%	26%	0%	94%
Vol Right, %	0%	4%	0%	69%	56%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	116	5	13	105	8	168
LT Vol	6	0	5	0	19	8	0
Through Vol	0	111	0	4	27	0	158
RT Vol	0	5	0	9	59	0	10
Lane Flow Rate	7	141	6	16	128	10	205
Geometry Grp	5	5	5	5	4b	5	5
Degree of Util (X)	0.011	0.2	0.01	0.022	0.184	0.015	0.286
Departure Headway (Hd)	5.631	5.098	6.098	5.106	5.168	5.571	5.026
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	636	703	586	699	694	643	715
Service Time	3.365	2.831	3.844	2.852	3.203	3.301	2.757
HCM Lane V/C Ratio	0.011	0.201	0.01	0.023	0.184	0.016	0.287
HCM Control Delay, s/veh	8.4	9.1	8.9	8	9.4	8.4	9.8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0	0.1	0.7	0	1.2

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Existing (2024)
AM Peak-Hour

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	0	336	137	40	15
Future Vol, veh/h	43	0	336	137	40	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	47	0	369	151	44	16

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	520	0	0 539 260
Stage 1	-	-	- - 445 -
Stage 2	-	-	- - 95 -
Critical Hdwy	4.14	-	- - 6.88 6.98
Critical Hdwy Stg 1	-	-	- - 5.88 -
Critical Hdwy Stg 2	-	-	- - 5.88 -
Follow-up Hdwy	2.22	-	- - 3.54 3.34
Pot Cap-1 Maneuver	1043	-	- - 468 733
Stage 1	-	-	- - 607 -
Stage 2	-	-	- - 913 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1043	-	- - 446 733
Mov Cap-2 Maneuver	-	-	- - 543 -
Stage 1	-	-	- - 580 -
Stage 2	-	-	- - 913 -

Approach	EB	WB	SB
HCM Control Delay, s/v	8.62	0	11.62
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1043	-	-	-	543	733
HCM Lane V/C Ratio	0.045	-	-	-	0.081	0.022
HCM Control Delay (s/veh)	8.6	-	-	-	12.2	10
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Existing (2024)
PM Peak-Hour

Intersection

Int Delay, s/veh 5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	0	398	56	204	73
Future Vol, veh/h	10	0	398	56	204	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	457	64	234	84

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	522	0	0 513 261
Stage 1	-	-	- - 490 -
Stage 2	-	-	- - 23 -
Critical Hdwy	4.14	-	- - 6.84 6.94
Critical Hdwy Stg 1	-	-	- - 5.84 -
Critical Hdwy Stg 2	-	-	- - 5.84 -
Follow-up Hdwy	2.22	-	- - 3.52 3.32
Pot Cap-1 Maneuver	1041	-	- - 491 738
Stage 1	-	-	- - 582 -
Stage 2	-	-	- - 996 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1041	-	- - 486 738
Mov Cap-2 Maneuver	-	-	- - 544 -
Stage 1	-	-	- - 575 -
Stage 2	-	-	- - 996 -

Approach	EB	WB	SB
HCM Control Delay, s/v	8.5	0	14.95
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1041	-	-	-	544	738
HCM Lane V/C Ratio	0.011	-	-	-	0.431	0.114
HCM Control Delay (s/veh)	8.5	-	-	-	16.5	10.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	2.2	0.4

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Background (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	0	352	144	42	16
Future Vol, veh/h	45	0	352	144	42	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	49	0	387	158	46	18
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	545	0	-	0	565	273
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	4.14	-	-	-	6.88	6.98
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.22	-	-	-	3.54	3.34
Pot Cap-1 Maneuver	1020	-	-	-	450	719
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1020	-	-	-	429	719
Mov Cap-2 Maneuver	-	-	-	-	527	-
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	908	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	8.71	0		11.83		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1020	-	-	-	527	719
HCM Lane V/C Ratio	0.048	-	-	-	0.088	0.024
HCM Control Delay (s/veh)	8.7	-	-	-	12.5	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Background (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	0	417	59	214	77
Future Vol, veh/h	10	0	417	59	214	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	479	68	246	89

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	547	0	-	0	536
Stage 1	-	-	-	-	513
Stage 2	-	-	-	-	23
Critical Hdwy	4.14	-	-	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	2.22	-	-	-	3.52
Pot Cap-1 Maneuver	1018	-	-	-	474
Stage 1	-	-	-	-	566
Stage 2	-	-	-	-	996
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1018	-	-	-	469
Mov Cap-2 Maneuver	-	-	-	-	529
Stage 1	-	-	-	-	559
Stage 2	-	-	-	-	996

Approach	EB	WB	SB
HCM Control Delay, s/v	8.58	0	15.76
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1018	-	-	-	529	724
HCM Lane V/C Ratio	0.011	-	-	-	0.465	0.122
HCM Control Delay (s/veh)	8.6	-	-	-	17.6	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	2.4	0.4

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	0	352	146	47	16
Future Vol, veh/h	45	0	352	146	47	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	49	0	387	160	52	18
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	547	0	-	0	566	274
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	4.14	-	-	-	6.88	6.98
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.22	-	-	-	3.54	3.34
Pot Cap-1 Maneuver	1018	-	-	-	450	718
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1018	-	-	-	428	718
Mov Cap-2 Maneuver	-	-	-	-	527	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	908	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	8.72	0		11.96		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1018	-	-	-	527	718
HCM Lane V/C Ratio	0.049	-	-	-	0.098	0.024
HCM Ctrl Dly (s/v)	8.7	-	-	-	12.6	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	6.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	0	417	65	218	77
Future Vol, veh/h	10	0	417	65	218	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	479	75	251	89
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	554	0	-	0	540	277
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1012	-	-	-	472	720
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	467	720
Mov Cap-2 Maneuver	-	-	-	-	527	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	996	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	8.6	0		16.01		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1012	-	-	-	527	720
HCM Lane V/C Ratio	0.011	-	-	-	0.476	0.123
HCM Ctrl Dly (s/v)	8.6	-	-	-	17.9	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	2.5	0.4

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Background (2045)
AM Peak-Hour

Intersection

Int Delay, s/veh 1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	0	431	176	51	19
Future Vol, veh/h	55	0	431	176	51	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	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	60	0	474	193	56	21

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	667	0	0 691 334
Stage 1	-	-	- - 570 -
Stage 2	-	-	- - 121 -
Critical Hdwy	4.14	-	- - 6.88 6.98
Critical Hdwy Stg 1	-	-	- - 5.88 -
Critical Hdwy Stg 2	-	-	- - 5.88 -
Follow-up Hdwy	2.22	-	- - 3.54 3.34
Pot Cap-1 Maneuver	918	-	- - 374 656
Stage 1	-	-	- - 523 -
Stage 2	-	-	- - 885 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	918	-	- - 349 656
Mov Cap-2 Maneuver	-	-	- - 457 -
Stage 1	-	-	- - 489 -
Stage 2	-	-	- - 885 -

Approach	EB	WB	SB
HCM Control Delay, s/v	9.2	0	13.07
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	918	-	-	-	457	656
HCM Lane V/C Ratio	0.066	-	-	-	0.123	0.032
HCM Control Delay (s/veh)	9.2	-	-	-	14	10.7
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Background (2045)
PM Peak-Hour

Intersection						
Int Delay, s/veh	8.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	0	510	72	262	94
Future Vol, veh/h	13	0	510	72	262	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	586	83	301	108
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	669	0	-	0	657	334
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	917	-	-	-	398	661
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	917	-	-	-	391	661
Mov Cap-2 Maneuver	-	-	-	-	460	-
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	989	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	8.99	0		22.55		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	917	-	-	-	460	661
HCM Lane V/C Ratio	0.016	-	-	-	0.655	0.163
HCM Control Delay (s/veh)	9	-	-	-	26.5	11.5
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	4.6	0.6

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045)
AM Peak-Hour

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	0	431	178	56	19
Future Vol, veh/h	55	0	431	178	56	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	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	60	0	474	196	62	21
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	669	0	-	0	692	335
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	4.14	-	-	-	6.88	6.98
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.22	-	-	-	3.54	3.34
Pot Cap-1 Maneuver	917	-	-	-	373	655
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	917	-	-	-	349	655
Mov Cap-2 Maneuver	-	-	-	-	457	-
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	885	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	9.2	0		13.24		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	917	-	-	-	457	655
HCM Lane V/C Ratio	0.066	-	-	-	0.135	0.032
HCM Ctrl Dly (s/v)	9.2	-	-	-	14.1	10.7
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5	0.1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045)
PM Peak-Hour

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	0	510	78	266	94
Future Vol, veh/h	13	0	510	78	266	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	125
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	586	90	306	108
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	676	0	-	0	661	338
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	912	-	-	-	396	658
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	912	-	-	-	389	658
Mov Cap-2 Maneuver	-	-	-	-	458	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	989	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	9.02	0		23.18		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	912	-	-	-	458	658
HCM Lane V/C Ratio	0.016	-	-	-	0.668	0.164
HCM Ctrl Dly (s/v)	9	-	-	-	27.3	11.5
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	4.8	0.6

Castleton Heights Castle Rock
5: Access & Castleton Rd

Total (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↓	↓	
Traffic Vol, veh/h	191	12	0	73	2	0
Future Vol, veh/h	191	12	0	73	2	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	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	4	4	2	2
Mvmt Flow	215	13	0	82	2	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	228	0	303	114
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	82	-
Critical Hdwy	-	-	4.16	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.238	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1326	-	676	917
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	676	917
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	941	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0		10.34	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	676	-	-	1326	-	
HCM Lane V/C Ratio	0.003	-	-	-	-	
HCM Ctrl Dly (s/v)	10.3	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Castleton Heights Castle Rock
5: Access & Castleton Rd

Total (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↑	
Traffic Vol, veh/h	152	6	0	211	7	1
Future Vol, veh/h	152	6	0	211	7	1
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	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	7	0	248	8	1
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	186	0	431	93
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	248	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1387	-	567	946
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	567	946
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	792	-
Approach	EB	WB		NB		
HCM Ctrl Dly, s/v	0	0		11.13		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	597	-	-	1387	-	
HCM Lane V/C Ratio	0.016	-	-	-	-	
HCM Ctrl Dly (s/v)	11.1	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Castleton Heights Castle Rock
5: Access & Castleton Rd

