

TRAFFIC IMPACT STUDY

For

A Little School on Perry Street Castle Rock, Colorado

December 2021
Revised July 2023
Revised October 2023
Revised December 2023

Prepared for:

Boduch Design Group, Inc.
4969 S Alkire Street
Morrison, Colorado 80465

Prepared by:



SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

8700 Turnpike Drive, Suite 240
Westminster, Colorado 80031
(303) 458-9798

6 South Tejon Street, Suite 618
Colorado Springs, Colorado 80903
(719) 203-6639

Project Engineer:
Brandon Wilson, EIT

Engineer in Responsible Charge:
Fred Lantz, PE



21-101512

Table of Contents	Page
I. Introduction	1
Project Overview	1
Study Area Boundaries	1
Site Description	1
Existing and Committed Surface Transportation Network	4
II. Existing Traffic Conditions	5
Existing Traffic Analysis Results	8
III. Future Traffic Conditions Without Proposed Development.....	9
Background Traffic Analysis Results – Year 2023	12
Background Traffic Analysis Results – Year 2041	13
IV. Proposed Project Traffic	15
Trip Generation	15
Adjustments to Trip Generation Rates	16
Trip Distribution	17
Trip Assignment	17
V. Future Traffic Conditions With Proposed Developments	19
VI. Project Impacts	22
Peak Hour Intersection Levels of Service	22
Total Traffic Analysis Results Upon Development Build-Out	23
Student Drop-Off/Pick-Up Queue Length Analysis	24
Multi-Modal Assessment	25
VII. Conclusion	26

List of Figures	Page
Figure 1 – Location.....	2
Figure 2 – Site Plan.....	3
Figure 3 – Existing Traffic Volumes.....	6
Figure 4 – Background Traffic Volumes – Year 2023.....	10
Figure 5 – Background Traffic Volumes – Year 2041.....	11
Figure 6 – Distribution and Site Generated Assignment.....	18
Figure 7 – Total Traffic Volumes – Year 2023.....	20
Figure 8 – Total Traffic Volumes – Year 2041.....	21

List of Tables	Page
Table 1 – Intersection Capacity Analysis Summary – Existing Traffic.....	7
Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2023.....	12
Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2041.....	13
Table 4 – Trip Generation Rates.....	16
Table 5 – Trip Generation Summary.....	16
Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2023.....	22
Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2041.....	23

Appendices

APPENDIX A	TRAFFIC COUNT DATA
	SIGNAL TIMING INFORMATION
APPENDIX B	LEVEL OF SERVICE DEFINITIONS
APPENDIX C	CAPACITY WORKSHEETS

I. Introduction

Project Overview

This traffic impact study addresses the capacity, geometric, and control requirements associated with the development entitled A Little School on Perry Street.

This traffic impact study has been revised to address Town review comments dated September 5, 2023, regarding additional information for student drop-off/pick-up procedures.

This proposed institutional development consists of a day care center. The development is located near the northwest corner of Perry Street and 2nd Street, at 203 Perry Street, in Castle Rock, Colorado.

Study Area Boundaries

The study area to be examined in this analysis was coordinated with Town Staff and encompasses the Perry Street intersections with 2nd Street, 3rd Street, and 5th Street, as well as the Wilcox Street intersections with 3rd Street and 5th Street.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently occupied by a Bark N Clips dog grooming facility and surrounded by a mix of commercial, retail, office, and residential land uses.

The proposed development is understood to entail the new construction of an approximate 3,700 square foot day care facility.

Due to the nature of the existing roadway characteristics, access to the development is provided along 2nd Street, which is a one-way roadway within the study area with available on-street parking.

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2023.

A conceptual site plan, as prepared by Boduch Design Group, Inc., is shown on Figure 2. This plan is provided for illustrative purposes only.



Not to Scale



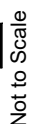
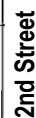
Figure 1
SITE LOCATION

December 2023
Page 2

A LITTLE SCHOOL ON PERRY STREET
Traffic Impact Study

SM ROCHA, LLC
Traffic and Transportation Consultants





A LITTLE SCHOOL ON PERRY STREET
Traffic Impact Study

December 2023
Page 3

Existing and Committed Surface Transportation Network

Within the study area, 5th Street is the primary roadway that will accommodate traffic to and from the proposed development. Secondary roadways include 3rd Street, 2nd Street, Wilcox Street, and Perry Street. A brief description of each roadway, based on the Town's Transportation Master Plan¹ and the Town of Castle Rock Transportation Design Criteria Manual (Criteria)², is provided below:

5th Street is an east-west major arterial roadway having two to four through lanes (one to two lanes in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. 5th Street provides a posted speed limit of 25 MPH. 5th Street ends near Interstate 25 and continues west as Park Street with a collector roadway classification.

3rd Street is an east-west local roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. 3rd Street provides designated on-street parking and a posted speed limit of 25 MPH.

2nd Street is an east-west local roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. West of Perry Street, 2nd Street is a one-way westbound roadway. 2nd Street provides designated on-street parking within the study area but does not provide a posted speed limit. Pursuant to Section 2.2, Table 2.2 of the Town's Criteria, 2nd Street is assumed to have a design speed limit of 25 MPH.

Wilcox Street is a north-south roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. North and south of 5th Street, Wilcox Street is classified as a major and minor arterial roadway, respectively. Wilcox Street provides designated on-street parking and a posted speed limit of 25 MPH.

Perry Street is a north-south minor arterial roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. Perry Street provides designated on-street parking and a posted speed limit of 25 MPH.

The 5th Street intersections with Wilcox Street and Perry Street, as well as the 3rd Street intersection with Wilcox Street, are signalized. The 3rd Street intersection with Perry Street operates as a roundabout. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

No regional or specific improvements for the roadways described above are known to be planned or committed at this time. The study area roadways appear to be built to their ultimate cross-sections.

¹ Town of Castle Rock Transportation Master Plan, Felsburg Holt & Ullevig, October 2017.

² Town of Castle Rock Transportation Design Criteria Manual, Town of Castle Rock, December 2018.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the intersection of 3rd Street with Wilcox Street and the intersection of 2nd Street with Perry Street. AM and PM peak hour traffic counts at the Perry Street intersections of 3rd Street and 5th Street, peak hour traffic counts at the Wilcox Street intersection with 5th Street, as well as 24-hour traffic volumes along Perry Street, were obtained from the Perry Street Social Traffic Impact Study³. These counts are shown on Figure 3.

Traffic count data is included for reference in Appendix A.

Existing signal timing parameters for the 5th Street intersections with Wilcox Street and Perry Street, as well as 3rd Street with Wilcox Street, were obtained from Town Staff and used throughout this study to the best extent possible in order to remain consistent with existing signal coordination plans. Town signal timing information received is included for reference in Appendix A.

³ Perry Street Social: Traffic Impact Study, SM ROCHA, LLC, August 2021.



Not to Scale

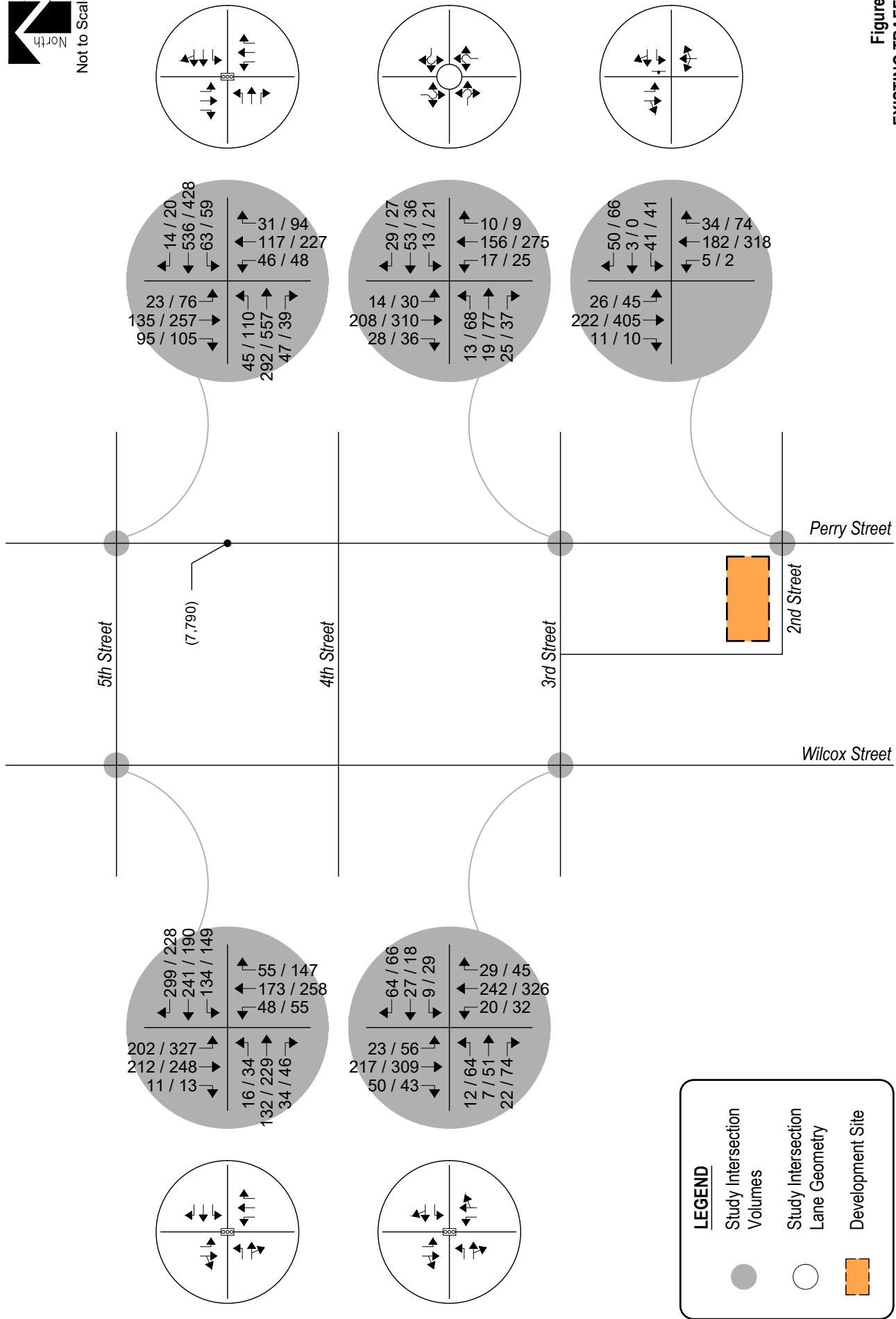


Figure 3
EXISTING TRAFFIC
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



The Signalized, Unsignalized, and Roundabout Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM) by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for existing traffic conditions. These nationally accepted techniques allow for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement, and based on the volume to capacity ratio and control delay for each approach.

Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
5th Street / Wilcox Street (Signalized)	B (17.2)	C (26.4)
5th Street / Perry Street (Signalized)	B (18.0)	C (25.1)
3rd Street / Wilcox Street (Signalized)	A (6.3)	A (9.5)
3rd Street / Perry Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A
2nd Street / Perry Street (Stop-Controlled)		
Westbound Left	B	C
Westbound Through and Right	A	B
Northbound Left, Through and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Roundabout Intersection: Level of Service

Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the signalized intersection of 5th Street with Wilcox Street has overall operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour.

The signalized intersection of 5th Street with Perry Street experiences overall operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour.

The signalized intersection of 3rd Street with Wilcox Street has overall operations at LOS A during both the morning and afternoon peak traffic hours.

The roundabout intersection of 3rd Street with Perry Street has turn movement operations at LOS A during both the morning and afternoon peak traffic hours.

The stop-controlled intersection of 2nd Street with Perry Street experiences turn movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2023 and 2041, a compounded annual growth rate was determined using traffic data provided by the Colorado Department of Transportation's (CDOT) Traffic Count Database System (TCDS)⁴, which anticipates average historical growth rates of less than one percent in the last eight years for the surrounding roadway network. Therefore, in order to provide for a conservative analysis, a growth rate of approximately two percent was applied to existing traffic volumes.

To account for projected traffic from adjacent developments not yet built, trip generations from the Perry Street Social Traffic Impact Study were added to background traffic volumes.

Pursuant to the non-committed area roadway improvements discussed in Section I, Year 2023 and Year 2041 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. Year 2041 assumes existing signal timing parameters for all signalized intersections within the study area with optimized intersection splits in effort to better long-term intersection performance. This assumption provides for a conservative analysis.

It is understood that, by Year 2041, Town Staff plans to have improved the 2nd Street with Perry Street stop-controlled intersection to operate as a roundabout. This is consistent with recommendations described in the Town of Castle Rock's Downtown Mobility Master Plan (DMMP)⁵. As such, and at the direction of Town Staff, additional intersection analysis was included for Year 2041 background traffic conditions to consider the 2nd Street with Perry Street intersection as a roundabout.

Projected background traffic volumes and intersection geometry for Years 2023 and 2041 are shown on Figure 4 and Figure 5, respectively.

⁴ Transportation Data Management System, MS2, 2021.

⁵ Downtown Mobility Master Plan, Town of Castle Rock, July 2019.



Not to Scale

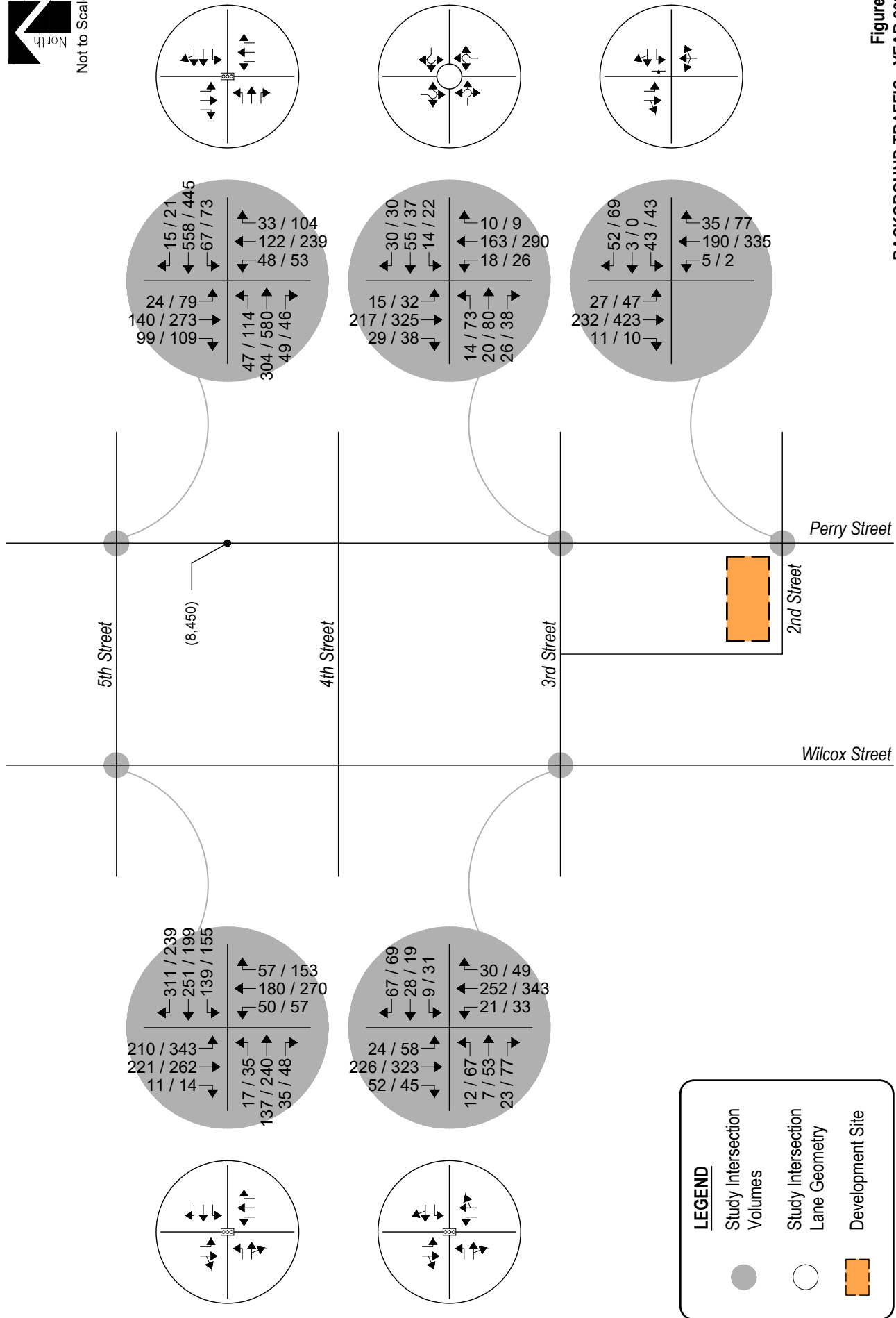


Figure 4
BACKGROUND TRAFFIC - YEAR 2023
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