Total (2045)
AM Peak-Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↑	
Traffic Vol, veh/h	232	14	0	86	2	0
Future Vol, veh/h	232	14	0	86	2	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	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	4	4	2	2
Mvmt Flow	261	16	0	97	2	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	276	0	365	138
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	-	-	4.16	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.238	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1272	-	621	885
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1272	-	621	885
Mov Cap-2 Maneuver	-	-	-	-	621	-
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	927	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0		10.82	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	621	-	-	1272	-	
HCM Lane V/C Ratio	0.004	-	-	-	-	
HCM Ctrl Dly (s/v)	10.8	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Castleton Heights Castle Rock
5: Access & Castleton Rd

Total (2045)
PM Peak-Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑	↑	
Traffic Vol, veh/h	183	7	0	256	9	1
Future Vol, veh/h	183	7	0	256	9	1
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	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	8	0	301	11	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	224	0	521	112
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	301	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1344	-	500	921
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1344	-	500	921
Mov Cap-2 Maneuver	-	-	-	-	500	-
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	750	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		0		12.02	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	524	-	-	1344	-	
HCM Lane V/C Ratio	0.022	-	-	-	-	
HCM Ctrl Dly (s/v)	12	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Castleton Heights Castle Rock
6: Castleton Ct & Access

Total (2028)
AM Peak-Hour

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	5	7	48	172	9
Future Vol, veh/h	15	5	7	48	172	9
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	-	150	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	16	5	8	52	187	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	259	192	197	0	-	0
Stage 1	192	-	-	-	-	-
Stage 2	67	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-	-
Pot Cap-1 Maneuver	730	850	1364	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	850	1364	-	-	-
Mov Cap-2 Maneuver	779	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.65	0.97		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1364	-	796	-	-	
HCM Lane V/C Ratio	0.006	-	0.027	-	-	
HCM Ctrl Dly (s/v)	7.7	-	9.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Castleton Heights Castle Rock
6: Castleton Ct & Access

Total (2028)
PM Peak-Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	8	7	170	113	15
Future Vol, veh/h	12	8	7	170	113	15
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	-	150	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	10	9	210	140	19
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	376	149	158	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	227	-	-	-	-	-
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	625	898	1422	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	622	898	1422	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.73	0.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1422	-	786	-	-	
HCM Lane V/C Ratio	0.006	-	0.031	-	-	
HCM Ctrl Dly (s/v)	7.5	-	9.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Castleton Heights Castle Rock
6: Castleton Ct & Access

Total (2045)
AM Peak-Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	5	8	59	210	10
Future Vol, veh/h	15	5	8	59	210	10
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	-	150	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	4	4	4
Mvmt Flow	16	5	9	64	228	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	315	234	239	0	-	0
Stage 1	234	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-	-
Pot Cap-1 Maneuver	678	805	1316	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	673	805	1316	-	-	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.89	0.93	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1316	-	758	-	-
HCM Lane V/C Ratio	0.007	-	0.029	-	-
HCM Control Delay (s/veh)	7.8	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Castleton Heights Castle Rock
6: Castleton Ct & Access

Total (2045)
PM Peak-Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	9	7	208	138	15
Future Vol, veh/h	12	9	7	208	138	15
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	-	150	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	11	9	257	170	19
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	454	180	189	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	274	-	-	-	-	-
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	564	863	1385	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	863	1385	-	-	-
Mov Cap-2 Maneuver	685	-	-	-	-	-
Stage 1	846	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	9.96	0.25		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1385	-	751	-	-	
HCM Lane V/C Ratio	0.006	-	0.035	-	-	
HCM Ctrl Dly (s/v)	7.6	-	10	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Existing (2024)
AM Peak-Hour

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	243	64	4	57	1	83	2	13	2	5	31
Future Vol, veh/h	45	243	64	4	57	1	83	2	13	2	5	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	264	70	4	62	1	90	2	14	2	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	334	0	0	470	468	167	302	503	62
Stage 1	-	-	-	-	-	-	397	397	-	71	71	-
Stage 2	-	-	-	-	-	-	73	72	-	231	432	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1539	-	-	1224	-	-	490	492	849	639	470	1002
Stage 1	-	-	-	-	-	-	601	603	-	938	835	-
Stage 2	-	-	-	-	-	-	936	835	-	752	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1539	-	-	1224	-	-	452	474	849	603	454	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	452	474	-	603	454	-
Stage 1	-	-	-	-	-	-	582	584	-	935	832	-
Stage 2	-	-	-	-	-	-	895	832	-	713	563	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.95			0.51			14.24			9.48		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	452	849	1539	-	-	1224	-	-	603	858
HCM Lane V/C Ratio	0.204	0.017	0.032	-	-	0.004	-	-	0.004	0.046
HCM Ctrl Dly (s/v)	15	9.3	7.4	-	-	8	-	-	11	9.4
HCM Lane LOS	B	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.8	0.1	0.1	-	-	0	-	-	0	0.1

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Existing (2024)
PM Peak-Hour

Intersection												
Int Delay, s/veh	19.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	129	280	87	17	161	6	157	9	13	4	10	131
Future Vol, veh/h	129	280	87	17	161	6	157	9	13	4	10	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	304	95	18	175	7	171	10	14	4	11	142
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	182	0	0	399	0	0	849	851	199	653	895	178
Stage 1	-	-	-	-	-	-	632	632	-	215	215	-
Stage 2	-	-	-	-	-	-	217	218	-	437	679	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1392	-	-	1158	-	-	267	297	809	366	280	864
Stage 1	-	-	-	-	-	-	436	473	-	786	724	-
Stage 2	-	-	-	-	-	-	784	722	-	569	450	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1392	-	-	1158	-	-	190	262	809	308	247	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	262	-	308	247	-
Stage 1	-	-	-	-	-	-	392	425	-	774	712	-
Stage 2	-	-	-	-	-	-	635	710	-	491	405	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	2.05			0.75			92.88			11.35		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1SBLn2	SBLn2		
Capacity (veh/h)	193 809		1392	-	-	1158	-	-	308	734		
HCM Lane V/C Ratio	0.937 0.017		0.101	-	-	0.016	-	-	0.014	0.209		
HCM Ctrl Dly (s/v)	99.4 9.5		7.9	-	-	8.2	-	-	16.9	11.2		
HCM Lane LOS	F A		A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	7.5 0.1		0.3	-	-	0	-	-	0	0.8		

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Background (2028)
AM Peak-Hour

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑			↰	↑	↰	↑	
Traffic Vol, veh/h	45	255	64	4	60	1	83	2	13	2	5	31
Future Vol, veh/h	45	255	64	4	60	1	83	2	13	2	5	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	277	70	4	65	1	90	2	14	2	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	66	0	0	347	0	0	486	485	173	312	519	66
Stage 1	-	-	-	-	-	-	410	410	-	74	74	-
Stage 2	-	-	-	-	-	-	77	75	-	238	445	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1534	-	-	1211	-	-	477	481	841	629	460	998
Stage 1	-	-	-	-	-	-	590	595	-	934	833	-
Stage 2	-	-	-	-	-	-	932	832	-	745	574	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1534	-	-	1211	-	-	440	464	841	594	444	998
Mov Cap-2 Maneuver	-	-	-	-	-	-	440	464	-	594	444	-
Stage 1	-	-	-	-	-	-	572	576	-	931	830	-
Stage 2	-	-	-	-	-	-	891	829	-	707	556	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.92			0.49			14.54			9.52		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	440	841	1534	-	-	1211	-	-	594	850
HCM Lane V/C Ratio	0.21	0.017	0.032	-	-	0.004	-	-	0.004	0.046
HCM Ctrl Dly (s/v)	15.3	9.4	7.4	-	-	8	-	-	11.1	9.4
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.8	0.1	0.1	-	-	0	-	-	0	0.1

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Background (2028)
PM Peak-Hour

Intersection												
Int Delay, s/veh	21											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑			↰	↑	↰	↑	
Traffic Vol, veh/h	129	294	87	17	169	6	157	9	13	4	10	131
Future Vol, veh/h	129	294	87	17	169	6	157	9	13	4	10	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	320	95	18	184	7	171	10	14	4	11	142
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	190	0	0	414	0	0	873	874	207	669	918	187
Stage 1	-	-	-	-	-	-	647	647	-	224	224	-
Stage 2	-	-	-	-	-	-	226	227	-	445	695	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1382	-	-	1143	-	-	257	287	800	357	271	854
Stage 1	-	-	-	-	-	-	427	465	-	778	718	-
Stage 2	-	-	-	-	-	-	776	715	-	563	443	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1382	-	-	1143	-	-	182	254	800	299	239	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	182	254	-	299	239	-
Stage 1	-	-	-	-	-	-	383	418	-	765	706	-
Stage 2	-	-	-	-	-	-	626	704	-	485	398	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	2			0.73			104.88			11.48		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	185 800		1382	-	-	1143	-	-	299	723		
HCM Lane V/C Ratio	0.978 0.018		0.101	-	-	0.016	-	-	0.015	0.212		
HCM Ctrl Dly (s/v)	112.3 9.6		7.9	-	-	8.2	-	-	17.2	11.3		
HCM Lane LOS	F A		A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	8 0.1		0.3	-	-	0	-	-	0	0.8		

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Total (2028)
AM Peak-Hour

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑			↰	↑	↰	↑	
Traffic Vol, veh/h	45	261	64	4	76	1	83	2	13	2	5	31
Future Vol, veh/h	45	261	64	4	76	1	83	2	13	2	5	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	284	70	4	83	1	90	2	14	2	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	353	0	0	510	509	177	333	543	83
Stage 1	-	-	-	-	-	-	416	416	-	92	92	-
Stage 2	-	-	-	-	-	-	94	92	-	241	451	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1512	-	-	1204	-	-	460	467	837	609	446	976
Stage 1	-	-	-	-	-	-	585	591	-	915	818	-
Stage 2	-	-	-	-	-	-	912	818	-	742	570	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1512	-	-	1204	-	-	423	450	837	574	430	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	423	450	-	574	430	-
Stage 1	-	-	-	-	-	-	566	572	-	911	815	-
Stage 2	-	-	-	-	-	-	872	815	-	703	552	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.91			0.4			15			9.65		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	423	837	1512	-	-	1204	-	-	574	830
HCM Lane V/C Ratio	0.218	0.017	0.032	-	-	0.004	-	-	0.004	0.047
HCM Ctrl Dly (s/v)	15.9	9.4	7.5	-	-	8	-	-	11.3	9.6
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.8	0.1	0.1	-	-	0	-	-	0	0.1

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Way

Total (2028)
PM Peak-Hour

Intersection												
Int Delay, s/veh	23.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	129	311	87	17	180	6	157	9	13	4	10	131
Future Vol, veh/h	129	311	87	17	180	6	157	9	13	4	10	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	338	95	18	196	7	171	10	14	4	11	142

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	202	0	0	433	0	0	904	905	216	690	949	199
Stage 1	-	-	-	-	-	-	666	666	-	236	236	-
Stage 2	-	-	-	-	-	-	238	239	-	454	713	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1368	-	-	1125	-	-	245	276	789	345	260	841
Stage 1	-	-	-	-	-	-	416	457	-	767	709	-
Stage 2	-	-	-	-	-	-	765	707	-	556	434	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1125	-	-	172	243	789	288	229	841
Mov Cap-2 Maneuver	-	-	-	-	-	-	172	243	-	288	229	-
Stage 1	-	-	-	-	-	-	373	410	-	754	698	-
Stage 2	-	-	-	-	-	-	615	695	-	478	390	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.94			0.69			122.44			11.66		
HCM LOS							F			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	175	789	1368	-	-	1125	-	-	288	707
HCM Lane V/C Ratio	1.033	0.018	0.102	-	-	0.016	-	-	0.015	0.217
HCM Ctrl Dly (s/v)	131.3	9.6	7.9	-	-	8.3	-	-	17.7	11.5
HCM Lane LOS	F	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	8.6	0.1	0.3	-	-	0.1	-	-	0	0.8

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Background (2045)
AM Peak-Hour

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	312	64	4	73	1	83	2	13	2	5	31
Future Vol, veh/h	45	312	64	4	73	1	83	2	13	2	5	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	339	70	4	79	1	90	2	14	2	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	80	0	0	409	0	0	563	561	204	357	595	80
Stage 1	-	-	-	-	-	-	472	472	-	89	89	-
Stage 2	-	-	-	-	-	-	91	89	-	268	507	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1516	-	-	1148	-	-	423	436	803	586	417	980
Stage 1	-	-	-	-	-	-	543	558	-	918	821	-
Stage 2	-	-	-	-	-	-	916	821	-	715	539	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1516	-	-	1148	-	-	389	420	803	552	402	980
Mov Cap-2 Maneuver	-	-	-	-	-	-	389	420	-	552	402	-
Stage 1	-	-	-	-	-	-	525	540	-	915	818	-
Stage 2	-	-	-	-	-	-	875	818	-	677	521	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.8	0.42	16.1	9.73
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	389	803	1516	-	-	1148	-	-	552	817
HCM Lane V/C Ratio	0.237	0.018	0.032	-	-	0.004	-	-	0.004	0.048
HCM Ctrl Dly (s/v)	17.1	9.6	7.5	-	-	8.1	-	-	11.5	9.6
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.9	0.1	0.1	-	-	0	-	-	0	0.2

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Drive

Background (2045)
PM Peak-Hour

Intersection												
Int Delay, s/veh	31.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑↑			↰	↑↑	↰	↑↑	
Traffic Vol, veh/h	129	359	87	17	206	6	157	9	13	4	10	131
Future Vol, veh/h	129	359	87	17	206	6	157	9	13	4	10	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	390	95	18	224	7	171	10	14	4	11	142

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	230	0	0	485	0	0	984	985	242	745	1029	227
Stage 1	-	-	-	-	-	-	718	718	-	264	264	-
Stage 2	-	-	-	-	-	-	266	267	-	480	765	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1336	-	-	1076	-	-	215	247	759	316	233	811
Stage 1	-	-	-	-	-	-	387	432	-	740	689	-
Stage 2	-	-	-	-	-	-	738	687	-	536	411	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1336	-	-	1076	-	-	~ 148	218	759	262	205	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 148	218	-	262	205	-
Stage 1	-	-	-	-	-	-	346	387	-	728	678	-
Stage 2	-	-	-	-	-	-	589	675	-	459	368	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.8	0.62	180.69	12.14
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	151	759	1336	-	-	1076	-	-	262	671
HCM Lane V/C Ratio	1.195	0.019	0.105	-	-	0.017	-	-	0.017	0.229
HCM Ctrl Dly (s/v)	194.1	9.8	8	-	-	8.4	-	-	19	12
HCM Lane LOS	F	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	10.3	0.1	0.4	-	-	0.1	-	-	0.1	0.9

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

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Way

Total (2045)
AM Peak-Hour

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑			↰	↑	↰	↑	
Traffic Vol, veh/h	45	318	64	4	89	1	83	2	13	2	5	31
Future Vol, veh/h	45	318	64	4	89	1	83	2	13	2	5	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	346	70	4	97	1	90	2	14	2	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	415	0	0	586	585	208	378	619	97
Stage 1	-	-	-	-	-	-	478	478	-	106	106	-
Stage 2	-	-	-	-	-	-	108	107	-	272	513	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1494	-	-	1142	-	-	407	422	799	567	404	958
Stage 1	-	-	-	-	-	-	538	555	-	899	807	-
Stage 2	-	-	-	-	-	-	897	807	-	712	535	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1494	-	-	1142	-	-	374	407	799	534	389	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	374	407	-	534	389	-
Stage 1	-	-	-	-	-	-	520	536	-	896	804	-
Stage 2	-	-	-	-	-	-	856	804	-	673	518	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.79	0.35	16.66	9.86
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	374	799	1494	-	-	1142	-	-	534	796
HCM Lane V/C Ratio	0.247	0.018	0.033	-	-	0.004	-	-	0.004	0.049
HCM Ctrl Dly (s/v)	17.7	9.6	7.5	-	-	8.2	-	-	11.8	9.8
HCM Lane LOS	C	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	1	0.1	0.1	-	-	0	-	-	0	0.2

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Way

Total (2045)
PM Peak-Hour

Intersection												
Int Delay, s/veh	34.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑			↰	↑	↰	↑	
Traffic Vol, veh/h	129	376	87	17	217	6	157	9	13	4	10	131
Future Vol, veh/h	129	376	87	17	217	6	157	9	13	4	10	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	409	95	18	236	7	171	10	14	4	11	142

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	503	0	0	1015	1016	252	766	1060	239
Stage 1	-	-	-	-	-	-	736	736	-	276	276	-
Stage 2	-	-	-	-	-	-	278	279	-	490	784	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1323	-	-	1059	-	-	204	237	749	306	223	799
Stage 1	-	-	-	-	-	-	377	424	-	729	681	-
Stage 2	-	-	-	-	-	-	728	679	-	530	403	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1323	-	-	1059	-	-	~ 140	208	749	252	196	799
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 140	208	-	252	196	-
Stage 1	-	-	-	-	-	-	337	379	-	717	669	-
Stage 2	-	-	-	-	-	-	578	667	-	453	361	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.75	0.6	207.59	12.35
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	143	749	1323	-	-	1059	-	-	252	656
HCM Lane V/C Ratio	1.263	0.019	0.106	-	-	0.017	-	-	0.017	0.234
HCM Ctrl Dly (s/v)	223.1	9.9	8	-	-	8.5	-	-	19.5	12.2
HCM Lane LOS	F	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	10.9	0.1	0.4	-	-	0.1	-	-	0.1	0.9

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



APPENDIX F

Queue Analysis Worksheets

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Background (2028)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	160	1238	74	271	1178	330	31	41	120	219	52	112
v/c Ratio	0.52	0.42	0.07	0.65	0.40	0.30	0.18	0.34	0.31	0.49	0.27	0.25
Control Delay (s/veh)	57.6	15.7	0.1	57.2	13.4	1.4	55.9	60.3	12.5	55.4	51.8	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	15.7	0.1	57.2	13.4	1.4	55.9	60.3	12.5	55.4	51.8	9.5
Queue Length 50th (ft)	61	190	0	104	175	0	11	31	15	58	38	7
Queue Length 95th (ft)	95	276	0	144	255	33	28	67	61	83	75	49
Internal Link Dist (ft)	803			599			372			641		
Turn Bay Length (ft)	425			225	450			250			250	350
Base Capacity (vph)	385	2945	1110	586	2948	1172	184	141	453	810	349	477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.07	0.46	0.40	0.28	0.17	0.29	0.26	0.27	0.15	0.23
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Background (2028)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	235	1044	118	277	1253	366	85	79	322	735	140	360
v/c Ratio	0.60	0.45	0.13	0.60	0.56	0.35	0.39	0.52	0.72	0.75	0.38	0.61
Control Delay (s/veh)	56.9	25.2	3.5	54.2	24.5	3.8	59.0	64.5	37.8	50.3	43.0	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.9	25.2	3.5	54.2	24.5	3.8	59.0	64.5	37.8	50.3	43.0	30.4
Queue Length 50th (ft)	90	206	0	106	265	34	32	59	162	190	92	188
Queue Length 95th (ft)	127	286	33	141	351	95	60	110	242	232	148	257
Internal Link Dist (ft)	803			599			372			641		
Turn Bay Length (ft)	425			225	450			250			250	350
Base Capacity (vph)	557	2310	936	643	2242	1056	229	180	524	1074	459	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.45	0.13	0.43	0.56	0.35	0.37	0.44	0.61	0.68	0.31	0.54
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	160	1238	75	275	1178	330	33	42	133	219	53	112
v/c Ratio	0.52	0.42	0.07	0.65	0.40	0.30	0.19	0.35	0.34	0.49	0.27	0.25
Control Delay (s/veh)	57.6	15.8	0.1	57.1	13.5	1.5	56.0	60.4	14.4	55.4	51.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	15.8	0.1	57.1	13.5	1.5	56.0	60.4	14.4	55.4	51.9	10.1
Queue Length 50th (ft)	61	191	0	106	175	1	12	32	23	58	39	9
Queue Length 95th (ft)	95	277	1	146	256	34	29	68	71	83	76	51
Internal Link Dist (ft)	803				599				372			
Turn Bay Length (ft)	425		225		450		250		250		350	
Base Capacity (vph)	385	2936	1108	586	2946	1170	186	142	453	810	349	475
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.07	0.47	0.40	0.28	0.18	0.30	0.29	0.27	0.15	0.24
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2028)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	235	1044	120	290	1253	366	87	80	330	735	142	360
v/c Ratio	0.60	0.46	0.13	0.61	0.56	0.35	0.39	0.52	0.73	0.74	0.39	0.61
Control Delay (s/veh)	56.9	25.6	3.5	53.9	24.6	3.8	59.0	64.8	38.1	50.2	43.2	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.9	25.6	3.5	53.9	24.6	3.8	59.0	64.8	38.1	50.2	43.2	30.4
Queue Length 50th (ft)	90	208	0	111	265	34	33	60	167	190	93	188
Queue Length 95th (ft)	127	286	33	147	351	95	61	112	250	232	149	257
Internal Link Dist (ft)	803			599			372			641		
Turn Bay Length (ft)	425			225	450			250			250	350
Base Capacity (vph)	557	2286	930	643	2240	1056	230	180	525	1074	458	661
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.46	0.13	0.45	0.56	0.35	0.38	0.44	0.63	0.68	0.31	0.54
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Background (2045)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1514	91	331	1440	403	39	49	147	269	63	137
v/c Ratio	0.58	0.54	0.09	0.69	0.51	0.38	0.21	0.39	0.35	0.53	0.29	0.31
Control Delay (s/veh)	58.6	19.9	0.8	56.8	16.4	3.5	57.8	61.1	15.5	54.8	49.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.6	19.9	0.8	56.8	16.4	3.5	57.8	61.1	15.5	54.8	49.2	13.0
Queue Length 50th (ft)	75	272	0	127	247	36	14	37	31	71	45	25
Queue Length 95th (ft)	113	387	8	170	346	95	34	76	80	98	83	67
Internal Link Dist (ft)	803				599				372			
Turn Bay Length (ft)	425	225		450	250			250	350			
Base Capacity (vph)	369	2783	1063	566	2838	1134	182	145	450	810	378	461
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.54	0.09	0.58	0.51	0.36	0.21	0.34	0.33	0.33	0.17	0.30
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Background (2045)
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	287	1276	144	339	1533	447	103	97	394	899	172	440
v/c Ratio	0.65	0.63	0.17	0.64	0.76	0.46	0.48	0.64	0.79	0.84	0.40	0.66
Control Delay (s/veh)	56.5	31.5	3.5	53.0	32.1	7.8	62.1	72.9	41.8	53.0	41.5	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.5	31.5	3.5	53.0	32.1	7.8	62.1	72.9	41.8	53.0	41.5	30.2
Queue Length 50th (ft)	109	296	0	127	385	110	40	74	215	236	112	234
Queue Length 95th (ft)	153	364	36	171	468	201	70	#138	326	287	178	338
Internal Link Dist (ft)		803			599			372			641	
Turn Bay Length (ft)	425		225	450			250		250	350		
Base Capacity (vph)	529	2033	866	643	2011	978	222	163	550	1101	454	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.63	0.17	0.53	0.76	0.46	0.46	0.60	0.72	0.82	0.38	0.63