Not to Scale

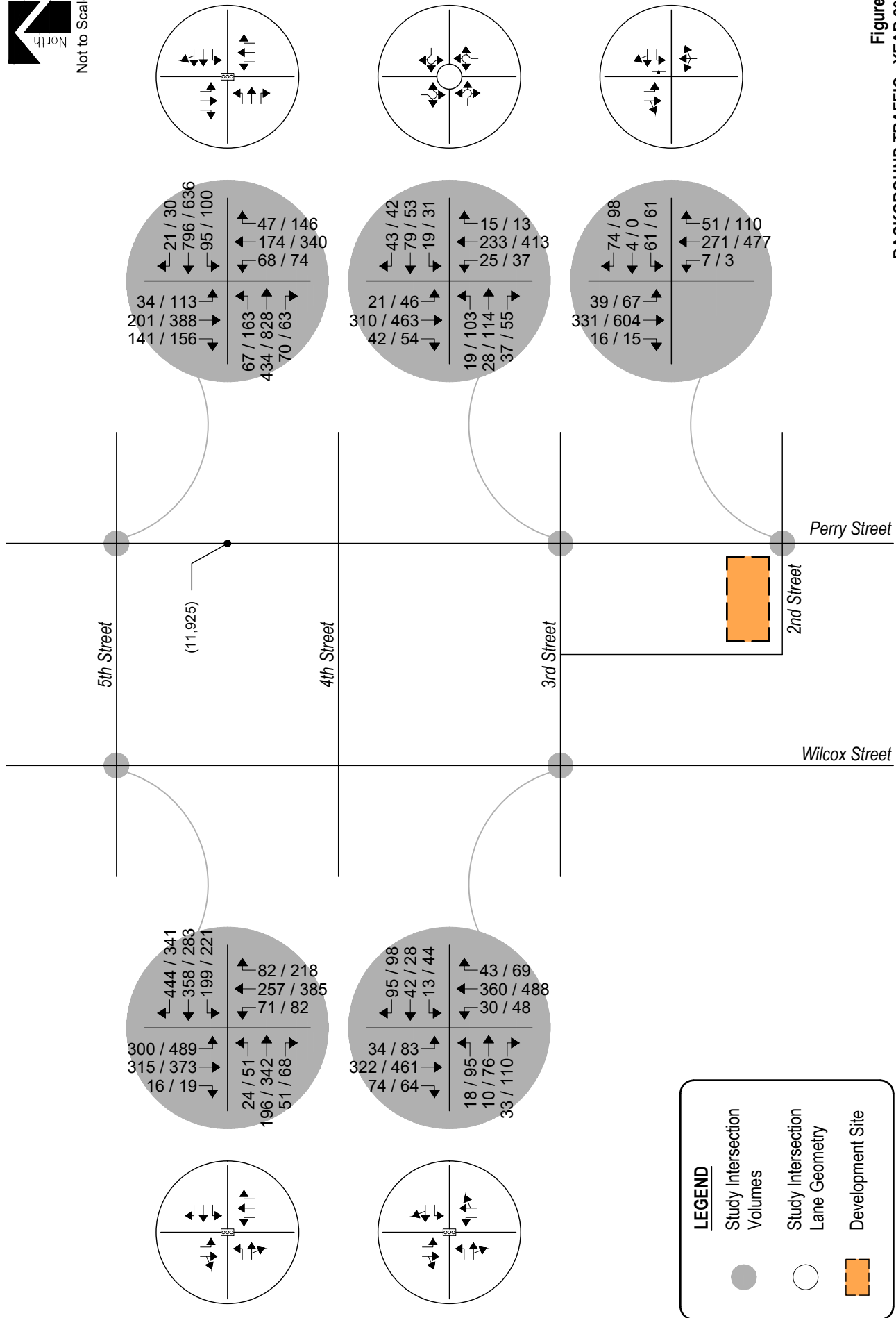


Figure 5
BACKGROUND TRAFFIC - YEAR 2041
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2023 are listed in Table 2. Year 2041 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2023

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
5th Street / Wilcox Street (Signalized)	B (17.6)	C (27.2)
5th Street / Perry Street (Signalized)	B (18.3)	C (25.8)
3rd Street / Wilcox Street (Signalized)	A (6.3)	A (9.9)
3rd Street / Perry Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A
2nd Street / Perry Street (Stop-Controlled)		
Westbound Left	B	C
Westbound Through and Right	A	B
Northbound Left, Through and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Roundabout Intersection: Level of Service

Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2023

Year 2023 background traffic analysis indicates that the 5th Street intersections with Wilcox Street and Perry Street to have overall operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour.

The signalized intersection of 3rd Street with Wilcox Street shows overall operations at LOS A during both the morning and afternoon peak traffic hours.

The roundabout intersection of 3rd Street with Perry Street expects turn movement operations at LOS A during both the morning and afternoon peak traffic hours.

The stop-controlled intersection of 2nd Street with Perry Street experiences turn movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2041

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
5th Street / Wilcox Street (Signalized)	C (22.7)	E (57.2)
5th Street / Perry Street (Signalized)	C (22.0)	D (47.3)
3rd Street / Wilcox Street (Signalized)	A (7.1)	B (12.0)
3rd Street / Perry Street (Roundabout)		
Eastbound Left, Through and Right	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A
2nd Street / Perry Street (Stop-Controlled)		
Westbound Left	C	F
Westbound Through and Right	B	B
Northbound Left, Through and Right	A	A
Southbound Left	A	A
2nd Street / Perry Street (Roundabout)		
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Roundabout Intersection: Level of Service

Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2041

By Year 2041 and without the proposed development, the signalized intersection of 5th Street with Wilcox Street anticipates overall operations at LOS C during the morning peak traffic hour and LOS E during the afternoon peak traffic hour. The LOS E operation anticipated during the afternoon peak traffic period is attributed to the westbound and southbound left turning movements as well as through movements in the eastbound and northbound directions. In order to mitigate the anticipated LOS E operation, it is recommended that Town Staff implement a Transportation Demand Management plan, as described within the Town's DMMP, promoting and enhancing alternate methods of transportation. These alternate transportation methods include, but are not limited to, walking, biking, and public transportation.

The signalized intersection of 5th Street with Perry Street projects overall operations at LOS C during the morning peak traffic hour and LOS D during the afternoon peak traffic hour.

The signalized intersection of 3rd Street with Wilcox Street expects overall operations at LOS A during the morning peak traffic hour and LOS B during the afternoon peak traffic hour.

The roundabout intersection of 3rd Street with Perry Street expects turn movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour.

The stop-controlled intersection of 2nd Street with Perry Street predicts turn movement operations at or better than LOS C during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. The exception would include the westbound left turning movement which operates at LOS F during the afternoon peak traffic hour. The LOS F operation is attributed to the through traffic volume along Perry Street and the stop-controlled nature of the intersection. Operating as a roundabout, the 2nd Street with Perry Street intersection expects turn movement operations at LOS A during both peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along Perry Street may create additional gaps in the traffic stream for turning movements at 2nd Street and may provide mitigation to the LOS F operation projected during the afternoon peak traffic hour.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the existing land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 918 (Hair Salon) was used for estimating existing trip generation because of its best fit to the existing land use description. Use of ITE's land use code 866 (Pet Supply Superstore) was also considered for the existing Bark N Clips dog grooming facility. However, in review of ITE's descriptions for both Hair Salon and Pet Supply Superstore land uses, the Hair Salon land use is believed to provide more accurate trip generation data for a dog grooming facility and provides more conservative trip generation results when compared to the proposed land use.

Due to operating behaviors of the existing dog grooming facility and in coordination with Town Staff, it was determined that, unlike the Hair Salon land use description, vehicle trips are doubled due to customers dropping their pets off and returning later to pick their pets up. As such, a multiplier of two was applied to trip generation data for ITE's Hair Salon land use.

Application of standard traffic generation characteristics for ITE land use code 565 (Day Care Center) was considered for the proposed land use. However, the proposed development has observed specific trip generation information for their existing in-home childcare facility. As such, proposed facility operations, as described by the developer, were evaluated to estimate average daily and weekday peak hour trip information.

Based on observations of the current in-home childcare facility licensed for up to 12 students, an average of 8.6 trips per hour were identified in the morning and afternoon peak traffic periods, with no trips outside of peak hours, totaling 17.2 trips per day. These values indicate that many parents or parental guardians have more than one student who attends the existing childcare facility, further concluding how carpooling occurs.

A summary of proposed facility operational information upon full-occupancy is as follows:

- 8:00 a.m. to 5:00 p.m. weekday operations
- Maximum 48 kids per day
- Maximum 8 employees

Using the above information, the number of daily and peak hour trips likely generated by the A Little School on Perry Street development were then calculated. These calculated rates as shown in Table 4 indicate how some vehicles have more than one student accessing the proposed day care center via carpooling, or a single-occupant vehicle (SOV) rate greater than one.

Trip generation rates used in this study are presented in Table 4.

Table 4 – Trip Generation Rates

ITE CODE	LAND USE	UNIT	TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
			HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
-	Day Care Center	STU	1.43	0.36	0.36	0.72	0.36	0.36	0.72
918	Hair Salon	KSF	14.50	0.61	0.61	1.21	0.25	1.20	1.45

Key: KSF = Thousand Square Feet Gross Floor Area. STU = Students.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed and provides comparison to traffic volume estimates for the existing land use.

Table 5 – Trip Generation Summary

ITE CODE LAND USE SIZE			TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
<u>Site Development - Existing</u>									
918	Hair Salon	2.2 KSF	63	3	3	6	1	5	6
Existing Total:			63	3	3	6	1	5	6
<u>Site Development - Proposed</u>									
-	Day Care Center	48 STU	69	17	17	34	17	17	34
-	Day Care Center	8 EMP	16	1	1	2	1	1	2
Proposed Total:			85	18	18	36	18	18	36
Difference Total:			22	16	16	31	17	13	30

Note: All data and calculations above are subject to being rounded to nearest value.

A multiplier of two (2) applied to land use code 918 (Hair Salon) due to operating characteristics of existing dog grooming facility.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 85 daily trips with 36 of those occurring during both the morning and afternoon peak hours. Compared to existing land use estimates, this represents a potential increase in site traffic generation of approximately 22 daily trips with 31 of those occurring during the morning peak hour and 30 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is likely to attract trips from mode share methods from the adjacent roadway system. ITE defines mode share as the percentage of trips using alternate methods of travel (i.e., walk or bike). As such, a reduction in vehicle trips is expected.

Mode share and alternate methods of transportation are especially common to downtown infill development areas given the compact urban development characteristics of the area and the quality and connectivity of the surrounding roadway network. To this point, the development site is located within the Town's Downtown Overlay District (DOD), a district designed to provide safe and efficient pedestrian and vehicular access.

Adjacent to the proposed development area are attached sidewalks. These pedestrian paths allow access to the residential subdivision directly east and to the greater downtown Castle Rock area. Also within the downtown Castle Rock area and as shown in the Town's DMMP, there is an established network of bicycle mobility.

As the Town's DMMP also indicates, and as a planned Town of Castle Rock project, improvements to adjacent alleyways are expected that would further increase the efficiency of pedestrian and bicycle travel.

It is important to note that, as expressed within the Town's DMMP, Castle Rock lacks transit mobility since the Town's elimination of a fixed route transit service in 2011.

While ITE's Trip Generation Handbook, 3rd Edition, does not provide specific mode share data for Day Care Center land use, it does provide overall averages to general retail and office land uses. ITE's Trip Generation Handbook describes reductions to vehicle trips as being approximately 28 percent caused by transit, walk, and bike trips. However, in order to continue providing for a conservative analysis, no reduction to trips from mode share was applied to this analysis.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the Town, proposed and existing area land uses, allowed turning movements, available roadway network, and in review of historical traffic count data provided by the Denver Regional Council of Governments' (DRCOG) Regional Traffic Count Program.

Overall trip distribution patterns for the development are shown on Figure 6.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6. It is important to note that, due to the one-way nature of 2nd Street, 100 percent of site-generated ingress volumes are assigned to the 2nd Street and Perry Street intersection.



Not to Scale

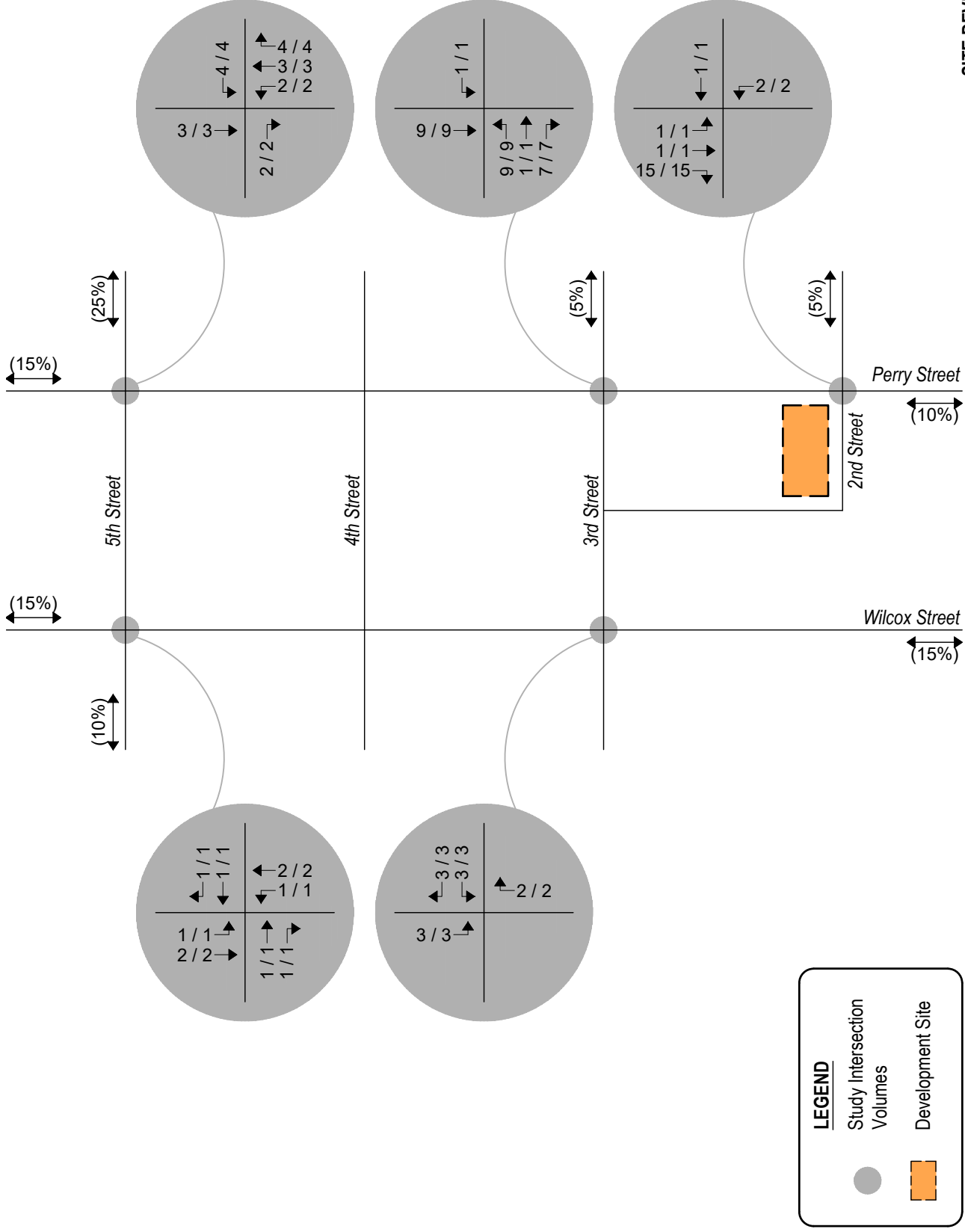


Figure 6
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED
AM / PM Peak Hour
December 2023
Page 18

V. Future Traffic Conditions With Proposed Developments

Site-generated traffic was added to background traffic projections for Years 2023 and 2041 to develop total traffic projections. For analysis purposes, it was assumed that development construction would be completed by end of Year 2023.

Pursuant to area roadway improvement discussions provided in Section III, Year 2023 and Year 2041 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2023 total traffic volumes and intersection geometry are shown in Figure 7.

Figure 8 shows projected total traffic volumes and intersection geometry for Year 2041.