Intersection Summary

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

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1514	92	335	1440	403	41	51	160	269	65	137
v/c Ratio	0.59	0.55	0.09	0.70	0.51	0.38	0.22	0.40	0.38	0.53	0.30	0.31
Control Delay (s/veh)	58.8	20.0	0.9	57.0	16.5	3.6	57.9	61.3	17.2	54.8	49.3	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.8	20.0	0.9	57.0	16.5	3.6	57.9	61.3	17.2	54.8	49.3	12.9
Queue Length 50th (ft)	75	273	0	128	248	38	15	38	40	71	47	25
Queue Length 95th (ft)	113	387	9	172	346	98	36	78	92	98	84	67
Internal Link Dist (ft)	803				599				372			
Turn Bay Length (ft)	425	225		450	250			250	350			
Base Capacity (vph)	368	2775	1061	565	2835	1132	184	147	451	810	378	462
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.55	0.09	0.59	0.51	0.36	0.22	0.35	0.35	0.33	0.17	0.30
Intersection Summary												

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045)
PM Peak-Hour

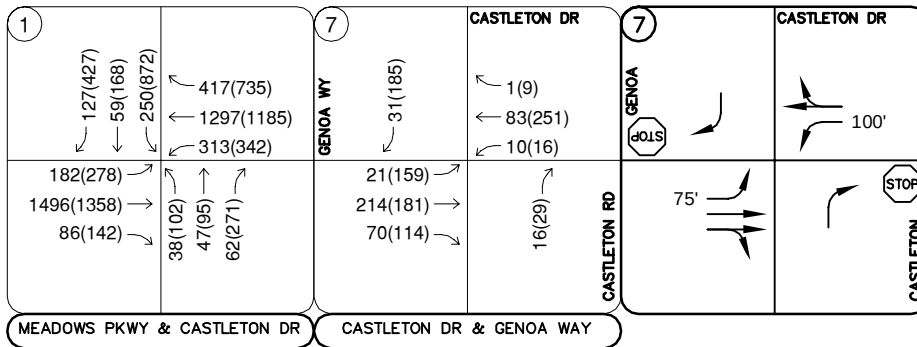
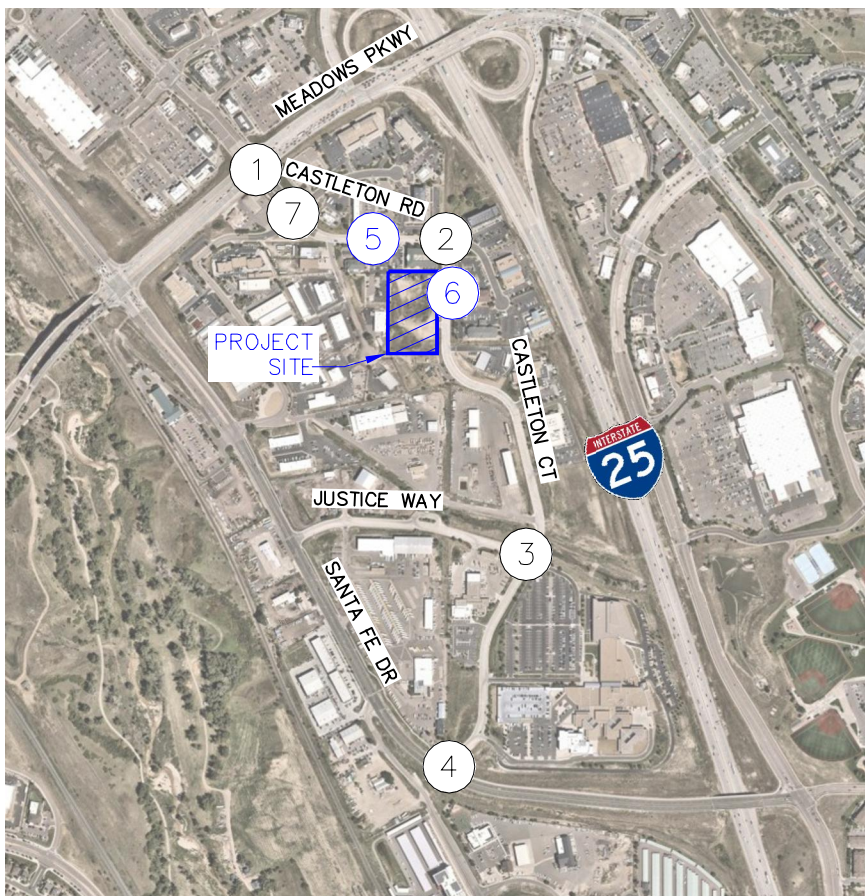
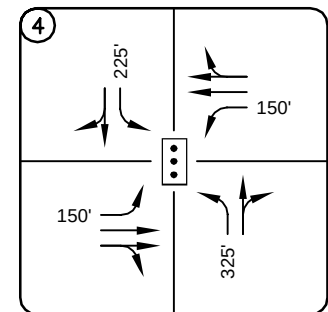
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	287	1276	146	352	1533	447	105	98	402	899	174	440
v/c Ratio	0.65	0.63	0.17	0.66	0.76	0.46	0.49	0.65	0.80	0.84	0.40	0.66
Control Delay (s/veh)	56.5	31.8	3.5	53.3	32.1	7.9	62.3	73.3	42.7	53.0	41.6	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.5	31.8	3.5	53.3	32.1	7.9	62.3	73.3	42.7	53.0	41.6	30.2
Queue Length 50th (ft)	109	299	0	131	385	111	41	74	220	236	113	234
Queue Length 95th (ft)	153	364	37	177	468	202	71	#139	336	287	181	338
Internal Link Dist (ft)		803			599			372			641	
Turn Bay Length (ft)	425		225	450			250		250	350		
Base Capacity (vph)	529	2021	864	643	2010	977	222	163	550	1101	454	704
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.63	0.17	0.55	0.76	0.46	0.47	0.60	0.73	0.82	0.38	0.63

Intersection Summary

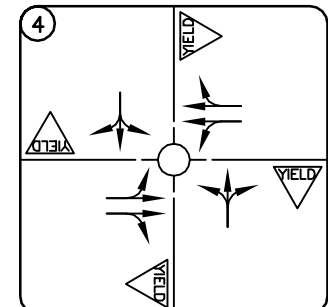
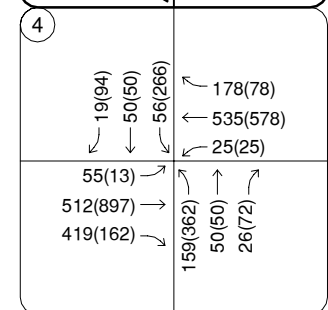
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX G

Alternative Analysis



- OR -



SANTA FE DR & CASTLETON CT

FIGURE A
 CASTLETON HEIGHTS
 CASTLE ROCK, CO
 2045 TOTAL RE-ROUTE SCENARIO
 VOLUMES AND GEOMETRY

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045) - Alternative
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	1491	86	312	1297	417	38	48	66	250	60	127
Future Volume (vph)	182	1491	86	312	1297	417	38	48	66	250	60	127
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	17.0	58.0	9.1	24.0	65.0	24.0	9.1	14.0	24.0	24.0	28.9	17.0
Total Split (%)	14.2%	48.3%	7.6%	20.0%	54.2%	20.0%	7.6%	11.7%	20.0%	20.0%	24.1%	14.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