Not to Scale

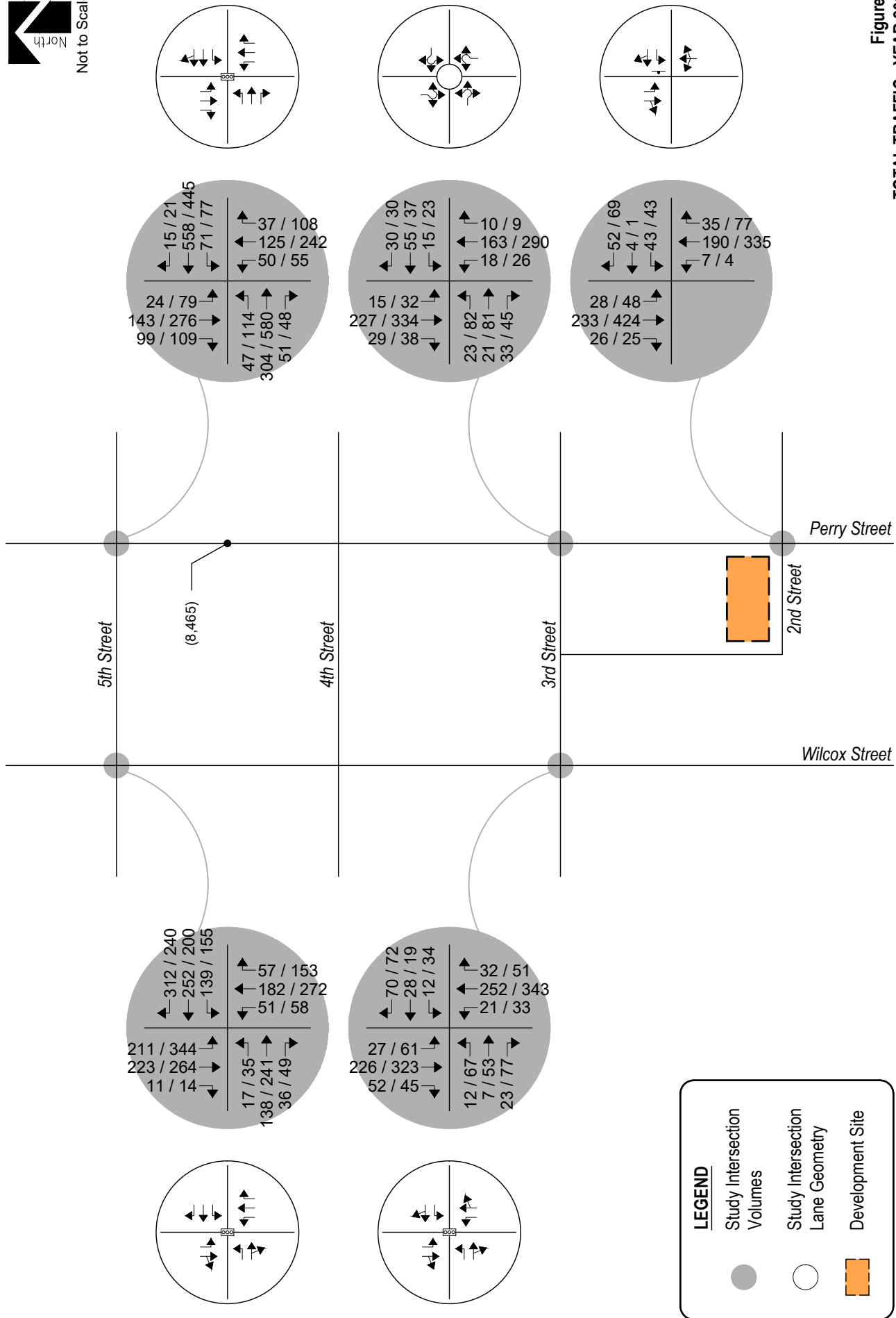


Figure 7
TOTAL TRAFFIC - YEAR 2023
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic





Not to Scale

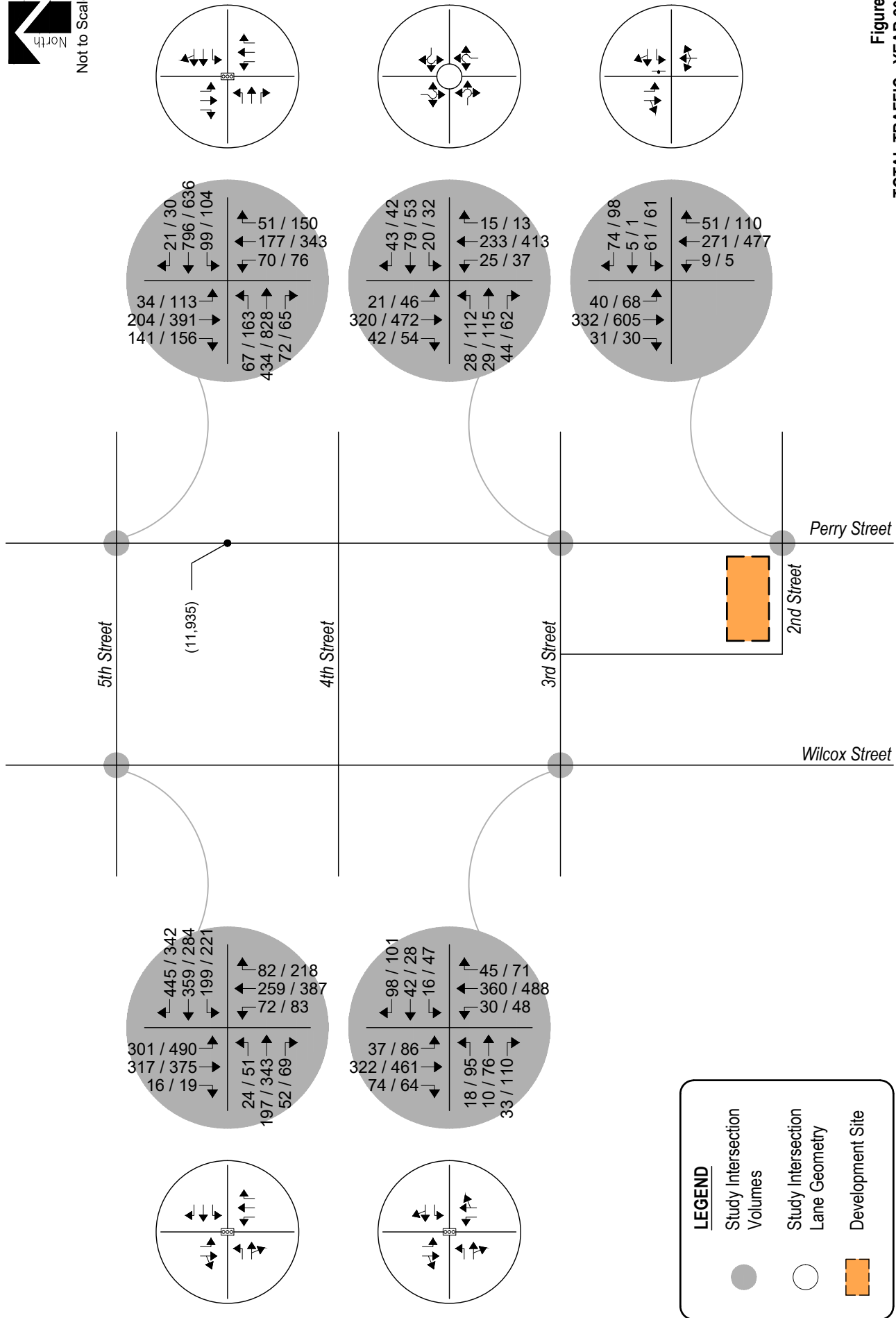


Figure 8
TOTAL TRAFFIC - YEAR 2041
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the Highway Capacity Manual (HCM) and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2023 and 2041 are summarized in Table 6 and Table 7, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2023

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
5th Street / Wilcox Street (Signalized)	B (17.5)	C (27.3)
5th Street / Perry Street (Signalized)	B (18.6)	C (25.9)
3rd Street / Wilcox Street (Signalized)	A (6.4)	A (9.9)
3rd Street / Perry Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A
2nd Street / Perry Street (Stop-Controlled)		
Westbound Left	B	C
Westbound Through and Right	A	B
Northbound Left, Through and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Roundabout Intersection: Level of Service

Stop-Controlled Intersection: Level of Service

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2041

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
5th Street / Wilcox Street (Signalized)	C (22.8)	E (57.5)
5th Street / Perry Street (Signalized)	C (22.1)	D (47.6)
3rd Street / Wilcox Street (Signalized)	A (7.1)	B (12.0)
3rd Street / Perry Street (Roundabout)		
Eastbound Left, Through and Right	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	A
2nd Street / Perry Street (Stop-Controlled)		
Westbound Left	C	F
Westbound Through and Right	B	B
Northbound Left, Through and Right	A	A
Southbound Left	A	A
2nd Street / Perry Street (Roundabout)		
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	A
Southbound Left, Through and Right	A	B

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)

Roundabout Intersection: Level of Service

Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 7 illustrates how, by Year 2041 and upon development build-out, the signalized intersection of 5th Street with Wilcox Street anticipates overall operations at LOS C during the morning peak traffic hour and LOS E during the afternoon peak traffic hour. Compared to the background traffic analysis, the traffic generated by the proposed development is not expected to significantly change the operations of the study intersection. The LOS E operation anticipated during the afternoon peak traffic period is still attributed to westbound and southbound left turning movements as well as through movements in the eastbound and northbound directions. To mitigate the anticipated LOS E operation, it is recommended that Town Staff implement a Transportation Demand Management plan, as described within the Town of Castle Rock's DMMP, promoting alternate methods of transportation. These alternate transportation methods include, but are not limited to, walking, biking, and public transportation.

The signalized intersection of 5th Street with Perry Street projects overall operations at LOS C during the morning peak traffic hour and LOS D during the afternoon peak traffic hour.

The signalized intersection of 3rd Street with Wilcox Street expects overall operations at LOS A during the morning peak traffic hour and LOS B during the afternoon peak traffic hour.

The roundabout intersection of 3rd Street with Perry Street shows turn movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour.

The stop-controlled intersection of 2nd Street with Perry Street predicts turn movement operations at or better than LOS C during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. The exception still includes the westbound left turning movement which operates at LOS F during the afternoon peak traffic hour. The LOS F operation is attributed to the through traffic volume along Perry Street and the stop-controlled nature of the intersection. Table 7 shows how the intersection is projected to have LOS B operations or better under roundabout-controlled conditions.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along Perry Street may create additional gaps in the traffic stream for turning movements at 2nd Street and may provide mitigation to the LOS F operation projected during the afternoon peak traffic hour.

These intersection operations are similar to background conditions.

Student Drop-Off/Pick-Up Queue Length Analysis

Vehicle queuing for student drop-off/pick-up was considered based on the anticipated trip generation and per current vehicle queuing observations for their existing in-home childcare facility.

In coordination with the developer for A Little School on Perry Street, the existing childcare facility typically has a morning peak period from 8:00 a.m. to 10:00 a.m. and an afternoon peak period from 3:00 p.m. to 5:00 p.m. and experiences maximum vehicle queuing of two vehicles during these times. The typical process for student drop-off and pick-up includes the parental guardian parking in the available on-site parking lot, checking in or out their children, then leaving. The existing facility requires parents or parental guardians to check-in their children when dropping them off and to check-out when picking them up. The existing facility has historical student check-in and check-out times spread over an approximate 90-minute window during both peak hours of generation. The entire drop-off/pick-up process takes no longer than 5-10 minutes.

For purposes of this analysis and pursuant to various urban/suburban sites surveyed, ITE's Trip Generation Manual describes how Day Care Center land uses typically experience their greatest demand between the morning peak period of 7:15 a.m. to 8:15 a.m. and the afternoon peak period of 4:45 p.m. to 5:45 p.m. during typical weekdays.

It is understood the maximum capacity of A Little School on Perry Street is 48 students. Applying the maximum capacity of 48 students to ITE's average peak hour of generator rates, the proposed development is estimated to experience 20 vehicles entering the site during the morning peak hour of generation (7:15 a.m. to 8:15 a.m.) and 22 vehicles entering the site during the afternoon peak hour of generation (4:45 p.m. to 5:45 p.m.).

ITE's vehicle time-of-day distribution spreadsheet, supported by ITE's Trip Generation Manual, provides site-specific distribution rates in 15-minute increments over a 24-hour period for various land uses. In review of the most recent time-of-day distribution data for the Day Care Center land use, a maximum distribution of 19.6 percent and 18.3 percent are identified for total site-generated trips during the morning and afternoon peak periods of generation, respectively. Applying these percentages to peak hour of generation trips discussed above, this equates to approximately four to five vehicles entering and/or exiting the site during either peak hour of generation. Considering how site trips are not expected to be on-site longer than 5-10 minutes as described above, this equates to approximately one to two vehicles on-site at any given time.

The above analysis was then applied to the proposed site plan. Considering how three off-street parking spaces are provided on-site (one of which is handicap-accessible), it is concluded that adequate off-street parking is available and no vehicle queuing is anticipated. Furthermore, shared on-street parking is available along the property's frontage and adjacent roadways. It is therefore concluded that adequate vehicle storage is available without negatively impacting the adjacent roadway network.

It is emphasized that the proposed development is within the Town's Downtown Overlay District (DOD). The DOD allows for efficient pedestrian connectivity for multimodal trips not considered within this analysis, which would further decrease the potential for vehicle queuing. Additionally, in order to further reduce site-generated trips, it is the developer's strategy to open their enrollment to those that live or work within walking distance of the day care center.

In coordination with Town Staff, it is understood that seasonal events occur within the study area which sometimes results in the temporary closure of 2nd Street. During these circumstances, facility operations remain unchanged. Site trips have the option to park on-street along Perry Street, Third Street, or Wilcox Street, or may even park off-street in any of the available public parking lots.

Multi-Modal Assessment

Due to the development's site location within the downtown area, an assessment of pedestrian connectivity was evaluated.

The proposed development would accommodate pedestrians and bicyclists by maintaining the current pedestrian and bicycle facilities that already exist.

Internal to the development site, pedestrian sidewalks are proposed, connecting the parking lot area to the building and playgrounds.

With the assumption that the conceptual site plan for the proposed development was designed per the Town's Criteria, and pursuant to the Federal Highway Administration's (FHWA) Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations⁶, traffic calming and pedestrian crossing treatments are not applicable, and are not expected to be needed for the proposed conditions.

⁶ Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, Federal Highway Administration, July 2018.

VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled A Little School on Perry Street. This proposed institutional development consists of a day care center. The development is located near the northwest corner of Perry Street and 2nd Street, at 203 Perry Street, in Castle Rock, Colorado.

The study area examined in this analysis was coordinated with Town Staff and encompassed the Perry Street intersections with 2nd Street, 3rd Street, and 5th Street, as well as the Wilcox Street intersections with 3rd Street and 5th Street.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2023 and Year 2041 background traffic conditions, and Year 2023 and Year 2041 total traffic conditions.

Analysis of existing traffic conditions indicates that the signalized study intersections have operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour. All stop-controlled and roundabout-controlled intersections within the study area have turning movements at or better than LOS C during both the morning and afternoon peak traffic hours.

Without the proposed development, Year 2023 background operational analysis shows that both signalized intersections of 5th Street have overall operations at LOS B during the morning peak traffic hour and LOS C during the afternoon peak traffic hour. All stop-controlled and roundabout-controlled intersections experience turning movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

By Year 2041 and without the proposed development, the signalized intersection of 5th Street with Wilcox Street anticipates overall operations at LOS C during the morning peak traffic hour and LOS E during the afternoon peak traffic hour. The LOS E operation anticipated during the afternoon peak traffic period is attributed to the westbound and southbound left turning movements as well as through movements in the eastbound and northbound directions. In order to mitigate the anticipated LOS E operation, it is recommended that Town Staff implement a Transportation Demand Management plan, as described within the Town of Castle Rock's DMMP, promoting alternate methods of transportation. The signalized intersection of 5th Street with Perry Street projects overall operations at LOS C during the morning peak traffic hour and LOS D during the afternoon peak traffic hour. The signalized intersection of 3rd Street with Wilcox Street expects overall operations at LOS A during the morning peak traffic hour and LOS B during the afternoon peak traffic hour. The roundabout intersection of 3rd Street with Perry Street expects turn movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. The stop-controlled intersection of 2nd Street with Perry Street predicts turn movement operations at or better than LOS C during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. The exception would include the westbound left turning movement which operates at LOS F during the afternoon peak traffic hour. The LOS F operation is attributed to the through traffic volume along Perry Street and the stop-controlled nature of the intersection. Roundabout control is expected to mitigate poor levels of service to LOS A during either peak period.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two Way Stop Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along Perry Street may create additional gaps in the traffic stream for turning movements at 2nd Street and may provide mitigation to the LOS F operation projected during the afternoon peak traffic hour.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2041 background traffic conditions.

APPENDIX A

**Traffic Count Data
Signal Timing Information**



(303) 216-2439
www.alltrafficdata.net

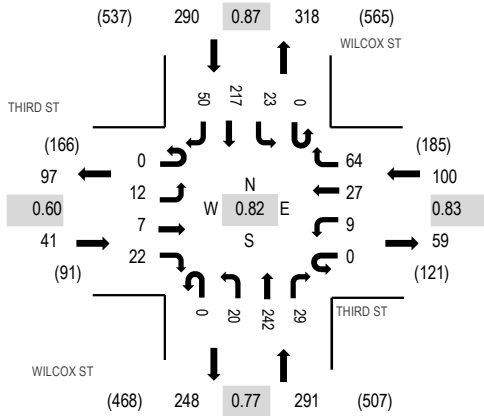
Location: 1 WILCOX ST & THIRD ST AM

Date: Tuesday, November 30, 2021

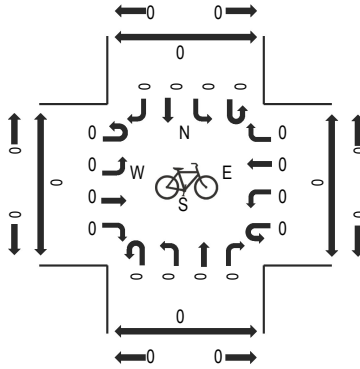
Peak Hour: 07:45 AM - 08:45 AM

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

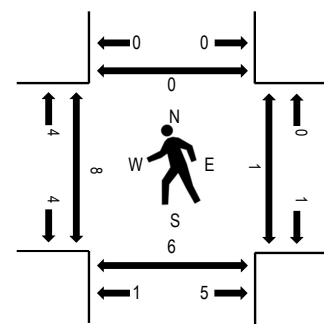
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	THIRD ST Eastbound				THIRD ST Westbound				WILCOX ST Northbound				WILCOX ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	3	4	3	0	4	4	22	0	4	38	4	0	4	27	4	121	637	0	0	0	0
7:15 AM	0	1	0	5	1	2	3	12	0	5	47	5	0	6	26	10	123	702	1	0	0	0
7:30 AM	0	4	3	4	0	5	4	9	0	6	43	7	0	7	73	9	174	713	0	1	0	0
7:45 AM	0	2	2	5	0	3	8	19	0	8	72	14	0	6	63	17	219	722	1	0	0	0
8:00 AM	0	1	2	6	0	1	10	8	0	5	69	6	0	3	63	12	186	683	2	0	0	0
8:15 AM	0	2	0	4	0	2	5	17	0	2	43	3	0	5	38	13	134		3	1	4	0
8:30 AM	0	7	3	7	0	3	4	20	0	5	58	6	0	9	53	8	183		2	0	2	0
8:45 AM	0	8	9	6	0	7	2	10	0	4	49	4	1	8	58	14	180		2	0	1	0
Count Total	0	28	23	40	1	27	40	117	0	39	419	49	1	48	401	87	1,320		11	2	7	0
Peak Hour	0	12	7	22	0	9	27	64	0	20	242	29	0	23	217	50	722		8	1	6	0



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

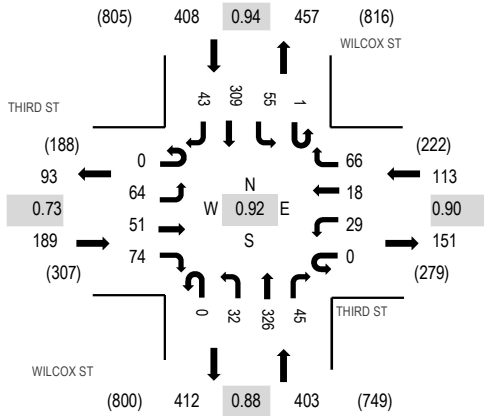
Location: 1 WILCOX ST & THIRD ST PM

Date: Tuesday, November 30, 2021

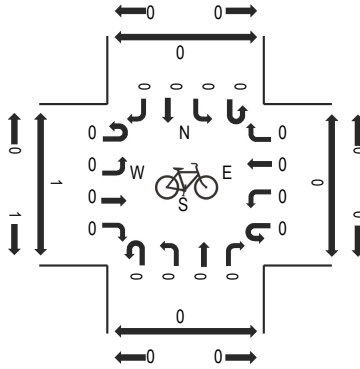
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

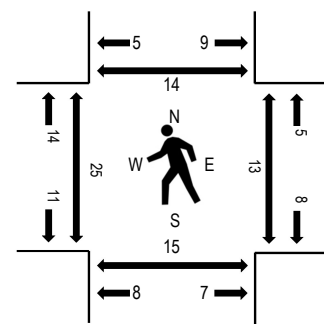
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	THIRD ST Eastbound				THIRD ST Westbound				WILCOX ST Northbound				WILCOX ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	19	9	20	0	10	10	16	0	3	80	14	0	19	72	11	283	1,086	0	0	0	0
4:15 PM	0	8	8	17	0	8	5	16	0	12	70	13	0	17	73	10	257	1,096	1	3	6	1
4:30 PM	0	12	10	17	0	8	2	18	0	3	74	11	0	15	63	11	244	1,113	3	1	4	0
4:45 PM	0	14	12	18	0	5	8	23	0	11	95	10	0	14	77	15	302	1,095	7	8	0	6
5:00 PM	0	25	19	21	0	9	5	14	0	6	73	11	0	15	85	10	293	997	7	0	2	7
5:15 PM	0	13	10	18	0	7	3	11	0	12	84	13	1	11	84	7	274		8	4	9	1
5:30 PM	0	2	4	11	0	5	3	15	0	10	74	7	0	8	78	9	226		1	2	1	2
5:45 PM	0	4	6	10	0	6	2	13	0	8	42	13	0	10	78	12	204		1	6	9	3
Count Total	0	97	78	132	0	58	38	126	0	65	592	92	1	109	610	85	2,083		28	24	31	20
Peak Hour	0	64	51	74	0	29	18	66	0	32	326	45	1	55	309	43	1,113		25	13	15	14



(303) 216-2439
www.alltrafficdata.net

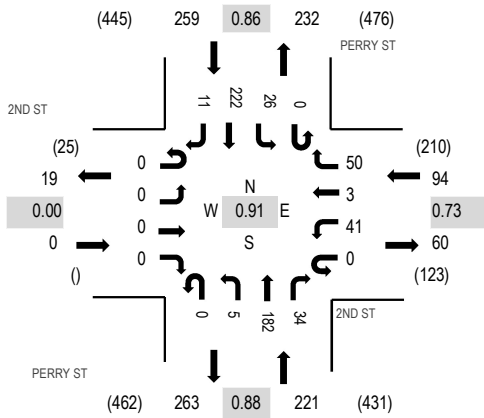
Location: 2 PERRY ST & 2ND ST AM

Date: Tuesday, November 30, 2021

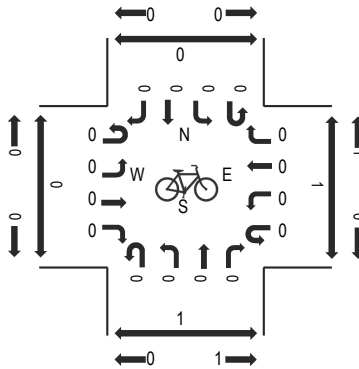
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

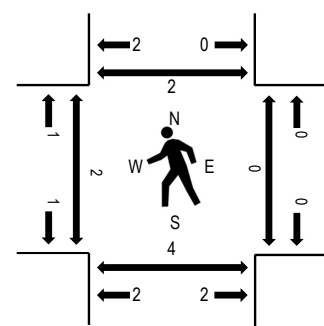
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	2ND ST Eastbound				2ND ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	15	0	25	0	0	35	10	0	6	20	1	112	512	0	0	1	2
7:15 AM	0	0	0	0	0	11	1	17	0	0	60	5	0	5	38	0	137	528	0	0	4	0
7:30 AM	0	0	0	0	0	9	0	17	0	1	32	7	0	13	53	1	133	549	0	0	6	0
7:45 AM	0	0	0	0	0	11	1	9	0	0	49	11	0	6	42	1	130	557	1	0	0	0
8:00 AM	0	0	0	0	0	8	1	8	0	0	55	8	0	9	38	1	128	574	0	0	1	1
8:15 AM	0	0	0	0	0	14	1	15	0	2	45	6	0	7	65	3	158		0	0	0	0
8:30 AM	0	0	0	0	0	7	1	11	0	2	36	11	0	5	63	5	141		0	0	0	0
8:45 AM	0	0	0	0	0	12	0	16	0	1	46	9	0	5	56	2	147		2	0	3	1
Count Total	0	0	0	0	0	87	5	118	0	6	358	67	0	56	375	14	1,086		3	0	15	4
Peak Hour	0	0	0	0	0	41	3	50	0	5	182	34	0	26	222	11	574		2	0	4	2



(303) 216-2439
www.alltrafficdata.net

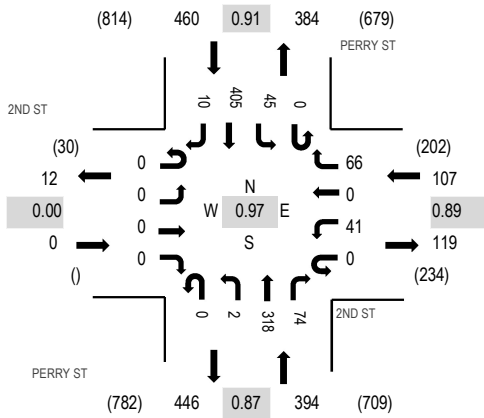
Location: 2 PERRY ST & 2ND ST PM

Date: Tuesday, November 30, 2021

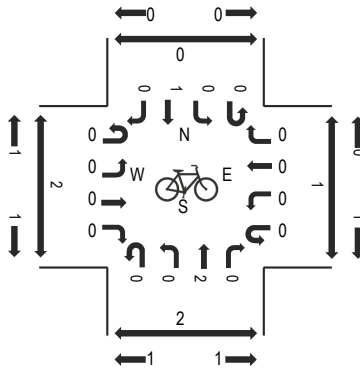
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

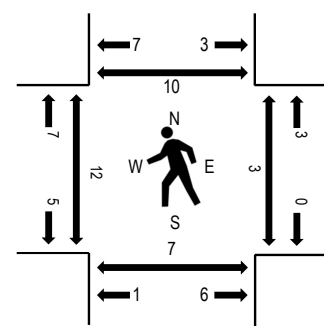
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	2ND ST Eastbound				2ND ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	8	0	20	0	1	80	27	0	9	99	2	246	961	0	0	2	2
4:15 PM	0	0	0	0	0	13	0	15	0	1	81	10	0	14	113	0	247	947	4	0	4	4
4:30 PM	0	0	0	0	0	11	0	19	0	0	91	22	0	10	92	2	247	891	5	0	0	3
4:45 PM	0	0	0	0	0	9	0	12	0	0	66	15	0	12	101	6	221	826	3	3	1	1
5:00 PM	0	0	0	0	0	12	0	9	0	1	72	28	0	13	94	3	232	764	13	1	2	8
5:15 PM	0	0	0	0	0	10	0	19	0	1	62	12	0	13	72	2	191		8	5	4	6
5:30 PM	0	0	0	0	0	7	1	14	0	1	66	14	0	12	66	1	182		6	0	0	1
5:45 PM	0	0	0	0	0	8	2	13	0	1	40	17	0	6	67	5	159		8	1	3	1
Count Total	0	0	0	0	0	78	3	121	0	6	558	145	0	89	704	21	1,725		47	10	16	26
Peak Hour	0	0	0	0	0	41	0	66	0	2	318	74	0	45	405	10	961		12	3	7	10



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

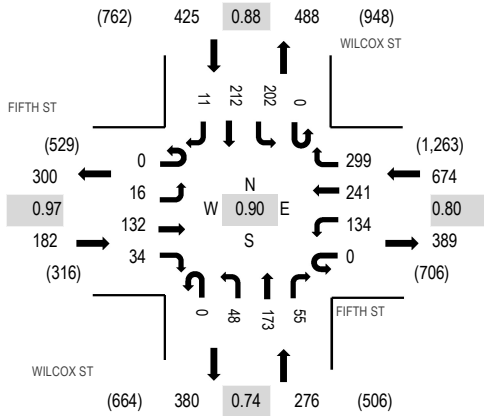
Location: 1 WILCOX ST & FIFTH ST AM

Date: Wednesday, July 28, 2021

Peak Hour: 07:45 AM - 08:45 AM

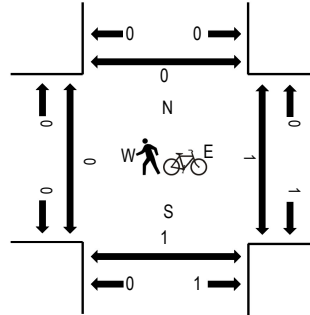
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FIFTH ST Eastbound				FIFTH ST Westbound				WILCOX ST Northbound				WILCOX ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	14	4	0	15	48	90	0	8	28	7	0	34	34	2	285	1,346	0	0	0	0
7:15 AM	0	3	22	6	0	20	41	74	0	10	17	11	0	35	32	3	274	1,437	0	1	0	0
7:30 AM	0	2	27	9	0	30	46	94	0	7	50	17	0	42	31	0	355	1,513	0	1	0	0
7:45 AM	0	3	32	6	0	36	94	84	0	13	38	14	0	56	54	2	432	1,557	0	0	0	0
8:00 AM	0	4	31	11	0	35	52	78	0	13	42	8	0	51	49	2	376	1,501	0	0	0	0
8:15 AM	0	4	34	10	0	27	44	66	0	6	34	12	0	51	57	5	350		0	0	1	0
8:30 AM	0	5	35	7	0	36	51	71	0	16	59	21	0	44	52	2	399		0	0	0	0
8:45 AM	0	7	32	7	0	31	44	56	0	14	38	23	0	53	65	6	376		0	0	0	0
Count Total	0	29	227	60	0	230	420	613	0	87	306	113	0	366	374	22	2,847		0	2	1	0
Peak Hour	0	16	132	34	0	134	241	299	0	48	173	55	0	202	212	11	1,557		0	0	1	0



(303) 216-2439
www.alltrafficdata.net

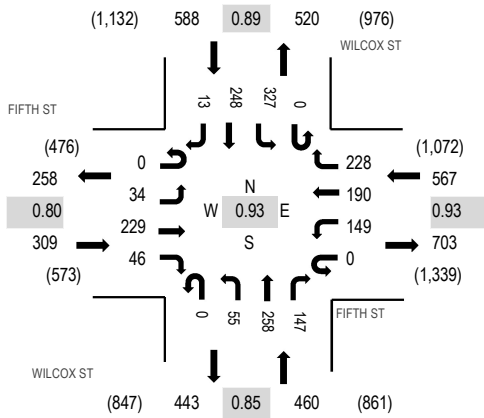
Location: 1 WILCOX ST & FIFTH ST PM

Date: Wednesday, July 28, 2021

Peak Hour: 04:30 PM - 05:30 PM

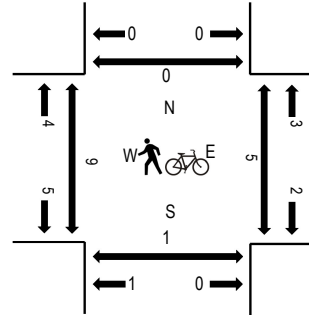
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FIFTH ST Eastbound				FIFTH ST Westbound				WILCOX ST Northbound				WILCOX ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	8	51	13	0	28	50	52	0	8	73	41	0	81	61	1	467	1,839	0	1	0	0
4:15 PM	0	7	39	13	0	26	42	52	0	9	57	35	0	76	55	1	412	1,892	3	1	0	0
4:30 PM	0	9	54	14	0	46	48	56	0	11	53	33	0	84	76	7	491	1,924	2	0	0	0
4:45 PM	0	7	55	13	0	36	50	57	0	13	62	35	0	86	52	3	469	1,858	3	3	0	0
5:00 PM	0	14	71	12	0	33	46	74	0	14	61	42	0	87	64	2	520	1,799	1	0	0	0
5:15 PM	0	4	49	7	0	34	46	41	0	17	82	37	0	70	56	1	444		3	1	1	0
5:30 PM	0	5	51	8	0	42	32	55	0	11	45	35	0	82	59	0	425		3	2	3	2
5:45 PM	0	6	52	11	0	32	43	51	0	15	45	27	0	66	56	6	410		3	0	0	0
Count Total	0	60	422	91	0	277	357	438	0	98	478	285	0	632	479	21	3,638		18	8	4	2
Peak Hour	0	34	229	46	0	149	190	228	0	55	258	147	0	327	248	13	1,924		9	4	1	0



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

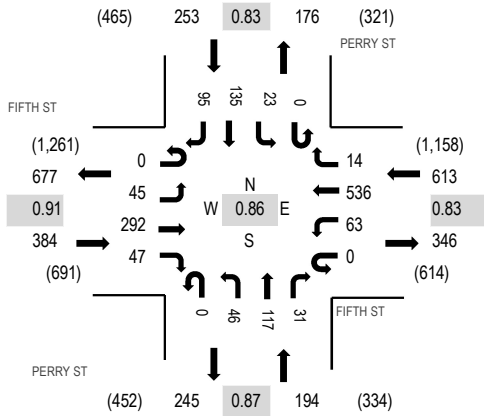
Location: 2 PERRY ST & FIFTH ST AM

Date: Wednesday, July 28, 2021

Peak Hour: 07:45 AM - 08:45 AM

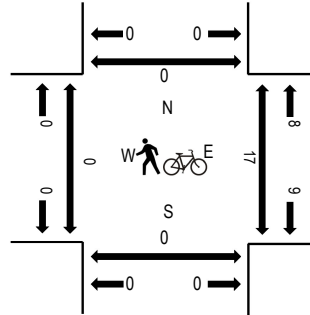
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FIFTH ST Eastbound				FIFTH ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	4	45	4	0	6	124	3	0	8	14	2	0	1	30	20	261	1,278	0	0	0	0
7:15 AM	0	11	52	7	0	9	113	4	0	11	21	3	0	3	28	16	278	1,364	0	0	0	0
7:30 AM	0	12	63	8	0	12	147	2	0	5	17	7	0	8	25	15	321	1,404	0	0	1	0
7:45 AM	0	10	76	10	0	17	171	2	0	16	29	11	0	8	34	34	418	1,444	0	2	0	0
8:00 AM	0	7	73	13	0	15	127	6	0	10	23	11	0	3	35	24	347	1,370	0	0	0	0
8:15 AM	0	9	62	17	0	19	109	2	0	9	33	4	0	4	35	15	318		0	8	0	0
8:30 AM	0	19	81	7	0	12	129	4	0	11	32	5	0	8	31	22	361		0	6	0	0
8:45 AM	0	21	69	11	0	19	102	4	0	10	32	10	0	5	48	13	344		0	3	0	0
Count Total	0	93	521	77	0	109	1,022	27	0	80	201	53	0	40	266	159	2,648		0	19	1	0
Peak Hour	0	45	292	47	0	63	536	14	0	46	117	31	0	23	135	95	1,444		0	16	0	0