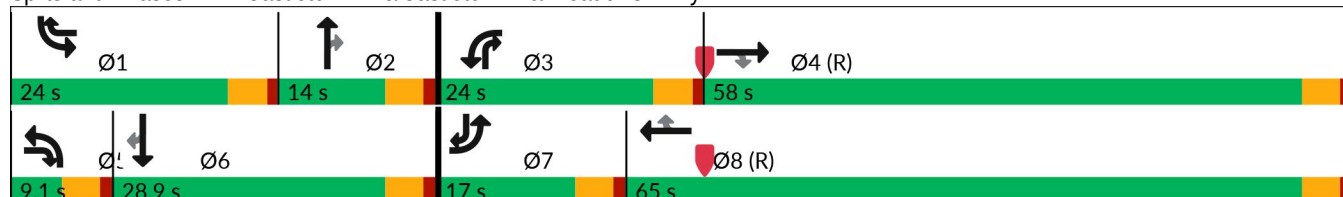
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045) - Alternative
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	1491	86	312	1297	417	38	48	66	250	60	127
Future Volume (veh/h)	182	1491	86	312	1297	417	38	48	66	250	60	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1752	1752	1752	1870	1870	1870
Adj Flow Rate, veh/h	196	1603	92	335	1395	0	41	52	71	269	65	137
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, %	3	3	3	2	2	2	10	10	10	2	2	2
Cap, veh/h	255	3049	986	406	3600		80	103	257	377	204	291
Arrive On Green	0.07	0.60	0.60	0.11	0.64	0.00	0.02	0.06	0.06	0.08	0.11	0.11
Sat Flow, veh/h	3428	5066	1572	3563	5611	1585	3237	1752	1485	5023	1870	1585
Grp Volume(v), veh/h	196	1603	92	335	1395	0	41	52	71	269	65	137
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1781	1870	1585	1618	1752	1485	1674	1870	1585
Q Serve(g_s), s	6.7	22.1	2.8	11.0	14.2	0.0	1.5	3.5	5.0	6.3	3.8	9.3
Cycle Q Clear(g_c), s	6.7	22.1	2.8	11.0	14.2	0.0	1.5	3.5	5.0	6.3	3.8	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	3049	986	406	3600		80	103	257	377	204	291
V/C Ratio(X)	0.77	0.53	0.09	0.82	0.39		0.51	0.50	0.28	0.71	0.32	0.47
Avail Cap(c_a), veh/h	357	3049	986	579	3600		124	139	287	816	380	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	13.9	8.9	52.0	10.3	0.0	57.8	54.8	43.1	54.2	49.3	43.8
Incr Delay (d2), s/veh	6.4	0.7	0.2	6.5	0.3	0.0	4.9	3.8	0.6	2.5	0.9	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	3.1	8.3	1.0	5.3	5.7	0.0	0.7	1.6	1.9	2.7	1.9	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.9	14.6	9.1	58.5	10.6	0.0	62.7	58.5	43.7	56.8	50.2	45.0
LnGrp LOS	E	B	A	E	B		E	E	D	E	D	D
Approach Vol, veh/h	1891			1730			164			471		
Approach Delay, s/veh	19.1			19.9			53.1			52.4		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	11.6	18.2	76.7	7.5	17.6	13.4	81.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	9.5	19.5	53.5	4.6	24.4	12.5	60.5				
Max Q Clear Time (g_c+I1), s	8.3	7.0	13.0	24.1	3.5	11.3	8.7	16.2				
Green Ext Time (p_c), s	0.7	0.1	0.7	15.5	0.0	0.6	0.2	14.6				

Intersection Summary

HCM 7th Control Delay, s/veh	24.4
HCM 7th LOS	C

Notes

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

Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045) - Alternative
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	1395	142	341	1185	735	102	96	233	872	169	427
Future Volume (vph)	278	1395	142	341	1185	735	102	96	233	872	169	427
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.5	20.5	8.5	8.5	20.5	8.5	8.5	8.5	8.5	8.5	20.5	8.5
Total Split (s)	23.0	47.0	12.2	27.0	51.0	31.0	12.2	15.0	27.0	31.0	33.8	23.0
Total Split (%)	19.2%	39.2%	10.2%	22.5%	42.5%	25.8%	10.2%	12.5%	22.5%	25.8%	28.2%	19.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120

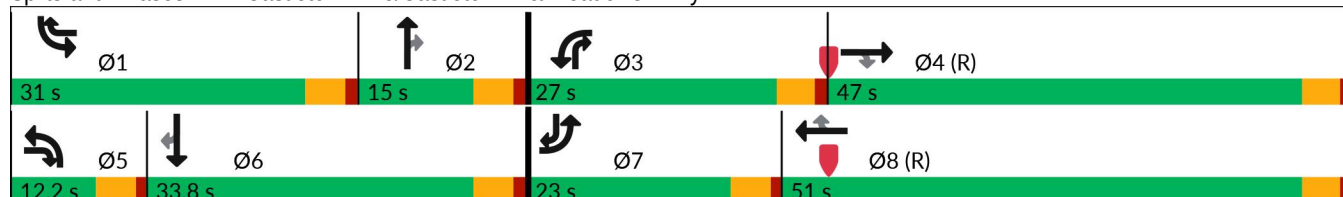
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Castleton Drive/Castleton Dr & Meadows Pkwy



Castleton Heights Castle Rock
1: Castleton Drive/Castleton Dr & Meadows Pkwy

Total (2045) - Alternative
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	1395	142	341	1185	735	102	96	233	872	169	427
Future Volume (veh/h)	278	1395	142	341	1185	735	102	96	233	872	169	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	1438	146	352	1078	0	105	99	240	899	174	440
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	2247	770	428	1712		157	164	329	1016	457	550
Arrive On Green	0.10	0.44	0.44	0.12	0.46	0.00	0.05	0.09	0.09	0.20	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	3563	3741	3170	3456	1870	1585	5023	1870	1585
Grp Volume(v), veh/h	287	1438	146	352	1078	0	105	99	240	899	174	440
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1781	1870	1585	1728	1870	1585	1674	1870	1585
Q Serve(g_s), s	9.8	26.3	6.3	11.6	26.3	0.0	3.6	6.1	10.5	20.9	9.3	29.3
Cycle Q Clear(g_c), s	9.8	26.3	6.3	11.6	26.3	0.0	3.6	6.1	10.5	20.9	9.3	29.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	2247	770	428	1712		157	164	329	1016	457	550
V/C Ratio(X)	0.81	0.64	0.19	0.82	0.63		0.67	0.60	0.73	0.88	0.38	0.80
Avail Cap(c_a), veh/h	533	2247	770	668	1712		222	164	329	1109	457	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	26.2	17.5	51.5	24.8	0.0	56.4	52.8	44.4	46.5	37.8	35.4
Incr Delay (d2), s/veh	5.6	1.4	0.5	4.7	1.8	0.0	4.8	6.2	7.9	8.3	0.5	8.3
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	4.5	10.8	0.1	5.4	11.9	0.0	1.7	3.2	7.4	9.4	4.3	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.3	27.6	18.0	56.3	26.6	0.0	61.2	58.9	52.3	54.8	38.3	43.7
LnGrp LOS	E	C	B	E	C		E	E	D	D	D	D
Approach Vol, veh/h	1871				1430		444				1513	
Approach Delay, s/veh	31.6				33.9		55.9				49.7	
Approach LOS	C				C		E				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	15.0	18.9	57.3	10.0	33.8	16.8	59.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	26.5	10.5	22.5	42.5	7.7	29.3	18.5	46.5				
Max Q Clear Time (g_c+I1), s	22.9	12.5	13.6	28.3	5.6	31.3	11.8	28.3				
Green Ext Time (p_c), s	1.4	0.0	0.9	8.9	0.0	0.0	0.6	7.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			39.5									
HCM 7th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Roundabout
AM Peak-Hour

Intersection						
Intersection Delay, s/veh	7.7					
Intersection LOS	A					
Approach	EB		WB		NB	SB
Entry Lanes	2		2		1	1
Conflicting Circle Lanes	2		2		2	2
Adj Approach Flow, veh/h	1078		808		255	131
Demand Flow Rate, veh/h	1099		825		260	135
Vehicles Circulating, veh/h	141		292		693	804
Vehicles Exiting, veh/h	798		661		547	313
Ped Vol Crossing Leg, #/h	0		0		0	0
Ped Cap Adj	1.000		1.000		1.000	1.000
Approach Delay, s/veh	7.7		7.5		8.6	7.3
Approach LOS	A		A		A	A
Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1420	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	517	582	388	437	260	135
Cap Entry Lane, veh/h	1186	1260	1032	1108	788	717
Entry HV Adj Factor	0.980	0.981	0.979	0.980	0.980	0.970
Flow Entry, veh/h	507	571	380	428	255	131
Cap Entry, veh/h	1162	1236	1010	1086	772	695
V/C Ratio	0.436	0.462	0.376	0.394	0.330	0.188
Control Delay, s/veh	7.7	7.7	7.6	7.4	8.6	7.3
LOS	A	A	A	A	A	A
95th %tile Queue, veh	2	3	2	2	1	1

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Roundabout
PM Peak-Hour

Intersection						
Intersection Delay, s/veh	39.6					
Intersection LOS	E					
Approach	EB		WB		NB	SB
Entry Lanes	2		2		1	1
Conflicting Circle Lanes	2		2		2	2
Adj Approach Flow, veh/h	1222		781		525	468
Demand Flow Rate, veh/h	1247		797		536	477
Vehicles Circulating, veh/h	395		471		1379	1106
Vehicles Exiting, veh/h	1188		1444		263	162
Ped Vol Crossing Leg, #/h	0		0		0	0
Ped Cap Adj	1.000		1.000		1.000	1.000
Approach Delay, s/veh	13.3		9.3		146.4	39.0
Approach LOS	B		A		F	E
Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.471	0.529	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
A (Intercept)	1350	1420	1350	1420	1420	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	586	661	375	422	536	477
Cap Entry Lane, veh/h	939	1015	875	952	440	555
Entry HV Adj Factor	0.980	0.980	0.979	0.981	0.979	0.981
Flow Entry, veh/h	575	648	367	414	525	468
Cap Entry, veh/h	920	995	856	933	431	544
V/C Ratio	0.624	0.651	0.428	0.443	1.219	0.860
Control Delay, s/veh	13.3	13.4	9.5	9.1	146.4	39.0
LOS	B	B	A	A	F	E
95th %tile Queue, veh	5	5	2	2	21	9

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
AM Peak-Hour

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	512	25	535	159	50	56	50
Future Volume (vph)	55	512	25	535	159	50	56	50
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	7	4	3	8
Permitted Phases	2		6		4		8	
Detector Phase	5	2	1	6	7	4	3	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)	9.5	24.0	9.5	24.0	9.0	23.0	9.0	23.0
Total Split (s)	12.0	64.0	11.0	63.0	20.0	33.0	12.0	25.0
Total Split (%)	10.0%	53.3%	9.2%	52.5%	16.7%	27.5%	10.0%	20.8%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 4: Santa Fe Dr & Castleton Ct



Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
AM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	512	419	25	535	178	159	50	26	56	50	19
Future Volume (veh/h)	55	512	419	25	535	178	159	50	26	56	50	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1870	1841
Adj Flow Rate, veh/h	60	563	455	27	588	196	173	54	18	62	54	14
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, %	2	2	2	2	2	2	2	2	2	4	2	4
Cap, veh/h	477	1203	972	367	1664	553	273	158	53	208	79	21
Arrive On Green	0.03	0.64	0.64	0.02	0.64	0.64	0.11	0.12	0.12	0.04	0.06	0.06
Sat Flow, veh/h	1781	1867	1509	1781	2619	871	1781	1342	447	1753	1432	371
Grp Volume(v), veh/h	60	536	482	27	398	386	173	0	72	62	0	68
Grp Sat Flow(s),veh/h/ln	1781	1777	1599	1781	1777	1714	1781	0	1790	1753	0	1804
Q Serve(g_s), s	1.4	18.4	18.4	0.6	12.7	12.7	10.6	0.0	4.4	4.0	0.0	4.4
Cycle Q Clear(g_c), s	1.4	18.4	18.4	0.6	12.7	12.7	10.6	0.0	4.4	4.0	0.0	4.4
Prop In Lane	1.00		0.94	1.00		0.51	1.00		0.25	1.00		0.21
Lane Grp Cap(c), veh/h	477	1145	1030	367	1129	1089	273	0	210	208	0	100
V/C Ratio(X)	0.13	0.47	0.47	0.07	0.35	0.35	0.63	0.00	0.34	0.30	0.00	0.68
Avail Cap(c_a), veh/h	529	1145	1030	421	1129	1089	307	0	418	235	0	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	10.9	10.9	8.6	10.3	10.3	45.1	0.0	48.7	50.5	0.0	55.6
Incr Delay (d2), s/veh	0.1	1.4	1.5	0.1	0.9	0.9	3.5	0.0	1.0	0.8	0.0	7.9
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	0.5	7.3	6.6	0.2	5.0	4.9	5.0	0.0	2.0	1.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.9	12.2	12.4	8.7	11.2	11.2	48.7	0.0	49.7	51.3	0.0	63.6
LnGrp LOS	A	B	B	A	B	B	D		D	D		E
Approach Vol, veh/h	1078			811			245			130		
Approach Delay, s/veh	12.1			11.1			49.0			57.7		
Approach LOS	B			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	83.3	10.2	19.1	8.5	82.2	17.7	11.6				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0				
Max Green Setting (Gmax), s	6.0	58.0	7.0	28.0	7.0	57.0	15.0	20.0				
Max Q Clear Time (g_c+I1), s	2.6	20.4	6.0	6.4	3.4	14.7	12.6	6.4				
Green Ext Time (p_c), s	0.0	8.7	0.0	0.3	0.0	6.0	0.1	0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	18.3											
HCM 7th LOS	B											

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
PM Peak-Hour

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	13	897	25	578	362	50	266	50
Future Volume (vph)	13	897	25	578	362	50	266	50
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	7	4	3	8
Permitted Phases	2		6		4		8	
Detector Phase	5	2	1	6	7	4	3	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	24.0	9.0	24.0	9.0	23.0	9.0	23.0
Total Split (s)	9.0	53.0	9.0	53.0	35.0	29.0	29.0	23.0
Total Split (%)	7.5%	44.2%	7.5%	44.2%	29.2%	24.2%	24.2%	19.2%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 4: Santa Fe Dr & Castleton Ct



Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	897	162	25	578	78	362	50	72	266	50	94
Future Volume (veh/h)	13	897	162	25	578	78	362	50	72	266	50	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	1031	176	27	664	90	393	54	52	306	54	71
Peak Hour Factor	0.87	0.87	0.92	0.92	0.87	0.87	0.92	0.92	0.92	0.87	0.92	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	1518	259	207	1593	216	465	116	112	465	67	88
Arrive On Green	0.01	0.50	0.50	0.02	0.51	0.51	0.21	0.13	0.13	0.17	0.09	0.09
Sat Flow, veh/h	1781	3037	517	1781	3145	426	1781	876	843	1781	733	964
Grp Volume(v), veh/h	15	603	604	27	375	379	393	0	106	306	0	125
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1781	1777	1794	1781	0	1719	1781	0	1697
Q Serve(g_s), s	0.5	30.8	30.9	0.9	15.8	15.9	23.0	0.0	6.8	18.3	0.0	8.7
Cycle Q Clear(g_c), s	0.5	30.8	30.9	0.9	15.8	15.9	23.0	0.0	6.8	18.3	0.0	8.7
Prop In Lane	1.00		0.29	1.00		0.24	1.00		0.49	1.00		0.57
Lane Grp Cap(c), veh/h	349	888	889	207	900	909	465	0	229	465	0	155
V/C Ratio(X)	0.04	0.68	0.68	0.13	0.42	0.42	0.85	0.00	0.46	0.66	0.00	0.80
Avail Cap(c_a), veh/h	385	888	889	232	900	909	530	0	344	514	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	22.7	22.7	18.3	18.5	18.5	36.0	0.0	48.1	39.3	0.0	53.5
Incr Delay (d2), s/veh	0.1	4.2	4.2	0.3	1.4	1.4	10.9	0.0	1.5	2.7	0.0	9.3
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	0.2	13.6	13.7	0.4	6.8	6.9	11.3	0.0	3.0	8.3	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.4	26.8	26.9	18.6	19.9	19.9	46.9	0.0	49.5	42.0	0.0	62.8
LnGrp LOS	B	C	C	B	B	B	D		D	D		E
Approach Vol, veh/h	1222			781			499			431		
Approach Delay, s/veh	26.7			19.9			47.5			48.0		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	66.0	25.7	21.0	6.6	66.8	30.6	16.0				
Change Period (Y+Rc), s	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0				
Max Green Setting (Gmax), s	4.0	47.0	24.0	24.0	4.0	47.0	30.0	18.0				
Max Q Clear Time (g_c+I1), s	2.9	32.9	20.3	8.8	2.5	17.9	25.0	10.7				
Green Ext Time (p_c), s	0.0	7.0	0.3	0.4	0.0	5.3	0.6	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	31.6											
HCM 7th LOS	C											

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Way

Total (2045) - Alternative
AM Peak-Hour

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	318	64	4	89	1	0	0	15	0	0	31
Future Vol, veh/h	45	318	64	4	89	1	0	0	15	0	0	31
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	346	70	4	97	1	0	0	16	0	0	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	415	0	0	-	-	208	-	-	97
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.93	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	-	-	3.319	-	-	3.319
Pot Cap-1 Maneuver	1494	-	-	1142	-	-	0	0	799	0	0	958
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-				-	-	
Mov Cap-1 Maneuver	1494	-	-	1142	-	-	-	-	799	-	-	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	0.79		0.35		9.6		8.89	
HCM LOS					A		A	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	799	1494	-	-	1142	-	-	958
HCM Lane V/C Ratio	0.02	0.033	-	-	0.004	-	-	0.035
HCM Ctrl Dly (s/v)	9.6	7.5	-	-	8.2	-	-	8.9
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Castleton Heights Castle Rock
7: Castleton Drive & Genoa Way

Total (2045) - Alternative
PM Peak-Hour

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑		↰	↑↑				↰			↰
Traffic Vol, veh/h	129	376	87	17	217	6	0	0	22	0	0	131
Future Vol, veh/h	129	376	87	17	217	6	0	0	22	0	0	131
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	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	140	409	95	18	236	7	0	0	24	0	0	142

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	503	0	0	-	-	252	-	-	239
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.93	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	-	-	3.319	-	-	3.319
Pot Cap-1 Maneuver	1323	-	-	1059	-	-	0	0	749	0	0	799
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1323	-	-	1059	-	-	-	-	749	-	-	799
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.75			0.6			9.97			10.48		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	749	1323	-	-	1059	-	-	799
HCM Lane V/C Ratio	0.032	0.106	-	-	0.017	-	-	0.178
HCM Ctrl Dly (s/v)	10	8	-	-	8.5	-	-	10.5
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-	-	0.6



"Our mission is to provide outstanding service, safety and support for transportation infrastructure and



TO: Dan Sailer, Public Works Director

FROM: Jacob Vargish, PE, Transportation Planning and Traffic Engineering Manager

DATE: March 15, 2023

SUBJECT: Safety Improvement Alternatives – Castleton Drive & Genoa Way

Executive Summary

The intersection of Genoa Way and Castleton Road was identified in the 2020 Town of Castle Rock Crash Facts Report as having the second highest crash rate among all non-signalized intersections in Castle Rock. In 2022, staff hired consultant Muller Engineering to perform an Intersection Control Evaluation (ICE) assessment to identify modifications that could be made to increase safety and minimize negative impacts to operations at this intersection (**Attachment A**).

To assess alternatives, Muller reviewed documented crash history, traffic volume, intersection lighting, and operations. Alternatives examined included no action, a roundabout, $\frac{3}{4}$ access control, and an offset tee that would realign the Castleton Road leg not the Genoa Way leg.

Figure 1: Vicinity Map



Viable options for consideration are a $\frac{3}{4}$ access control, a realigned t-intersection to preserve access to businesses, and additional lighting. The roundabout is the most expensive option with a lower safety benefit compared to other options, and therefore is not recommended as a safety improvement project.

The conclusions found the greatest safety benefit to cost was the access control option by adding a $\frac{3}{4}$ median (**see Table 1**). This would eliminate lefts out and through movement across Castleton Drive, see **Figure 2**. Additional street lights also had a safety benefit and could be added to the other two corners, while the two existing lights need to be repaired with any of the alternatives.

Table 1: Benefit Cost Analysis Summary

Alternative	Construction Cost	Cost/Year	Safety Benefit ¹	Safety B/C	Operations Benefit	Ops B/C
Lighting Only	\$170,000	\$13,600	\$16,200	1.19	\$0	1.0
Roundabout	\$4,810,000	\$386,000	\$99,200	0.26	\$324,900	0.84
Access Control	\$480,000	\$38,500	\$120,400	3.13	n/a ²	n/a ²
Offset Tee	\$2,300,000	\$184,600	\$89,200	0.48	\$332,900	1.8

¹ Calculated using methodology provided by CDOT for Calculating Benefit-to-Cost Ratio

² Operational benefits omitted as they do not account for redirected traffic delay.