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

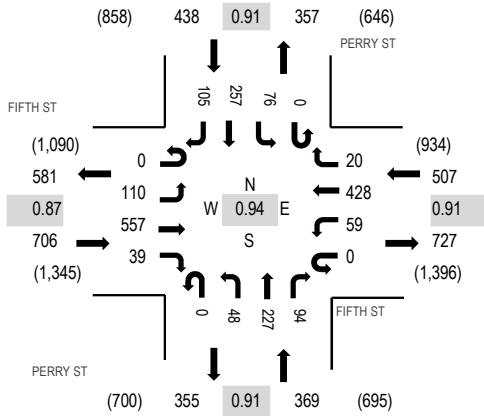
Location: 2 PERRY ST & FIFTH ST PM

Date: Wednesday, July 28, 2021

Peak Hour: 04:30 PM - 05:30 PM

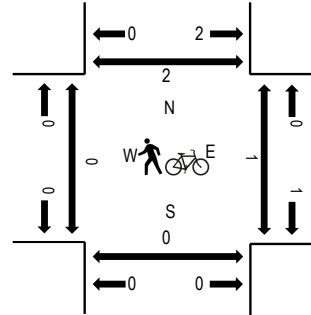
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	FIFTH ST Eastbound				FIFTH ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	26	138	11	0	15	82	5	0	21	43	27	0	20	66	28	482	1,952	0	2	2	0
4:15 PM	0	18	125	12	0	21	89	3	0	12	48	23	0	19	62	18	450	2,007	1	0	1	0
4:30 PM	0	22	137	10	0	15	118	7	0	10	60	31	0	20	71	20	521	2,020	0	0	0	0
4:45 PM	0	24	135	15	0	13	104	4	0	11	50	20	0	20	68	35	499	1,941	0	0	0	0
5:00 PM	0	37	159	7	0	14	105	4	0	15	66	20	0	23	61	26	537	1,880	0	1	0	0
5:15 PM	0	27	126	7	0	17	101	5	0	12	51	23	0	13	57	24	463		0	0	0	0
5:30 PM	0	22	137	9	0	7	78	4	0	17	54	17	0	18	51	28	442		0	0	1	0
5:45 PM	0	21	114	6	0	18	98	7	0	12	38	14	0	17	67	26	438		0	0	0	0
Count Total	0	197	1,071	77	0	120	775	39	0	110	410	175	0	150	503	205	3,832		1	3	4	0
Peak Hour	0	110	557	39	0	59	428	20	0	48	227	94	0	76	257	105	2,020		0	1	0	0



(303) 216-2439
www.alltrafficdata.net

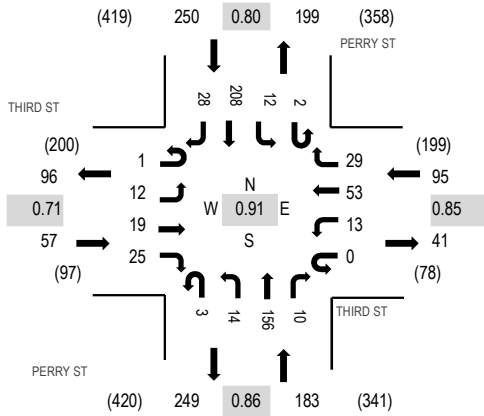
Location: 5 PERRY ST & THIRD ST AM

Date: Wednesday, July 28, 2021

Peak Hour: 08:00 AM - 09:00 AM

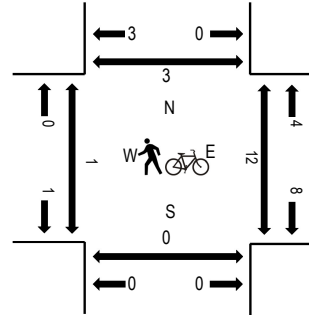
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	THIRD ST Eastbound				THIRD ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	4	5	0	2	13	7	1	10	18	2	1	0	31	2	97	471	0	1	0	0
7:15 AM	0	3	4	3	0	1	16	4	0	2	35	3	0	3	34	4	112	516	0	4	0	0
7:30 AM	0	2	4	2	0	3	19	7	0	2	24	3	0	2	35	5	108	537	0	0	0	0
7:45 AM	0	4	3	5	0	9	16	7	0	8	45	5	1	4	40	7	154	579	0	0	0	2
8:00 AM	0	3	4	7	0	7	13	7	0	5	37	2	2	3	48	4	142	585	0	1	0	1
8:15 AM	0	1	3	9	0	0	11	3	1	1	39	2	0	4	54	5	133		0	6	0	0
8:30 AM	0	3	3	4	0	3	21	10	2	4	45	3	0	2	43	7	150		1	5	0	2
8:45 AM	1	5	9	5	0	3	8	9	0	4	35	3	0	3	63	12	160		0	0	0	0
Count Total	1	22	34	40	0	28	117	54	4	36	278	23	4	21	348	46	1,056		1	17	0	5
Peak Hour	1	12	19	25	0	13	53	29	3	14	156	10	2	12	208	28	585		1	12	0	3



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

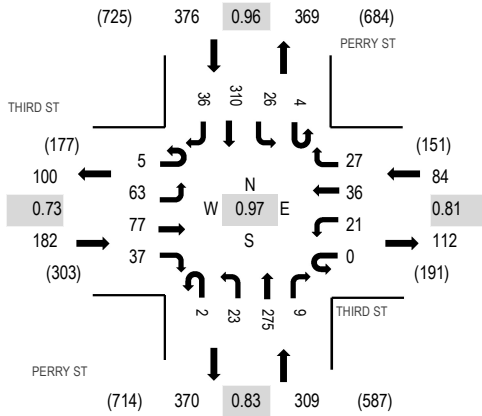
Location: 5 PERRY ST & THIRD ST PM

Date: Wednesday, July 28, 2021

Peak Hour: 04:15 PM - 05:15 PM

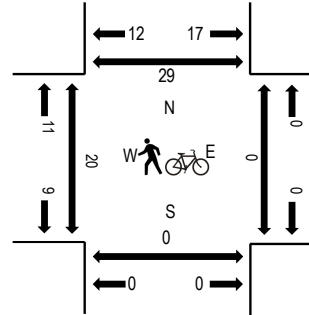
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	THIRD ST Eastbound				THIRD ST Westbound				PERRY ST Northbound				PERRY ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	2	7	9	5	0	8	5	7	0	4	66	2	0	4	81	9	209	916	1	0	0	0
4:15 PM	2	13	14	5	0	6	7	3	0	5	72	2	0	5	80	13	227	951	0	0	0	5
4:30 PM	0	9	19	11	0	7	6	9	0	7	81	6	0	7	77	7	246	927	2	0	0	11
4:45 PM	2	18	17	10	0	6	8	6	1	6	60	0	3	6	81	10	234	888	12	0	0	5
5:00 PM	1	23	27	11	0	2	15	9	1	5	62	1	1	8	72	6	244	850	5	0	0	8
5:15 PM	1	12	9	11	0	0	3	3	0	4	68	4	0	7	73	8	203		2	0	0	2
5:30 PM	0	10	15	8	0	7	6	11	0	2	68	4	1	5	57	13	207		9	0	0	5
5:45 PM	2	8	14	8	0	6	8	3	1	4	49	2	2	4	79	6	196		3	0	0	0
Count Total	10	100	124	69	0	42	58	51	3	37	526	21	7	46	600	72	1,766		34	0	0	36
Peak Hour	5	63	77	37	0	21	36	27	2	23	275	9	4	26	310	36	951		19	0	0	29

Date Start: 28-Jul-21
Site Code: 6
Station ID: 6
PERRY ST S.O. 5TH ST

Start Time	28-Jul-21 Wed	NB	SB	Total
12:00 AM		10	8	18
01:00		4	8	12
02:00		6	8	14
03:00		5	9	14
04:00		11	6	17
05:00		24	26	50
06:00		56	110	166
07:00		145	194	339
08:00		176	250	426
09:00		195	285	480
10:00		239	252	491
11:00		275	283	558
12:00 PM		304	318	622
01:00		295	292	587
02:00		278	283	561
03:00		277	322	599
04:00		367	403	770
05:00		329	295	624
06:00		240	278	518
07:00		208	181	389
08:00		125	136	261
09:00		80	74	154
10:00		48	38	86
11:00		16	19	35
Total		3713	4078	7791
Percent		47.7%	52.3%	
AM Peak	-	11:00	09:00	-
Vol.	-	275	285	-
PM Peak	-	16:00	16:00	-
Vol.	-	367	403	-
Grand Total		3713	4078	7791
Percent		47.7%	52.3%	
ADT		ADT 7,791		AADT 7,791

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B	B	B	B	B											
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 13																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 14																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 15																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 16																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X	X	X	X	X								
Exclusive Ped																

Phase Compatibility (MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Approach	W	E	S	N	E	W	N	S	N	N	N	N	N	N	N	N
Movement	L	T	L	T	L	T	L	T								
Associated PED																
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Approach	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Movement																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC

No

CRC (16 bit)

EFB7

Enable Automatic Backup to Datakey

No

Backup Prevent (MM) 1-1-3

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Timing	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phases	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Simultaneous Gap (MM) 1-1-4

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phase	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Must	8	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Gap	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phase	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disable		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming				Power Up	Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	
1	1	V				-	Auto	X		
2	2	V				-	Auto	X		X
3	3	V				-	Auto	X		
4	4	V				-	Auto	X		X
5	5	V				+	Auto	X		
6	6	V				+	Auto	X		X
7	7	V				+	Auto	X		
8	8	V				+	Auto	X		X
9	1	O				-	Auto			
10	2	O				-	Auto			
11	3	O				+	Auto			
12	4	O				+	Auto			
13	2	P				-	Auto	X		
14	4	P				+	Auto	X		X
15	6	P				-	Auto	X		
16	8	P				+	Auto	X		X

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Configuration Port 1 (SDLC)**Port 1 SDLC (MM) 1-4-1**

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
 Enable MMU Extended Status: No
 Enable SDLC Stop Time: No
 Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	Channel 2

Color Check Enable (MM) 1-4-3

Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)**Ethernet Port Configuration (MM) 1-5-1**

DHCP Enable: No
 Controller IP: 10.50.60.53
 Subnet Mask: 255.255.255.0
 Default Gateway IP: 10.50.60.1
 Server IP: 10.1.5.39

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec): 0
 NTCIP UDP Port: 501
 Ethernet Priority: 1
 Port 2 Priority (Port C50S for 2070): 4
 Port 3A Priority (Port C21S for 2070): 3
 Port 3B Priority (Port C22S for 2070): 2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address: 0
 Expanded System Detector Address: 0

System Detector Assignment

System Detector	Local Detector
-----------------	----------------

Wireless Configuration (MM) 1-5-7

Wireless Channel Number: 1
 Wireless Access Code: 327423274

Peer to Peer Setup (MM) 1-5-8

Local Port: 503

Peer	Port	IP Address	Timeout	Peer Name (Cobalt only)
1	503	10.50.60.52	1	5th/Wilcox
2	503	10.50.60.30	1	Virtual 3

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Configuration Logging / Display**Event Logging (MM) 1-6-1**

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	Yes
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: 5th Street & Perry Street
 Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
 OS (Boot) Version: 06.07.00

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Logic Processor Page 1
Logic Statement Control (MM)
1-8-1

Logic #	Statement Control
1	E
2	E
21	D
22	D

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Logic Processor Page 2

Logic Statements (MM) 1-8-2

Logic #: 1 - "Stop Time"

If:

	Peer	T/F	Assignment	#	State
IF	--	F	LP COB CODE ON		520

Then:

Assignment	#	State
CTR SET STIME ALL		On

Logic #: 2 - "CTL ST"

If:

	Peer	T/F	Assignment	#	State
IF	--	F	LP CIB CODE ON		424

Then:

Assignment	#	State
CTR SET STIME ALL		On

Logic #: 21 - "PeerStpTim"

If:

	Peer	T/F	Assignment	#	State
IF	1	F	LP LOGIC FLAG	3	IS On
AND	--	F	VEH GREEN ON PH	2	IS On
AND	--	F	VEH GREEN ON PH	6	IS On

Then:

Assignment	#	State
CTR SET STIME ALL		On

Logic #: 22 - "Virt2StpTim"

If:

	Peer	T/F	Assignment	#	State
IF	2	F	LP LOGIC FLAG	3	IS On

Then:

Assignment	#	State
CTR SET STIME ALL		On

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Min Green	5	5	4	5	4	5	4	5	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	17	0	18	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	10	35	10	25	10	35	10	25	0	0	0	0	0	0	0	0
Max2	7	12	7	7	7	12	7	7	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Min Green	5	5	4	5	4	5	4	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	17	0	18	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	10	35	10	25	10	35	10	25	35	35	35	35	35	35	35	35
Max2	7	12	7	7	7	12	7	7	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Min Green	5	5	4	5	4	5	4	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	17	0	18	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	10	30	30	25	10	30	10	25	35	35	35	35	35	35	35	35
Max2	7	12	7	7	7	12	7	7	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Min Green	5	5	4	5	4	5	4	5	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	17	0	18	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	10	35	10	90	10	35	10	25	0	0	0	0	0	0	0	0
Max2	7	12	7	7	7	12	7	7	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green
---------	------	-----------	--------	-----	------------

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green
E	1	Yes	No	No	No		No	No	
E	4	Yes	No	Yes	No		No	No	

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
A	1	2	Isolate	9	0.0	0.0	1	No
B	3	4	Isolate	10	0.0	0.0	2	No
C	5	6	Isolate	11	0.0	0.0	3	No
D	7	8	Isolate	12	0.0	0.0	4	No

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	3	0	7	3.0	0.0	5
B02	3	0	7	3.0	0.0	5
C03	3	0	7	3.0	0.0	5
D04	3	0	7	3.0	0.0	5
E05	3	0	7	3.0	0.0	5
F06	3	0	7	3.0	0.0	5
G07	3	0	7	3.0	0.0	5
H08	3	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Controller Pedestrian Overlaps**Vehicle / Pedestrian Overlaps (MM) 2-3**

Included	Pedestrian Overlaps
----------	---------------------

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Controller Start / Flash Data (MM) 2-5**Start Up**

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	Y
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
 Flash Time: 0
 All Red: 6
 Power Start Seq: 1
 MUTCD Enabled: No
 Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: No
 Exit Flash: W
 Minimum Flash: 8
 Minimum Recall: No
 Cycle Through Phase: No

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X					X									
Non-Act II			X					X								
Dual Entry		X	X	X	X	X										
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X					X									
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X					X									
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Plan # 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X					X									
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Coordination Options**Options (MM) 3-1**

Manual Pattern	Auto	ECPI Coord	Yes
System Source	SYS	System Format	PTN
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Fixed
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reserve	No
Local Zero Override	Yes	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Coordination Pattern Data

Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	90	Std (COS)	9	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	31		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	12	44	12	22	12	44	12	22	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	90s	90s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	80	Std (COS)	17	Offsets In	Seconds
Offset Value	56s	Dwell/Add Time	26		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	11	29	11	29	11	29	11	29	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	80s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	100	Std (COS)	25	Offsets In	Seconds
Offset Value	86s	Dwell/Add Time	33		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	13	44	10	33	13	44	10	33	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	100s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern	11	TS2 (Pat-Off)	3-2	Splits In	Seconds
Cycle	120	Std (COS)	137	Offsets In	Seconds
Offset Value	56s	Dwell/Add Time	40		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Splits (Split Pat 11)	16	44	16	44	16	44	16	44	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	120s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern	12	TS2 (Pat-Off)	3-3	Splits In	Seconds
Cycle	120	Std (COS)	145	Offsets In	Seconds
Offset Value	56s	Dwell/Add Time	40		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	3		
Phase Reservice	No	Action Plan	0		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Splits (Split Pat 12)	0	60	37	23	26	34	0	60	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	120s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Coordination Split Pattern
Split Pattern Data (MM) 3-3
Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Split (seconds)	12	44	12	22	12	44	12	22	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	90s	90s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Split (seconds)	11	29	11	29	11	29	11	29	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	80s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Split (seconds)	13	44	10	33	13	44	10	33	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	100s	0s	0s

Split Pattern # 11

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Split (seconds)	16	44	16	44	16	44	16	44	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	120s	0s	0s

Split Pattern # 12

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	S-L	N-T	E-L	W-T	N-L	S-T	N	N	N	N	N	N	N	N
Split (seconds)	0	60	37	23	26	34	0	60	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	120s	0s	0s

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	X	X	.	X	X	.	.	.	.	.	.	.	.
Cycling Ped	.	.	.	X	.	.	X	.	.	.	.	.	.	.	.	.
Cycling Overlap	.	.	.	1-F1	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Exit Calls	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	23	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	5	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	18	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Veh	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.
Dwell Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Calls	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Special Function	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4

Free During Pmt	No	No	No	No
-----------------	----	----	----	----

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing																
Dwell Veh	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Dwell Ped																
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped																
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases																
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing																
Dwell Veh	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-
Dwell Ped																
Dwell Overlap	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped																
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases																
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off

Linked Pmt 0 FL Exit Color Red Exit Options Off
 Exit Timing Plan 0 Reservice 0 Fault Type Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out On Preempt Act Dwell No
 Other - Priority Preempt Off Non-Priority Pmt Off
 Inhibit Extension Time 0.0 Ped Priority Return Off
 Veh Priority Return Off Queue Delay Off
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing																
Dwell Veh	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Dwell Ped																
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped																
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases																
Exit Calls																
Special Function																

Enable Yes Preempt Override Yes Interlock Enable No
 Det Lock Yes Delay 0 Inhibit 0
 Override Flash Yes Duration 10 CLR > GRN No
 Term Ovlp Asap No PC Through Yel No Terminate Phase No
 Ped Dark No Track Clear Rsrv No Dwell Flash Off
 Linked Pmt 0 FL Exit Color Red Exit Options Off
 Exit Timing Plan 0 Reservice 0 Fault Type Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out On Preempt Act Dwell No
 Other - Priority Preempt Off Non-Priority Pmt Off
 Inhibit Extension Time 0.0 Ped Priority Return Off
 Veh Priority Return Off Queue Delay Off
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Preempt Preempt Filtering**Enable Preempt Filtering & TSP/SCP (MM) 4-2**

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP

Free Default Pattern: 120

Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Time Base Clock/Calendar**Clock/Calendar Data (MM) 5-1**

Manual Action Plan: 0
SYNC Reference Time: 00:00
SYNC Reference: Reference Time
Day Light Savings: No
Time Reset Input Set Time: 3:30:00
Standard Time From GMT: 0

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Time Base Action Plan
Action Plan (MM) 5-2
Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 4 - "2 NB omit"

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit				X			X									

Spec Func (1-8)																
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Aux Func (1-3)																
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 10 - "10"

Pattern	Auto	Override Sys	No
Timing Plan	4	Sequence	0
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)																
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Aux Func (1-3)																
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 11 - "11"

Pattern	11	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 12 - "12"

Pattern	12	Override Sys	No
Timing Plan	1	Sequence	3
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 20 - "20"

Pattern	Free	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 21 - "21"

Pattern	Free	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2	X	X	X	X	X	X	X	X								
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 22 - "steer drive"

Pattern	Free	Override Sys	No
Timing Plan	3	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X		X		X		X									
Spec Func (1-8)	X		X													
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 30 - "30"

Pattern	Free	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Time Base Day Plan/Schedule
Day Plan (MM) 5-3
Day Plan #1 - "1"

Event	Action Plan	Start Time
1	20	05:30
2	1	06:00
3	2	09:00
4	3	15:00
5	2	18:30
6	30	21:00
7	21	23:59

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	20	05:30
2	2	08:00
3	30	21:00
4	21	23:59

Day Plan #3 - "steer drive"

Event	Action Plan	Start Time
1	20	05:30
2	1	06:00
3	2	09:00
4	3	15:00
5	22	16:45
6	2	19:00
7	30	21:00
8	21	23:59

Day Plan #4 - "Star"

Event	Action Plan	Start Time
1	20	05:30
2	2	08:00
3	12	12:00
4	2	20:00
5	30	21:00
6	21	23:59
7	2	19:30

Schedule (MM) 5-4**Schedule Number - 1**

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Time Base Exceptions**Exception Day Program (MM) 5-5**

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	7	26	2019	3
2	FIXED	11	23	2019	4

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Assigned Phase	Called Phase	Type
1	1	2	S
3	2		S
5	3	4	S
7	4		S
17	5	6	S
19	6		S
21	7	8	S
23	8		S

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S
23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Plan Number - 3

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S

23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Plan Number - 4

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S
23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	C-CALLING	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	C-CALLING	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	G-GREEN EXT	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	G-GREEN EXT	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	C-CALLING	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	C-CALLING	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	G-GREEN EXT	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	G-GREEN EXT	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	

42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	
63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	3	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
6	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
7	4	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
8	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
15	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
16	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	7	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
22	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
23	8	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
24	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	5.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: Econolite

Ped Detector Number	Called Phase															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.

Ped Detector Number	Called Phase															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X

Castle Rock, CO



Solutions that Move the World™

051 - 5th St @ Perry St - Cobalt @ 10.50.60.53 - Econolite Type - Cobalt

Detectors**Detectors - Pg 2****Log - Speed Detector Setup (MM) 6-4**

NTCIP Log Period: 60

ECPI Log Period: 0

Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5**Veh Diagnostic Plan Number - 1**

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Pedestrian Detector Diagnostics (MM) 6-6**Ped Diagnostic Plan Number - 1**

Det	Counts	Act	Pres	Multiplier
2	0	0	60	1
4	0	0	60	1
6	0	0	60	1
8	0	0	60	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence and Assignment (MM) 1-1-1

Hardware Alternate Sequence Enable: No

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B	B	B	B	B											
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 13																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 14																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 15																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 16																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X	X	X	X	X	X	X								
Exclusive Ped																

Phase Compatibility (MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Approach	N	S	E	W	S	N	W	E	N	N	N	N	N	N	N	N
Movement	L	T	L	T	L	T	L	T								
Associated PED																
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

Approach	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Movement																

Administration (MM) 1-7-1

Enable Controller/Cabinet Interlock CRC

No

CRC (16 bit)

E75C

Enable Automatic Backup to Datakey

No

Backup Prevent (MM) 1-1-3

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Timing	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phases	2	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Simultaneous Gap (MM) 1-1-4

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phase	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Must	8	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Gap	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
With	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phase	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disable		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Load Switch Assignments (MM) 1-3

	Phase / Overlap	Type	Dimming				Power Up	Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	
1	1	V				-	Auto	X		
2	2	V				-	Auto	X		X
3	3	V				-	Auto	X		
4	4	V				-	Auto	X		X
5	5	V				+	Auto	X		
6	6	V				+	Auto	X		X
7	7	V				+	Auto	X		
8	8	V				+	Auto	X		X
9	2	P				-	Auto			
10	4	P				-	Auto			
11	6	P				+	Auto			
12	8	P				+	Auto			
13	1	O				-	Auto	X		
14	2	O				+	Auto	X		X
15	3	O				-	Auto	X		
16	4	O				+	Auto	X		X

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Configuration Port 1 (SDLC)**Port 1 SDLC (MM) 1-4-1**

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
 Enable MMU Extended Status: No
 Enable SDLC Stop Time: No
 Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	Channel 2

Color Check Enable (MM) 1-4-3

Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable: No
 Controller IP: 10.50.60.52
 Subnet Mask: 255.255.255.0
 Default Gateway IP: 10.50.60.1
 Server IP: 10.1.5.39

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec): 0
 NTCIP UDP Port: 501
 Ethernet Priority: 1
 Port 2 Priority (Port C50S for 2070): 4
 Port 3A Priority (Port C21S for 2070): 3
 Port 3B Priority (Port C22S for 2070): 2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address: 0
 Expanded System Detector Address: 0

System Detector Assignment

System Detector	Local Detector
-----------------	----------------

Wireless Configuration (MM) 1-5-7

Wireless Channel Number: 1
 Wireless Access Code: 327423274

Peer to Peer Setup (MM) 1-5-8

Local Port: 503

Peer	Port	IP Address	Timeout	Peer Name (Cobalt only)
1	503	10.50.60.28	1	Virtual 1
2	503	10.50.60.53	1	5th/Perry

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Configuration Logging / Display**Event Logging (MM) 1-6-1**

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	Yes
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: 5th Street & Wilcox Street
 Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
 OS (Boot) Version: 06.07.00

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Logic Processor Page 1
Logic Statement Control (MM)
1-8-1

Logic #	Statement Control
1	E
2	E
3	D
5	D
21	D

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Logic Processor Page 2

Logic Statements (MM) 1-8-2

Logic #: 1 - "Stop Time"

If:

	Peer	T/F	Assignment	#	State
IF	--	F	LP COB CODE ON		520

Then:

Assignment	#	State
CTR SET STIME ALL		On
LP SET LOGIC FLAG	3	On

Else:

Assignment	#	State
LP SET LOGIC FLAG	3	Off

Logic #: 2 - "CTL ST"

If:

	Peer	T/F	Assignment	#	State
IF	--	F	LP CIB CODE ON		424

Then:

Assignment	#	State
CTR SET STIME ALL		On
LP SET LOGIC FLAG	3	On

Else:

Assignment	#	State
LP SET LOGIC FLAG	3	Off

Logic #: 3 - "Door Open"

If:

	Peer	T/F	Assignment	#	State
IF	--	F	LP CIB CODE ON		160

Then:

Assignment	#	State
CTR SET ALARM	1	On

Else:

Assignment	#	State
CTR SET ALARM	1	Off

Logic #: 5 - "TrainClr"

If:

	Peer	T/F	Assignment	#	State
IF	2	F	PMT PREEMPT ACTIVE	2	IS On

Then:

Assignment	#	State
PMT CALL PMT SEQ	6	On
LP DELAY FOR	23.0 Sec.	
PMT CALL PMT SEQ	6	Off

Logic #: 21 - "VirtStpTim"

If:

	Peer	T/F	Assignment	#	State
IF	1	F	CTR STOP TIME RING	1	IS On
OR	1	F	CTR STOP TIME RING	2	IS On

Then:

Assignment	#	State
CTR SET STIME ALL		On
LP SET LOGIC FLAG	3	On

Else:

Assignment	#	State
LP SET LOGIC FLAG	3	Off

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	3	10	3	10	3	10	3	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	13	0	17	0	18	0	18	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	1.5	0.0	1.5	3.0	1.5	0.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	30	15	30	25	30	12	30	0	0	0	0	0	0	0	0
Max2	12	12	7	7	12	12	7	7	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	3	10	3	10	3	10	3	10	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	1.5	0.0	1.5	3.0	1.5	0.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	3	10	3	10	3	10	3	10	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	13	0	17	0	18	0	18	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	1.5	0.0	1.5	3.0	1.5	0.0	1.5	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	30	15	30	25	30	12	30	35	35	35	35	35	35	35	35
Max2	12	12	10	12	12	12	10	12	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	3	10	3	10	3	10	3	10	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	1.5	0.0	1.5	3.0	1.5	0.0	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Controller Overlaps
Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green
---------	------	-----------	--------	-----	------------

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green
E	3	Yes	No	No	No		No	No	.
E	4	No	No	No	Yes		No	No	.
E	6	Yes	No	Yes	No		No	No	.
E	7	Yes	No	No	No		No	No	.
F	5	Yes	No	No	No		No	No	.
F	8	Yes	No	Yes	No		No	No	.

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
A	1	2	Green Overlap	13	0.0	0.0	0	No
B	3	4	Green Overlap	14	0.0	0.0	0	No
C	5	6	Green Overlap	15	0.0	0.0	0	No
D	7	8	Green Overlap	16	0.0	0.0	0	No

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	3	0	7	3.0	0.0	5
B02	3	0	7	3.0	0.0	5
C03	3	0	7	3.0	0.0	5
D04	3	0	7	3.0	0.0	5
E05	3	0	7	3.0	0.0	5
F06	3	0	7	3.0	0.0	5
G07	3	0	7	3.0	0.0	5
H08	3	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Controller Pedestrian Overlaps**Vehicle / Pedestrian Overlaps (MM) 2-3**

Included	Pedestrian Overlaps
----------	---------------------

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Controller Start / Flash Data (MM) 2-5**Start Up**

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	Y
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap

A
B
C
D

Flash Thru Mon: No

Flash Time: 0

All Red: 6

Power Start Seq: 1

MUTCD Enabled: No

Y->G: n/a

Automatic Flash**Entry**

2
6

Exit

2
6

Overlap Exit

A
B
C
D

Flash Thru Mon: No

Exit Flash: W

Minimum Flash: 8

Minimum Recall: No

Cycle Through Phase: No

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X					X									
Non-Act II			X					X								
Dual Entry		X	X	X	X	X										
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X					X									
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X					X									
Ped Recall																
Max Recall																
Soft Recall																
No Rest																
AI Calc																

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Coordination Options**Options (MM) 3-1**

Manual Pattern	Auto	ECPI Coord	Yes
System Source	SYS	System Format	PTN
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Fixed
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reserve	No
Local Zero Override	Yes	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Coordination Pattern Data

Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	90	Std (COS)	9	Offsets In	Seconds
Offset Value	72s	Dwell/Add Time	30		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	12	31	12	35	12	31	12	35	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	90s	90s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	80	Std (COS)	17	Offsets In	Seconds
Offset Value	16s	Dwell/Add Time	26		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	12	31	11	26	15	28	11	26	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	80s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	100	Std (COS)	25	Offsets In	Seconds
Offset Value	99s	Dwell/Add Time	33		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	12	38	17	33	26	24	11	39	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	100s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 10

Split Pattern	10	TS2 (Pat-Off)	3-1	Splits In	Seconds
Cycle	80	Std (COS)	105	Offsets In	Seconds
Offset Value	65s	Dwell/Add Time	26		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	MAXINH	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 10)	0	40	0	40	15	25	14	26	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	80s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase				X				X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern	11	TS2 (Pat-Off)	3-2	Splits In	Seconds
Cycle	120	Std (COS)	137	Offsets In	Seconds
Offset Value	16s	Dwell/Add Time	40		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 11)	19	46	16	39	18	47	16	39	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	120s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern	12	TS2 (Pat-Off)	3-3	Splits In	Seconds
Cycle	120	Std (COS)	145	Offsets In	Seconds
Offset Value	69s	Dwell/Add Time	40		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 12)	0	50	0	70	25	25	26	44	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	120s	0s	0s

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase				X				X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Coordination Split Pattern
Split Pattern Data (MM) 3-3
Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	12	31	12	35	12	31	12	35	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	90s	90s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	12	31	11	26	15	28	11	26	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	80s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	12	38	17	33	26	24	11	39	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	100s	0s	0s

Split Pattern # 10

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	40	0	40	15	25	14	26	0	0	0	0	0	0	0	0
Coord Phase				X				X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	80s	0s	0s

Split Pattern # 11

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	19	46	16	39	18	47	16	39	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	120s	0s	0s

Split Pattern # 12

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	50	0	70	25	25	26	44	0	0	0	0	0	0	0	0
Coord Phase				X				X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	120s	0s	0s

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dwell Veh	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Dwell Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Calls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Special Function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dwell Veh	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-
Dwell Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Calls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Special Function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4

Free During Pmt	No	No	No	No
-----------------	----	----	----	----

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing																
Dwell Veh	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Dwell Ped																
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped																
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases																
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Red	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trk Clr Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enable Trailing																
Dwell Veh	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-
Dwell Ped																
Dwell Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Veh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cycling Ped																
Cycling Overlap	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exit Phases																
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrsv	No	Dwell Flash	Off

Linked Pmt 0 FL Exit Color Red Exit Options Off
 Exit Timing Plan 0 Reservice 0 Fault Type Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	255	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.0	1.0

Preemption Active Out On Preempt Act Dwell No
 Other - Priority Preempt Off Non-Priority Pmt Off
 Inhibit Extension Time 0.0 Ped Priority Return Off
 Veh Priority Return Off Queue Delay Off
 Conditional Delay Off

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Preempt Preempt Filtering**Enable Preempt Filtering & TSP/SCP (MM) 4-2**

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP

Free Default Pattern: 120

Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

**Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1**

Manual Action Plan: 0
SYNC Reference Time: 00:00
SYNC Reference: Reference Time
Day Light Savings: No
Time Reset Input Set Time: 3:30:00
Standard Time From GMT: 0

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Time Base Action Plan
Action Plan (MM) 5-2
Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 4 - "2 NB omit"

Pattern	2	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X					X										

Spec Func (1-8)																
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Aux Func (1-3)																
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 10 - "10"

Pattern	10	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X		X													

Spec Func (1-8)																
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Aux Func (1-3)																
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 11 - "11"

Pattern	11	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 12 - "12"

Pattern	12	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	0	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 20 - "20"

Pattern	Free	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 21 - "21"

Pattern	Free	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	1	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2	X	X	X	X	X	X	X	X								
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Action Plan - 22 - "20 NB omit"

Pattern	Free	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X					X										
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Action Plan - 30 - "30"

Pattern	Free	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
LP 1-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 16-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 31-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 46-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 61-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 76-90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LP 91-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Time Base Day Plan/Schedule
Day Plan (MM) 5-3
Day Plan #1 - "1"

Event	Action Plan	Start Time
1	20	05:30
2	1	06:00
3	2	09:00
4	3	15:00
5	2	18:30
6	30	21:00
7	21	23:59

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	20	05:30
2	2	08:00
3	30	21:00
4	21	23:59

Day Plan #3 - "I25 Nt Close"

Event	Action Plan	Start Time
1	21	05:00
2	20	05:30
3	1	06:00
4	2	09:00
5	3	15:00
6	2	18:30

Day Plan #4 - "start"

Event	Action Plan	Start Time
1	20	05:30
2	2	08:00
3	12	12:00
4	2	19:15
5	30	21:00
6	21	23:59
7	2	20:00

Schedule (MM) 5-4**Schedule Number - 1**

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Time Base Exceptions**Exception Day Program (MM) 5-5**

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	6	10	2019	3
2	FIXED	11	23	2019	4
3	FIXED	6	11	2019	3

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Assigned Phase	Called Phase	Type
1	5	6	S
2	6		S
5	7	8	S
6	4		S
17	1	2	S
18	2		S
21	3	4	S
22	8		S

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S
23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Plan Number - 3

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S

23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Plan Number - 4

Veh Detector	Assigned Phase	Called Phase	Type
1	1		S
2	2		S
3	3		S
4	4		C
5	5		S
6	6		S
7	7		S
8	8		C
9	2		S
10	2		S
11	4		G
12	4		S
13	6		S
14	6		S
15	8		G
16	8		S
17	1		S
18	2		S
19	3		S
20	4		C
21	5		S
22	6		S
23	7		S
24	8		C
25	2		S
26	4		S
27	6		G
28	8		S

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	C-CALLING	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	C-CALLING	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	G-GREEN EXT	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	G-GREEN EXT	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	C-CALLING	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	C-CALLING	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	G-GREEN EXT	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	G-GREEN EXT	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	

42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	
63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	5	No	Yes	3.0	Passage	0.0	0	No	0	None	Yes	Yes	No
2	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	7	No	Yes	2.0	Passage	0.0	0	No	0	None	Yes	Yes	No
6	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	0	No	Yes	6.0	Passage	0.0	0	No	0	None	Yes	Yes	No
15	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	3.0	Passage	0.0	0	No	0	None	Yes	Yes	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	3	No	Yes	0.0	Passage	0.0	0	No	0	None	Yes	Yes	No
22	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	0	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	2.0	Passage	0.0	0	No	0	None	Yes	Yes	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	None	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: Econolite

Ped Detector Number	Called Phase															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.

Ped Detector Number	Called Phase															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X

Castle Rock, CO



Solutions that Move the World™

050 - Wilcox St @ 5th St - Cobalt @ 10.50.60.52 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60

ECPI Log Period: 0

Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
1	0	0	22	15	255	0
5	0	0	22	15	255	0
14	0	0	22	15	255	0
17	0	0	22	15	255	0
21	0	0	22	15	255	0
30	0	0	22	15	255	0

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay
-----	--------	-----	------	------------	-------------	-------------------

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
2	0	0	60	1
4	0	0	60	1
6	0	0	60	1
8	0	0	60	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier
-----	--------	-----	------	------------

APPENDIX B

Level of Service Definitions

The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2016:
Chapter 19 – Signalized Intersections and Chapter 20 – Two-Way Stop Controlled Intersections.