Figure 2: Access Control Alternative Conceptual Layout



If the access control option is pursued further, by closing through traffic and lefts out across Castleton Drive, as with any new driving restriction public outreach is important. This alternative would restrict movements and re-route minor street left-turn and through traffic to alternate routes, see **Figure 4**. The most added to a trip is 0.6 mile with all right turns to get back to

Meadows Parkway and I-25. Prior to committing to this improvement, public outreach to adjacent businesses is necessary and could begin at any time.

Figure 4: Alternate Routes



If a full movement near businesses is a necessity, the offset tee intersection improvement is the 2nd best option with significantly more cost and less safety benefit, since broad side crashes are reduced but not eliminated.

Staff Recommendation

Staff recommends completing the recommended access control project within allowable budgets and as prioritized along other safety projects. By doing this, the crash impact to a greater number of drivers and safety risk to all roadway users is maximized with this priority. We also recommending coordinating necessary street light repair and maintenance with CORE at this intersection.

Budget Impact

Staff proposes to use safety project funds, as the budget allows to complete the initial design and construction of the proposed improvements. This project could be complete after public outreach has been done in the fall as a part of miscellaneous concrete project and within the allotted \$500,000 budget, or remain on the “Fiscally Unconstrained” project list until funds become available.

Attachment A

Muller – Castleton Drive Intersection Control Evaluation

MEMORANDUM

Project: Castleton Drive Intersection Control Evaluation
To: Chris Sobie, PE, PTOE – Town of Castle Rock
From: Kenneth Ryan, PE, PTOE – Muller Engineering Company
Alex Liston, EI – Muller Engineering Company
Date: February 11, 2022
Subject: ICE and BCA Documentation

INTRODUCTION

The purpose of this memorandum is to document the results of the Intersection Control Evaluation (ICE) at the N Castleton Drive/W Castleton Road and Genoa Way/W Castleton Road intersection; generally referred to as the Castleton Road intersection. This location experiences poor safety performance with the worst Level of Service of Safety (LOSS) when compared to other unsignalized intersections in the Town of Castle Rock crash report.

Location

The Castleton Road intersection is located about 375-ft southeast of the Meadows Parkway/Factory Shops and N Castleton Drive signalized intersection (generally referred to as the Meadows Parkway intersection). An aerial image with the intersection locations is shown in **Figure 1**.

Figure 1: Vicinity Map



Directional Reference Convention

For the purpose of this report, Meadows Parkway, Genoa Way, and Castleton Road west are referenced as the eastbound or westbound directions. Factory Shops Boulevard, Castleton Drive, and Castleton Road south are referenced as the northbound or southbound directions.

EXISTING CONDITIONS

The existing traffic and safety conditions are based on data collected in the field in December 2021, and five-years of crash history.

Documented Crash History

Crash data was provided by the Town of Castle Rock for the five-year period between January 1st, 2015 and December 31st, 2019. The crash frequency and severity directly addressed by the proposed improvements are provided in **Table 1**.

Table 1: Crash History by Year

Crash History	Number of Crashes			
By Type	PDO ¹	Injury	Fatal	Total
Broadside	11	3	0	14
Rear-End	5	0	0	5
Sideswipe (Same Direction)	1	1	0	2
Fixed Object	2	0	0	2
Approach Turn	1	0	0	1
Total	20	4	0	24
By Lighting	PDO ¹	Injury	Fatal	Total
Daylight	15	2	0	17
Dark-Lighted	3	2	0	5
Dark-Unlighted	2	0	0	2
Total	20	4	0	24

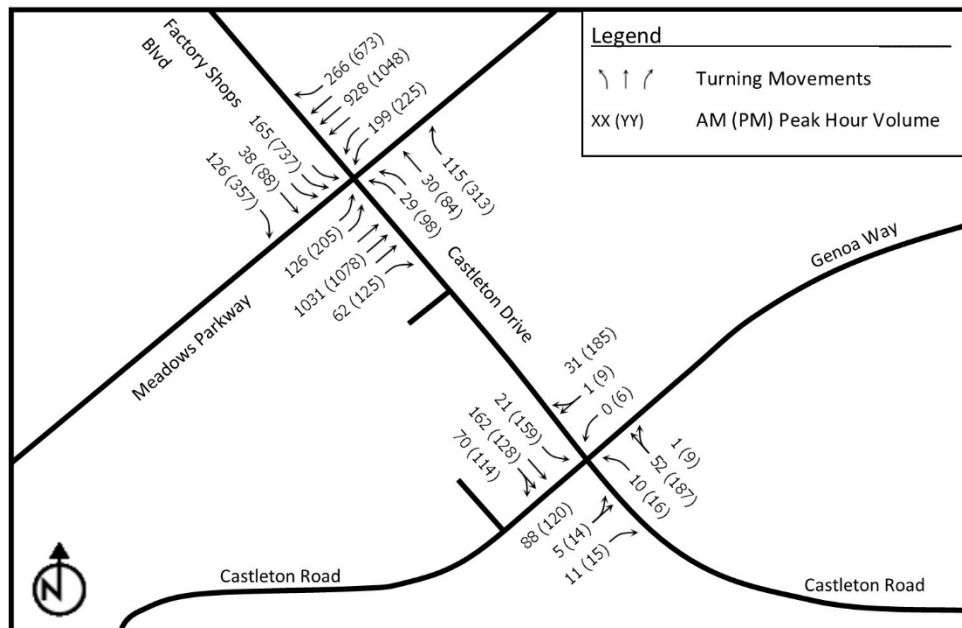
¹ Property Damage Only

Broadside type crashes were predominant at this location. A crash is considered a *broadside* collision when the vehicles involved enter the intersection from non-opposing (adjacent) directions; one or both of the vehicles may be turning at the time of the collision.

Traffic Volume Counts

Turning movement counts were collected on December 8th, 2021 at the Meadows Parkway intersection and the Castleton Road intersection. The AM peak hour took place from 7:00 a.m. to 8:00 a.m. and the PM peak hour took place from 4:15 p.m. to 5:15 p.m. **Figure 2** shows the existing traffic volumes during the AM and PM peak hours. The traffic count data is provided in **Appendix A**.

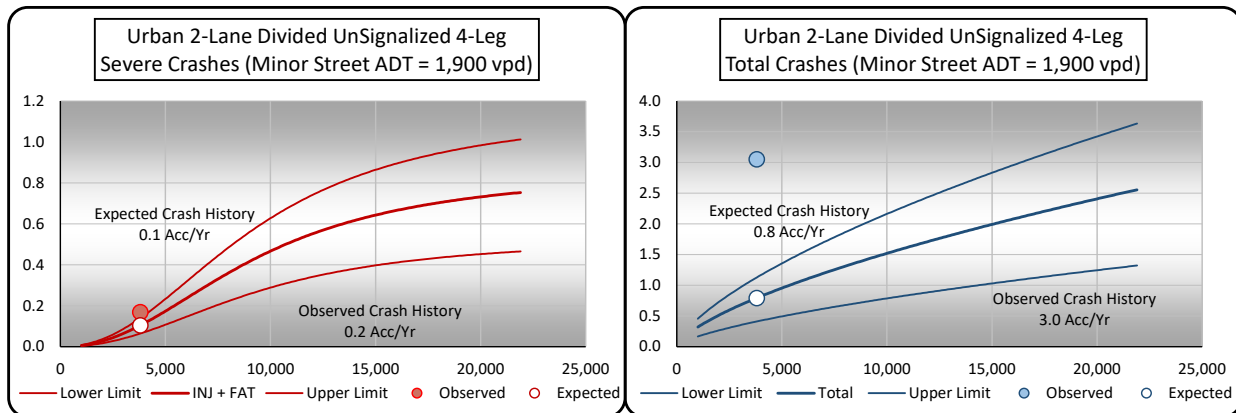
Figure 2: Traffic Counts (December 2021)



Description of Existing Safety Concern

The CDOT Safety Performance Functions (SPF) calibrated for urban 2-lane divided unsignalized 4-leg intersections indicates that the Level of Service of Safety (LOSS) for both total and severe crashes at the Castleton Road intersection are in the LOSS IV category. This indicates a high potential for crash reduction at this intersection. **Figure 3** shows the LOSS for the Castleton Road total and severe crashes.

Figure 3: Castleton Road Intersection SPF Chart



Broadside Collisions

There was a significant pattern of *broadside* type crashes observed in the five-year crash data (14 of 24 crashes). Most of these crashes (8 of 14, 57%) involved eastbound vehicles colliding with either a northbound vehicle (5 of 8) or a southbound vehicle (3 of 8). There was also a northbound *broadside* crash that may have listed the directions incorrectly and is instead part of the eastbound vs. northbound pattern (revised frequency 9 of 14, 64%).



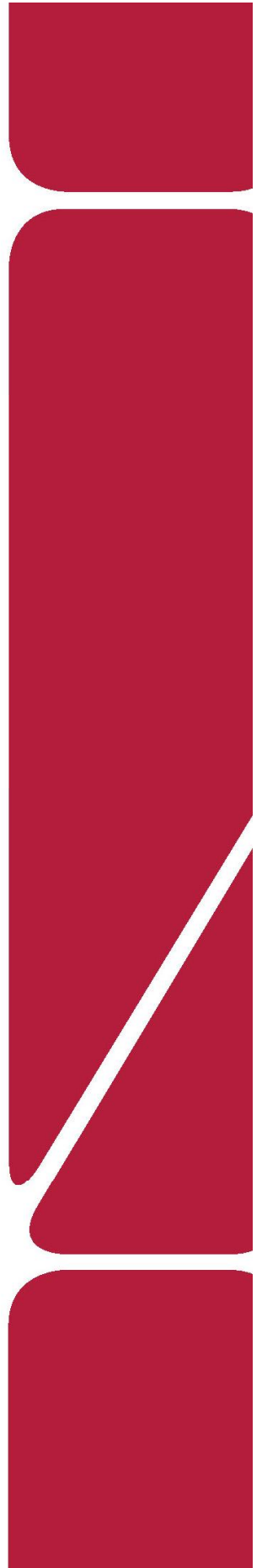
Traffic Impact Study

Pine Canyon Douglas County, Colorado

Prepared for:

JRW Family Limited Partnership LLLP

Kimley»Horn



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

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Douglas County, Colorado

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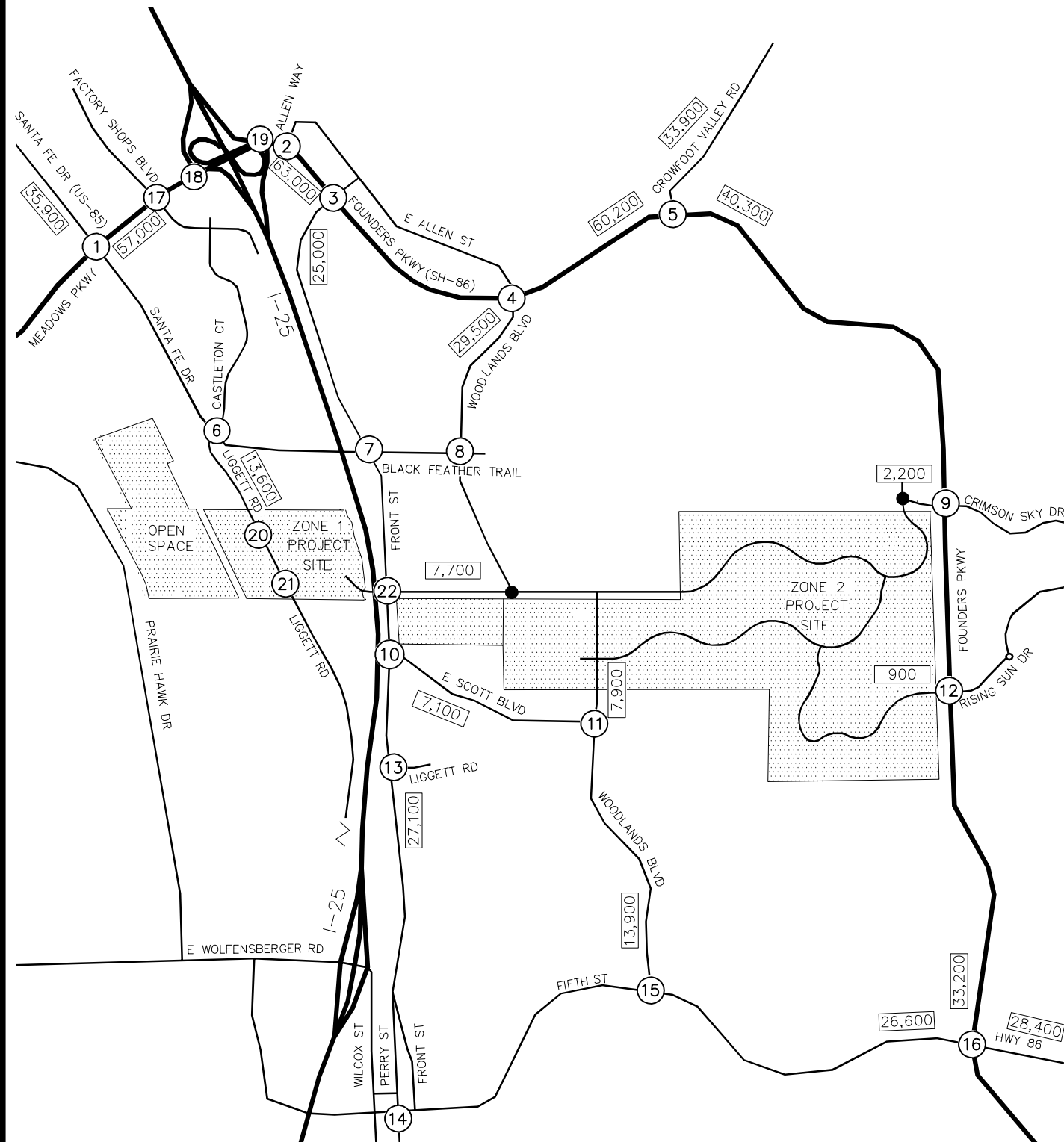
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<p>1</p> <p>196(298) 576(621) 589(679)</p> <p>646(745) 982(1600) 461(356)</p> <p>312(311) 1368(1349) 396(328)</p> <p>MEADOWS PKWY / HWY 85</p>	<p>2</p> <p>367(443) 19(48) 75(152)</p> <p>144(198) 3106(2549) 54(53)</p> <p>252(382) 1527(3241) 150(225)</p> <p>FOUNDERS PKWY / ALLEN WAY</p>	<p>3</p> <p>102(91) 75(144) 5(60)</p> <p>17(28) 2513(2013) 93(158)</p> <p>73(202) 1239(2499) 390(819)</p> <p>FOUNDERS PKWY / FRONT ST</p>	<p>4</p> <p>3(11) 15(98) 54(178)</p> <p>127(119) 2384(1613) 589(523)</p> <p>2(3) 942(2287) 346(683)</p> <p>FOUNDERS PKWY / WOODLANDS BLVD</p>	<p>5</p> <p>1265(990) 135(326)</p> <p>218(393) 1986(1257)</p> <p>525(1334) 683(2051)</p> <p>FOUNDERS PKWY / CROWFOOT VALLEY RD</p>
<p>6</p> <p>620(329) 795(1081) 95(15)</p> <p>20(100) 65(65) 50(280)</p> <p>360(585) 65(65) 60(125)</p> <p>SANTA FE DR LIGGETT RD / HWY 85</p>	<p>7</p> <p>60(159) 461(1011) 27(97)</p> <p>84(73) 332(204) 262(234)</p> <p>90(188) 222(447) 401(800)</p> <p>BLACK FEATHER TRAIL / FRONT ST</p>	<p>8</p> <p>324(238) 517(732) 15(55)</p> <p>50(50) 80(60) 60(40)</p> <p>172(298) 25(50) 90(160)</p> <p>BLACK FEATHER TR / WOODLANDS BLVD</p>	<p>9</p> <p>57(120) 656(1863) 56(183)</p> <p>235(108) 12(13)</p> <p>106(80) 98(82)</p> <p>FOUNDERS PKWY / CRIMSON SKY DR</p>	<p>10</p> <p>943(1453) 119(397)</p> <p>258(120) 198(57)</p> <p>1009(1097) 139(63)</p> <p>E SCOTT BLVD / FRONT ST</p>
<p>11</p> <p>10(5) 301(366)</p> <p>5(10) 169(366)</p> <p>407(139) 332(329)</p> <p>E SCOTT BLVD / WOODLANDS BLVD</p>	<p>12</p> <p>15(27) 671(1737) 63(180)</p> <p>178(121) 83(62)</p> <p>28(18) 21(14)</p> <p>RISING SUN DR / FOUNDERS PKWY</p>	<p>13</p> <p>691(1442) 185(52)</p> <p>163(107) 85(51)</p> <p>1005(1027) 284(48)</p> <p>LIGGETT RD / FRONT ST</p>	<p>14</p> <p>206(276) 205(413) 23(90)</p> <p>25(14) 1153(817) 91(119)</p> <p>131(252) 489(1192) 68(76)</p> <p>FIFTH ST / PERRY ST</p>	<p>15</p> <p>211(174) 323(563)</p> <p>711(269) 1072(660)</p> <p>131(246) 390(1173)</p> <p>FIFTH ST / WOODLANDS BLVD</p>
<p>16</p> <p>299(228) 253(805) 367(895)</p> <p>906(565) 723(391) 115(173)</p> <p>136(288) 354(690) 266(725)</p> <p>FIFTH ST / FOUNDERS PKWY</p>	<p>17</p> <p>277(543) 65(93) 398(1270)</p> <p>480(1187) 1853(2148) 340(470)</p> <p>317(343) 1897(1998) 124(199)</p> <p>MEADOWS PKWY / FACTORY SHOPS BLVD</p>	<p>18</p> <p>1105(1298) 1258(1921)</p> <p>1327(1970)</p> <p>2003(3115)</p> <p>FOUNDERS PKWY / I-25 SB RAMPS</p>	<p>19</p> <p>2352(1487) 1374(1776)</p> <p>1688(3440) 101(203)</p> <p>FOUNDERS PKWY / I-25 NB RAMPS</p>	<p>20</p> <p>23(7) 391(242) 246(101)</p> <p>120(270) 8(22)</p> <p>8(22) 3(7)</p> <p>LIGGETT ROAD NORTH ACCESS</p>
<p>21</p> <p>15(5) 252(217) 135(49)</p> <p>52(128) 13(36)</p> <p>5(14) 3(7)</p> <p>LIGGETT ROAD SOUTH ACCESS</p>	<p>22</p> <p>161(52) 1042(1891) 120(252)</p> <p>238(163) 112(48) 58(48)</p> <p>42(115) 45(106) 18(50)</p> <p>FRONT STREET SITE ACCESS</p>			

LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

PINE CANYON
DOUGLAS COUNTY, CO
2040 TOTAL TRAFFIC VOLUMES

FIGURE 13

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
AM Peak-Hour

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	1018	27	784	173	82	62	75
v/c Ratio	0.13	0.47	0.08	0.38	0.60	0.31	0.33	0.49
Control Delay (s/veh)	8.0	11.1	8.0	13.6	47.6	37.0	40.4	52.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.0	11.1	8.0	13.6	47.6	37.0	40.4	52.8
Queue Length 50th (ft)	14	181	6	159	113	43	38	46
Queue Length 95th (ft)	33	262	18	229	173	89	72	93
Internal Link Dist (ft)		593		716		261		1325
Turn Bay Length (ft)	150		150		150		150	
Base Capacity (vph)	457	2170	356	2087	305	427	191	307
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.47	0.08	0.38	0.57	0.19	0.32	0.24
Intersection Summary								

Castleton Heights Castle Rock
4: Santa Fe Dr & Castleton Ct

Total (2045) - Alternative - Signal #4
PM Peak-Hour

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	1207	27	754	393	132	306	162
v/c Ratio	0.04	0.71	0.15	0.43	0.85	0.44	0.70	0.70
Control Delay (s/veh)	15.8	29.4	17.1	21.5	47.8	30.6	37.8	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.8	29.4	17.1	21.5	47.8	30.6	37.8	44.7
Queue Length 50th (ft)	5	415	10	176	238	54	175	68
Queue Length 95th (ft)	18	515	28	280	322	110	222	136
Internal Link Dist (ft)		593		716		273		1325
Turn Bay Length (ft)	150		150		150		150	
Base Capacity (vph)	346	1694	185	1767	496	382	479	311
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.71	0.15	0.43	0.79	0.35	0.64	0.52
Intersection Summary								