Automobile Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A

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

LOS B

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

LOS C

Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D

Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E

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

LOS F

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

Level of Service (LOS) for Unsignalized TWSC Intersections

Level of Service ($v/c \leq 1.0$)	Average Control Delay (s/veh)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

APPENDIX C

Capacity Worksheets

Timings
1: Wilcox Street & 5th Street

Existing Traffic Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	132	34	134	241	299	48	173	55	202	212	11
Future Volume (vph)	16	132	34	134	241	299	48	173	55	202	212	11
Satd. Flow (prot)	1770	1805	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.597			0.448			0.608			0.564		
Satd. Flow (perm)	1112	1805	0	835	1863	1583	1133	1863	1583	1051	1850	0
Satd. Flow (RTOR)		15				325			133		3	
Lane Group Flow (vph)	17	180	0	146	262	325	52	188	60	220	242	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	12.0	35.0		12.0	35.0	35.0	12.0	31.0	31.0	12.0	31.0	
Total Split (%)	13.3%	38.9%		13.3%	38.9%	38.9%	13.3%	34.4%	34.4%	13.3%	34.4%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	20.5	13.9		29.5	23.8	23.8	44.0	36.7	36.7	52.5	44.5	
Actuated g/C Ratio	0.23	0.15		0.33	0.26	0.26	0.49	0.41	0.41	0.58	0.49	
v/c Ratio	0.06	0.62		0.39	0.53	0.49	0.09	0.25	0.08	0.32	0.26	
Control Delay	18.8	41.5		17.8	23.7	3.7	10.9	21.5	0.2	11.6	16.9	
Queue Delay	0.0	0.0		0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.8	41.5		17.8	23.7	4.0	10.9	21.5	0.2	11.6	16.9	
LOS	B	D		B	C	A	B	C	A	B	B	
Approach Delay		39.5			13.8			15.4			14.4	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)	6	89		31	60	0	12	69	0	56	82	
Queue Length 95th (ft)	18	146		45	79	7	33	148	0	113	162	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	353	591		378	600	730	645	764	727	694	916	
Starvation Cap Reductn	0	0		0	0	83	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.05	0.30		0.39	0.44	0.50	0.08	0.25	0.08	0.32	0.26	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 72 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Timings 1: Wilcox Street & 5th Street

Existing Traffic Conditions
AM Peak Hour

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 17.2

Intersection LOS: B

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	31 s	12 s	35 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	31 s	12 s	35 s

Timings

2: Perry Street & 5th Street

Existing Traffic Conditions

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	292	47	63	536	14	46	117	31	23	135	95
Future Volume (vph)	45	292	47	63	536	14	46	117	31	23	135	95
Satd. Flow (prot)	1770	1863	1583	1770	3525	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.415			0.520			0.531			0.676		
Satd. Flow (perm)	773	1863	1583	969	3525	0	989	1863	1583	1259	1863	1583
Satd. Flow (RTOR)			133		3				133			133
Lane Group Flow (vph)	49	317	51	68	598	0	50	127	34	25	147	103
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	12.0	44.0	44.0	12.0	44.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	13.3%	48.9%	48.9%	13.3%	48.9%		13.3%	24.4%	24.4%	13.3%	24.4%	24.4%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	58.2	51.6	51.6	59.6	53.7		19.3	14.1	14.1	17.0	11.4	11.4
Actuated g/C Ratio	0.65	0.57	0.57	0.66	0.60		0.21	0.16	0.16	0.19	0.13	0.13
v/c Ratio	0.09	0.30	0.05	0.10	0.28		0.19	0.43	0.09	0.09	0.63	0.33
Control Delay	10.7	17.1	2.4	7.3	12.0		25.4	37.9	0.5	23.5	48.4	6.2
Queue Delay	0.0	0.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	17.4	2.4	7.3	12.0		25.4	37.9	0.5	23.5	48.4	6.2
LOS	B	B	A	A	B		C	D	A	C	D	A
Approach Delay		14.8			11.6			28.9			30.3	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	13	109	0	13	98		21	59	0	11	81	0
Queue Length 95th (ft)	34	181	7	34	162		44	115	0	27	134	27
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	603	1068	964	722	2102		283	363	415	300	331	390
Starvation Cap Reductn	0	295	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.41	0.05	0.09	0.28		0.18	0.35	0.08	0.08	0.44	0.26

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 24 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated

Timings 2: Perry Street & 5th Street

Existing Traffic Conditions
AM Peak Hour

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 18.0

Intersection LOS: B

Intersection Capacity Utilization 46.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	44 s	12 s	22 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	44 s	12 s	22 s

Timings
3: Wilcox Street & 3rd Street

Existing Traffic Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	7	22	9	27	64	20	242	29	23	217	50
Future Volume (vph)	12	7	22	9	27	64	20	242	29	23	217	50
Satd. Flow (prot)	1770	1652	0	1770	1665	0	1770	1833	0	1770	1811	0
Flt Permitted	0.693			0.736			0.582			0.580		
Satd. Flow (perm)	1291	1652	0	1371	1665	0	1084	1833	0	1080	1811	0
Satd. Flow (RTOR)		24			70			16			31	
Lane Group Flow (vph)	13	32	0	10	99	0	22	295	0	25	290	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	21.0	21.0		21.0	21.0		39.0	39.0		39.0	39.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		65.0%	65.0%		65.0%	65.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	7.1	7.1		7.1	7.1		44.4	44.4		44.4	44.4	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.74	0.74		0.74	0.74	
v/c Ratio	0.09	0.15		0.06	0.38		0.03	0.22		0.03	0.22	
Control Delay	23.5	13.9		23.0	14.8		3.9	4.0		3.9	3.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.5	13.9		23.0	14.8		3.9	4.0		3.9	3.8	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		16.6			15.6			4.0			3.8	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	4	3		3	10		2	29		2	26	
Queue Length 95th (ft)	17	22		14	44		9	66		10	62	
Internal Link Dist (ft)		266			304			257			304	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	322	431		342	468		802	1360		799	1348	
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	0.07		0.03	0.21		0.03	0.22		0.03	0.22	
Intersection Summary												
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Existing Traffic Conditions
AM Peak Hour

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 36.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R) 39 s	 Ø4 21 s
 Ø5 (R) 39 s	 Ø8 21 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Existing Traffic Conditions
AM Peak Hour

Intersection				
Intersection Delay, s/veh	4.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	62	104	199	271
Demand Flow Rate, veh/h	63	106	202	277
Vehicles Circulating, veh/h	260	205	50	91
Vehicles Exiting, veh/h	108	47	273	220
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	4.1	4.1	4.8
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	63	106	202	277
Cap Entry Lane, veh/h	1058	1120	1311	1258
Entry HV Adj Factor	0.978	0.980	0.983	0.980
Flow Entry, veh/h	62	104	199	271
Cap Entry, veh/h	1035	1097	1289	1232
V/C Ratio	0.060	0.095	0.154	0.220
Control Delay, s/veh	4.0	4.1	4.1	4.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
5: Perry Street & 2nd Street

Existing Traffic Conditions
AM Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	41	3	50	5	182	34	26	222	11
Future Vol, veh/h	0	0	0	41	3	50	5	182	34	26	222	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	45	3	54	5	198	37	28	241	12

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	530	536	217	253	0	0
Stage 1	227	227	-	-	-	-
Stage 2	303	309	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	2.218
Pot Cap-1 Maneuver	510	451	823	1312	-	1332
Stage 1	811	716	-	-	-	-
Stage 2	749	660	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	497	0	823	1312	-	1332
Mov Cap-2 Maneuver	497	0	-	-	-	-
Stage 1	808	0	-	-	-	-
Stage 2	733	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0.2	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1312	-	-	497	823	1332	-	-
HCM Lane V/C Ratio	0.004	-	-	0.09	0.07	0.021	-	-
HCM Control Delay (s)	7.8	0	-	13	9.7	7.8	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Timings
1: Wilcox Street & 5th Street

Existing Traffic Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	229	46	149	190	228	55	258	147	327	248	13
Future Volume (vph)	34	229	46	149	190	228	55	258	147	327	248	13
Satd. Flow (prot)	1770	1816	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.628			0.291			0.586			0.423		
Satd. Flow (perm)	1170	1816	0	542	1863	1583	1092	1863	1583	788	1850	0
Satd. Flow (RTOR)		11				248			164		3	
Lane Group Flow (vph)	37	299	0	162	207	248	60	280	160	355	284	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	12.0	39.0		11.0	33.0	33.0	12.0	24.0	24.0	26.0	38.0	
Total Split (%)	12.0%	39.0%		11.0%	33.0%	33.0%	12.0%	24.0%	24.0%	26.0%	38.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	28.7	21.3		34.2	27.5	27.5	42.1	34.5	34.5	56.4	46.4	
Actuated g/C Ratio	0.29	0.21		0.34	0.28	0.28	0.42	0.34	0.34	0.56	0.46	
v/c Ratio	0.10	0.76		0.57	0.40	0.40	0.12	0.44	0.25	0.59	0.33	
Control Delay	20.1	47.4		34.4	35.5	17.2	13.7	31.5	6.0	17.4	20.3	
Queue Delay	0.0	0.0		0.0	0.0	0.1	0.0	0.0	0.0	1.2	0.0	
Total Delay	20.1	47.4		34.4	35.5	17.4	13.7	31.5	6.0	18.6	20.3	
LOS	C	D		C	D	B	B	C	A	B	C	
Approach Delay		44.4			27.9			21.2			19.4	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)	15	173		90	127	65	17	139	0	121	117	
Queue Length 95th (ft)	33	244		141	193	132	40	#289	51	203	204	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	414	606		286	599	677	540	642	653	665	859	
Starvation Cap Reductn	0	0		0	0	59	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	18	139	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.49		0.57	0.35	0.40	0.11	0.44	0.25	0.67	0.33	
Intersection Summary												
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 99 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings

1: Wilcox Street & 5th Street

Existing Traffic Conditions

PM Peak Hour

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 26.4

Intersection LOS: C

Intersection Capacity Utilization 71.5%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	38 s	12 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
26 s	24 s	11 s	39 s

Timings

2: Perry Street & 5th Street

Existing Traffic Conditions

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	557	39	59	428	20	48	227	94	76	257	105
Future Volume (vph)	110	557	39	59	428	20	48	227	94	76	257	105
Satd. Flow (prot)	1770	1863	1583	1770	3514	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.430			0.284			0.330			0.375		
Satd. Flow (perm)	801	1863	1583	529	3514	0	615	1863	1583	699	1863	1583
Satd. Flow (RTOR)			120		5				120			120
Lane Group Flow (vph)	120	605	42	64	487	0	52	247	102	83	279	114
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0	3.5	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	13.0	44.0	44.0	13.0	44.0		10.0	33.0	33.0	10.0	33.0	33.0
Total Split (%)	13.0%	44.0%	44.0%	13.0%	44.0%		10.0%	33.0%	33.0%	10.0%	33.0%	33.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	60.7	52.3	52.3	57.3	49.2		25.7	18.9	18.9	26.6	19.3	19.3
Actuated g/C Ratio	0.61	0.52	0.52	0.57	0.49		0.26	0.19	0.19	0.27	0.19	0.19
v/c Ratio	0.22	0.62	0.05	0.17	0.28		0.23	0.70	0.26	0.33	0.78	0.28
Control Delay	7.5	21.3	0.4	10.7	17.3		24.9	48.3	5.8	27.0	52.8	7.1
Queue Delay	0.0	0.8	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	22.2	0.4	10.7	17.3		24.9	48.3	5.8	27.0	52.8	7.1
LOS	A	C	A	B	B		C	D	A	C	D	A
Approach Delay		18.7			16.6			34.4			37.3	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	30	339	0	16	96		23	150	0	38	170	0
Queue Length 95th (ft)	56	#528	m1	39	157		46	213	31	67	241	38
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	583	974	884	429	1732		229	503	515	254	503	515
Starvation Cap Reductn	0	147	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.73	0.05	0.15	0.28		0.23	0.49	0.20	0.33	0.55	0.22

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Existing Traffic Conditions
PM Peak Hour

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 25.1

Intersection LOS: C

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	44 s	10 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	44 s	10 s	33 s

Timings
3: Wilcox Street & 3rd Street

Existing Traffic Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	51	74	29	18	66	32	326	45	56	309	43
Future Volume (vph)	64	51	74	29	18	66	32	326	45	56	309	43
Satd. Flow (prot)	1770	1697	0	1770	1645	0	1770	1829	0	1770	1829	0
Flt Permitted	0.697			0.671			0.535			0.525		
Satd. Flow (perm)	1298	1697	0	1250	1645	0	997	1829	0	978	1829	0
Satd. Flow (RTOR)		80			72			15			15	
Lane Group Flow (vph)	70	135	0	32	92	0	35	403	0	61	383	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	28.0	28.0		28.0	28.0		47.0	47.0		47.0	47.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%		62.7%	62.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	9.5	9.5		9.5	9.5		57.0	57.0		57.0	57.0	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.76	0.76		0.76	0.76	
v/c Ratio	0.43	0.48		0.20	0.34		0.05	0.29		0.08	0.27	
Control Delay	37.3	19.3		30.9	14.2		4.2	4.6		4.3	4.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.3	19.3		30.9	14.2		4.2	4.6		4.3	4.5	
LOS	D	B		C	B		A	A		A	A	
Approach Delay		25.5			18.5			4.6			4.5	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)	31	24		14	8		4	53		7	49	
Queue Length 95th (ft)	65	68		36	45		14	109		21	102	
Internal Link Dist (ft)		240			303			255			306	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	380	554		366	533		758	1394		743	1394	
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	0.18	0.24		0.09	0.17		0.05	0.29		0.08	0.27	
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 28 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Existing Traffic Conditions
PM Peak Hour

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 9.5

Intersection LOS: A

Intersection Capacity Utilization 59.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
47 s	28 s
 Ø5 (R)	 Ø8
47 s	28 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Existing Traffic Conditions
PM Peak Hour

Intersection				
Intersection Delay, s/veh 6.0				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	198	91	336	409
Demand Flow Rate, veh/h	202	93	343	418
Vehicles Circulating, veh/h	401	408	195	91
Vehicles Exiting, veh/h	108	130	408	410
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.2	5.0	6.2	6.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	202	93	343	418
Cap Entry Lane, veh/h	917	910	1131	1258
Entry HV Adj Factor	0.982	0.981	0.980	0.979
Flow Entry, veh/h	198	91	336	409
Cap Entry, veh/h	900	893	1108	1231
V/C Ratio	0.220	0.102	0.303	0.332
Control Delay, s/veh	6.2	5.0	6.2	6.0
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

HCM 6th TWSC
5: Perry Street & 2nd Street

Existing Traffic Conditions
PM Peak Hour

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	41	0	66	2	318	74	45	405	10
Future Vol, veh/h	0	0	0	41	0	66	2	318	74	45	405	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	45	0	72	2	346	80	49	440	11

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	934	939	386	451	0	0
Stage 1	390	390	-	-	-	-
Stage 2	544	549	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	295	264	662	1109	-	-
Stage 1	684	608	-	-	-	-
Stage 2	582	516	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	282	0	662	1109	-	-
Mov Cap-2 Maneuver	282	0	-	-	-	-
Stage 1	683	0	-	-	-	-
Stage 2	557	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	282	662	1133	-	-
HCM Lane V/C Ratio	0.002	-	-	0.158	0.108	0.043	-	-
HCM Control Delay (s)	8.3	0	-	20.1	11.1	8.3	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.4	0.1	-	-

Timings

1: Wilcox Street & 5th Street

Background Traffic Conditions

Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	137	35	139	251	311	50	180	57	210	221	11
Future Volume (vph)	17	137	35	139	251	311	50	180	57	210	221	11
Satd. Flow (prot)	1770	1807	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.591			0.438			0.603			0.552		
Satd. Flow (perm)	1101	1807	0	816	1863	1583	1123	1863	1583	1028	1850	0
Satd. Flow (RTOR)		15				338			133		3	
Lane Group Flow (vph)	18	187	0	151	273	338	54	196	62	228	252	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	26.0	
Total Split (s)	12.0	35.0		12.0	35.0	35.0	12.0	31.0	31.0	12.0	31.0	
Total Split (%)	13.3%	38.9%		13.3%	38.9%	38.9%	13.3%	34.4%	34.4%	13.3%	34.4%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	20.8	14.2		30.0	24.3	24.3	43.3	36.0	36.0	51.9	42.3	
Actuated g/C Ratio	0.23	0.16		0.33	0.27	0.27	0.48	0.40	0.40	0.58	0.47	
v/c Ratio	0.06	0.63		0.40	0.54	0.50	0.09	0.26	0.09	0.34	0.29	
Control Delay	18.5	41.7		17.7	23.5	3.7	11.2	22.4	0.2	12.0	18.2	
Queue Delay	0.0	0.0		0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.5	41.7		17.7	23.8	3.9	11.2	22.4	0.2	12.0	18.2	
LOS	B	D		B	C	A	B	C	A	B	B	
Approach Delay		39.6			13.8			16.0			15.3	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)	7	93		33	64	0	13	73	0	59	87	
Queue Length 95th (ft)	19	150		46	81	7	35	156	0	119	171	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	355	592		379	600	739	631	753	719	679	871	
Starvation Cap Reductn	0	0		0	65	83	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.05	0.32		0.40	0.51	0.52	0.09	0.26	0.09	0.34	0.29	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 72 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings 1: Wilcox Street & 5th Street

Background Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 17.6

Intersection LOS: B

Intersection Capacity Utilization 54.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	31 s	12 s	35 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	31 s	12 s	35 s

Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	304	49	67	558	15	48	122	33	24	140	99
Future Volume (vph)	47	304	49	67	558	15	48	122	33	24	140	99
Satd. Flow (prot)	1770	1863	1583	1770	3525	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.401			0.506			0.517			0.672		
Satd. Flow (perm)	747	1863	1583	943	3525	0	963	1863	1583	1252	1863	1583
Satd. Flow (RTOR)			133		4				133			133
Lane Group Flow (vph)	51	330	53	73	623	0	52	133	36	26	152	108
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	12.0	44.0	44.0	12.0	44.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	13.3%	48.9%	48.9%	13.3%	48.9%		13.3%	24.4%	24.4%	13.3%	24.4%	24.4%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	57.8	51.1	51.1	59.4	53.3		19.7	14.5	14.5	17.3	11.7	11.7
Actuated g/C Ratio	0.64	0.57	0.57	0.66	0.59		0.22	0.16	0.16	0.19	0.13	0.13
v/c Ratio	0.09	0.31	0.06	0.11	0.30		0.19	0.44	0.10	0.10	0.63	0.34
Control Delay	11.0	17.6	2.6	7.5	12.4		25.1	37.8	0.5	23.3	48.3	6.9
Queue Delay	0.0	0.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	17.8	2.6	7.5	12.4		25.1	37.8	0.5	23.3	48.3	6.9
LOS	B	B	A	A	B		C	D	A	C	D	A
Approach Delay		15.2			11.9			28.8			30.4	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	14	117	0	14	104		22	61	0	11	83	0
Queue Length 95th (ft)	35	188	8	37	171		45	119	0	27	137	30
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	584	1061	959	703	2089		284	367	418	302	333	391
Starvation Cap Reductn	0	278	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.42	0.06	0.10	0.30		0.18	0.36	0.09	0.09	0.46	0.28

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 24 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Timings 2: Perry Street & 5th Street

Background Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	44 s	12 s	22 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	44 s	12 s	22 s

Timings

3: Wilcox Street & 3rd Street

Background Traffic Conditions

Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	7	23	9	28	67	21	252	30	24	226	52
Future Volume (vph)	12	7	23	9	28	67	21	252	30	24	226	52
Satd. Flow (prot)	1770	1650	0	1770	1665	0	1770	1833	0	1770	1811	0
Flt Permitted	0.690			0.736			0.575			0.573		
Satd. Flow (perm)	1285	1650	0	1371	1665	0	1071	1833	0	1067	1811	0
Satd. Flow (RTOR)		25			73			16			31	
Lane Group Flow (vph)	13	33	0	10	103	0	23	307	0	26	303	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	21.0	21.0		21.0	21.0		39.0	39.0		39.0	39.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		65.0%	65.0%		65.0%	65.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	7.1	7.1		7.1	7.1		44.4	44.4		44.4	44.4	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.74	0.74		0.74	0.74	
v/c Ratio	0.09	0.15		0.06	0.39		0.03	0.23		0.03	0.22	
Control Delay	23.4	13.6		22.9	14.8		3.9	4.1		3.9	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.4	13.6		22.9	14.8		3.9	4.1		3.9	3.9	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		16.4			15.5			4.1			3.9	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	4	3		3	10		2	30		2	28	
Queue Length 95th (ft)	17	22		14	45		9	69		10	66	
Internal Link Dist (ft)		266			304			257			304	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	321	431		342	471		791	1359		789	1347	
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	0.08		0.03	0.22		0.03	0.23		0.03	0.22	
Intersection Summary												
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Background Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 6.3

Intersection LOS: A

Intersection Capacity Utilization 37.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R) 39 s	 Ø4 21 s
 Ø5 (R) 39 s	 Ø8 21 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Background Traffic Conditions

Year 2023 - AM Peak Hour

Intersection				
Intersection Delay, s/veh	4.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	65	108	208	284
Demand Flow Rate, veh/h	66	110	212	290
Vehicles Circulating, veh/h	272	216	53	96
Vehicles Exiting, veh/h	114	49	285	230
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.1	4.2	4.2	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	66	110	212	290
Cap Entry Lane, veh/h	1046	1107	1307	1251
Entry HV Adj Factor	0.978	0.980	0.983	0.980
Flow Entry, veh/h	65	108	208	284
Cap Entry, veh/h	1023	1085	1285	1226
V/C Ratio	0.063	0.099	0.162	0.232
Control Delay, s/veh	4.1	4.2	4.2	5.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2023 - AM Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	43	3	52	5	190	35	27	232	11
Future Vol, veh/h	0	0	0	43	3	52	5	190	35	27	232	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	47	3	57	5	207	38	29	252	12

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	552	558	226	264	0	0
Stage 1	236	236	-	-	-	-
Stage 2	316	322	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	495	438	813	1300	-	-
Stage 1	803	710	-	-	-	-
Stage 2	739	651	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	482	0	813	1300	-	-
Mov Cap-2 Maneuver	482	0	-	-	-	-
Stage 1	800	0	-	-	-	-
Stage 2	723	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0.2	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1300	-	-	482	813	1321	-	-
HCM Lane V/C Ratio	0.004	-	-	0.097	0.074	0.022	-	-
HCM Control Delay (s)	7.8	0	-	13.3	9.8	7.8	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Timings

1: Wilcox Street & 5th Street

Background Traffic Conditions

Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	240	48	155	199	239	57	270	153	343	262	14
Future Volume (vph)	35	240	48	155	199	239	57	270	153	343	262	14
Satd. Flow (prot)	1770	1816	0	1770	1863	1583	1770	1863	1583	1770	1848	0
Flt Permitted	0.623			0.281			0.577			0.391		
Satd. Flow (perm)	1160	1816	0	523	1863	1583	1075	1863	1583	728	1848	0
Satd. Flow (RTOR)		11				260			164		3	
Lane Group Flow (vph)	38	313	0	168	216	260	62	293	166	373	300	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	12.0	39.0		11.0	33.0	33.0	12.0	24.0	24.0	26.0	38.0	
Total Split (%)	12.0%	39.0%		11.0%	33.0%	33.0%	12.0%	24.0%	24.0%	26.0%	38.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	29.5	22.1		34.4	28.0	28.0	40.4	32.7	32.7	55.9	45.8	
Actuated g/C Ratio	0.30	0.22		0.34	0.28	0.28	0.40	0.33	0.33	0.56	0.46	
v/c Ratio	0.10	0.77		0.60	0.41	0.41	0.13	0.48	0.26	0.64	0.35	
Control Delay	19.8	47.3		35.0	34.5	16.8	14.2	34.1	6.9	18.8	21.1	
Queue Delay	0.0	0.0		0.0	0.0	0.1	0.0	0.0	0.1	2.5	0.0	
Total Delay	19.8	47.3		35.0	34.5	17.0	14.2	34.1	7.0	21.3	21.1	
LOS	B	D		D	C	B	B	C	A	C	C	
Approach Delay		44.3			27.6			23.1			21.2	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	16	182		92	134	71	17	146	1	125	122	
Queue Length 95th (ft)	34	253		144	199	135	42	#331	56	220	220	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	420	606		279	602	687	514	608	627	643	848	
Starvation Cap Reductn	0	0		0	0	59	0	0	0	0	0	
Spillback Cap Reductn	0	1		0	0	0	0	0	39	161	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.52		0.60	0.36	0.41	0.12	0.48	0.28	0.77	0.35	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 99 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Timings

1: Wilcox Street & 5th Street

Background Traffic Conditions

Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 27.2

Intersection LOS: C

Intersection Capacity Utilization 74.0%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	38 s	12 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
26 s	24 s	11 s	39 s

Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	580	46	73	445	21	53	239	104	79	273	109
Future Volume (vph)	114	580	46	73	445	21	53	239	104	79	273	109
Satd. Flow (prot)	1770	1863	1583	1770	3514	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.420			0.250			0.302			0.370		
Satd. Flow (perm)	782	1863	1583	466	3514	0	563	1863	1583	689	1863	1583
Satd. Flow (RTOR)			120		5				120			120
Lane Group Flow (vph)	124	630	50	79	507	0	58	260	113	86	297	118
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0	3.5	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	13.0	44.0	44.0	13.0	44.0		10.0	33.0	33.0	10.0	33.0	33.0
Total Split (%)	13.0%	44.0%	44.0%	13.0%	44.0%		10.0%	33.0%	33.0%	10.0%	33.0%	33.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	59.2	50.9	50.9	56.8	48.3		27.0	20.0	20.0	27.4	20.2	20.2
Actuated g/C Ratio	0.59	0.51	0.51	0.57	0.48		0.27	0.20	0.20	0.27	0.20	0.20
v/c Ratio	0.23	0.67	0.06	0.23	0.30		0.26	0.70	0.27	0.34	0.79	0.28
Control Delay	8.1	23.8	0.7	11.6	18.0		24.8	46.7	6.8	26.5	52.5	7.3
Queue Delay	0.0	1.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	25.0	0.7	11.6	18.0		24.8	46.7	6.8	26.5	52.5	7.3
LOS	A	C	A	B	B		C	D	A	C	D	A
Approach Delay		20.9			17.1			33.3			37.4	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	35	365	0	20	104		25	155	0	38	181	0
Queue Length 95th (ft)	57	#588	m2	47	163		49	220	37	67	252	41
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	558	947	864	393	1700		226	503	515	257	503	515
Starvation Cap Reductn	0	142	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.78	0.06	0.20	0.30		0.26	0.52	0.22	0.33	0.59	0.23

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Background Traffic Conditions
Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 25.8

Intersection LOS: C

Intersection Capacity Utilization 68.9%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	44 s	10 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	44 s	10 s	33 s

Timings

3: Wilcox Street & 3rd Street

Background Traffic Conditions

Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	53	77	31	19	69	33	343	49	58	323	45
Future Volume (vph)	67	53	77	31	19	69	33	343	49	58	323	45
Satd. Flow (prot)	1770	1697	0	1770	1645	0	1770	1827	0	1770	1829	0
Flt Permitted	0.695			0.666			0.525			0.507		
Satd. Flow (perm)	1295	1697	0	1241	1645	0	978	1827	0	944	1829	0
Satd. Flow (RTOR)		84			75			15			15	
Lane Group Flow (vph)	73	142	0	34	96	0	36	426	0	63	400	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	28.0	28.0		28.0	28.0		47.0	47.0		47.0	47.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%		62.7%	62.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	9.6	9.6		9.6	9.6		53.4	53.4		53.4	53.4	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.71	0.71		0.71	0.71	
v/c Ratio	0.44	0.49		0.21	0.35		0.05	0.33		0.09	0.31	
Control Delay	37.5	19.3		31.0	14.0		4.3	5.2		4.5	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.5	19.3		31.0	14.0		4.3	5.2		4.5	5.0	
LOS	D	B		C	B		A	A		A	A	
Approach Delay		25.5			18.5			5.1			5.0	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)	32	25		14	9		4	58		7	53	
Queue Length 95th (ft)	66	71		37	46		14	118		22	109	
Internal Link Dist (ft)		240			303			255			306	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	379	557		364	535		696	1304		671	1306	
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	0.19	0.25		0.09	0.18		0.05	0.33		0.09	0.31	
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 28 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Background Traffic Conditions
Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 61.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
47 s	28 s
 Ø5 (R)	 Ø8
47 s	28 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Background Traffic Conditions

Year 2023 - PM Peak Hour

Intersection				
Intersection Delay, s/veh 6.3				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	207	97	353	429
Demand Flow Rate, veh/h	212	99	360	438
Vehicles Circulating, veh/h	420	431	206	94
Vehicles Exiting, veh/h	112	135	426	436
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	5.2	6.4	6.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	212	99	360	438
Cap Entry Lane, veh/h	899	889	1118	1254
Entry HV Adj Factor	0.978	0.982	0.980	0.979
Flow Entry, veh/h	207	97	353	429
Cap Entry, veh/h	879	873	1096	1228
V/C Ratio	0.236	0.111	0.322	0.349
Control Delay, s/veh	6.5	5.2	6.4	6.2
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	2

HCM 6th TWSC
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2023 - PM Peak Hour

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↱			↰		↰	↱	
Traffic Vol, veh/h	0	0	0	43	0	69	2	335	77	47	423	10
Future Vol, veh/h	0	0	0	43	0	69	2	335	77	47	423	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	47	0	75	2	364	84	51	460	11

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	978	983	406	471	0	0
Stage 1	410	410	-	-	-	-
Stage 2	568	573	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	278	249	645	1091	-	-
Stage 1	670	595	-	-	-	-
Stage 2	567	504	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	265	0	645	1091	-	-
Mov Cap-2 Maneuver	265	0	-	-	-	-
Stage 1	669	0	-	-	-	-
Stage 2	541	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1091	-	-	265	645	1112	-	-
HCM Lane V/C Ratio	0.002	-	-	0.176	0.116	0.046	-	-
HCM Control Delay (s)	8.3	0	-	21.5	11.3	8.4	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.4	0.1	-	-

Timings
1: Wilcox Street & 5th Street

Background Traffic Conditions
Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	196	51	199	358	444	71	257	82	300	315	16
Future Volume (vph)	24	196	51	199	358	444	71	257	82	300	315	16
Satd. Flow (prot)	1770	1805	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.500			0.334			0.547			0.397		
Satd. Flow (perm)	931	1805	0	622	1863	1583	1019	1863	1583	740	1850	0
Satd. Flow (RTOR)		13				483			230		3	
Lane Group Flow (vph)	26	268	0	216	389	483	77	279	89	326	359	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	7.0	27.0		15.0	35.0	35.0	7.0	28.0	28.0	20.0	41.0	
Total Split (%)	7.8%	30.0%		16.7%	38.9%	38.9%	7.8%	31.1%	31.1%	22.2%	45.6%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	23.5	17.3		34.4	29.2	29.2	35.0	28.3	28.3	47.6	38.5	
Actuated g/C Ratio	0.26	0.19		0.38	0.32	0.32	0.39	0.31	0.31	0.53	0.43	
v/c Ratio	0.09	0.75		0.57	0.64	0.58	0.18	0.48	0.14	0.60	0.45	
Control Delay	17.0	45.9		26.5	26.8	7.3	15.6	30.9	0.4	18.6	22.4	
Queue Delay	0.0	0.5		0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay	17.0	46.3		26.5	27.7	7.5	15.6	30.9	0.4	18.6	22.4	
LOS	B	D		C	C	A	B	C	A	B	C	
Approach Delay		43.7			18.5			22.2			20.6	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	9	137		43	84	1	22	134	0	108	156	
Queue Length 95th (ft)	24	213		144	222	117	46	225	0	174	232	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	283	431		387	629	854	435	597	663	576	815	
Starvation Cap Reductn	0	0		0	73	57	0	0	0	0	0	
Spillback Cap Reductn	0	24		0	0	0	0	0	3	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.66		0.56	0.70	0.61	0.18	0.47	0.13	0.57	0.44	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 72 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings 1: Wilcox Street & 5th Street

Background Traffic Conditions
Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 22.7

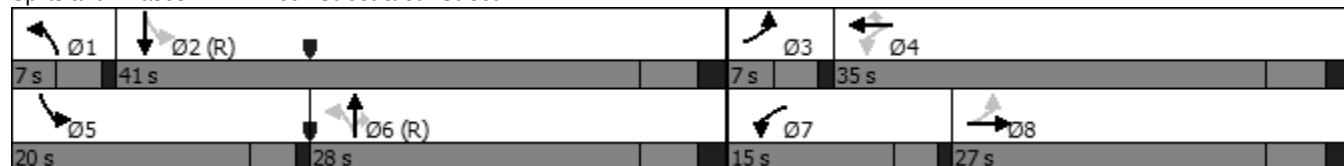
Intersection LOS: C

Intersection Capacity Utilization 71.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Wilcox Street & 5th Street



Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	434	70	95	796	21	68	174	47	34	201	141
Future Volume (vph)	67	434	70	95	796	21	68	174	47	34	201	141
Satd. Flow (prot)	1770	1863	1583	1770	3525	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.249			0.369			0.391			0.626		
Satd. Flow (perm)	464	1863	1583	687	3525	0	728	1863	1583	1166	1863	1583
Satd. Flow (RTOR)			133		4				133			153
Lane Group Flow (vph)	73	472	76	103	888	0	74	189	51	37	218	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	9.0	47.0	47.0	9.0	47.0		9.0	26.0	26.0	8.0	25.0	25.0
Total Split (%)	10.0%	52.2%	52.2%	10.0%	52.2%		10.0%	28.9%	28.9%	8.9%	27.8%	27.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	52.6	46.0	46.0	53.5	46.4		24.2	17.5	17.5	21.4	14.5	14.5
Actuated g/C Ratio	0.58	0.51	0.51	0.59	0.52		0.27	0.19	0.19	0.24	0.16	0.16
v/c Ratio	0.21	0.50	0.09	0.21	0.49		0.27	0.52	0.12	0.12	0.73	0.40
Control Delay	14.7	23.7	4.7	9.9	17.6		23.3	37.6	0.6	20.9	49.6	8.7
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	24.2	4.7	9.9	17.6		23.3	37.6	0.6	20.9	49.6	8.7
LOS	B	C	A	A	B		C	D	A	C	D	A
Approach Delay		20.7			16.8			28.2			31.7	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	22	183	3	23	182		30	99	0	15	119	0
Queue Length 95th (ft)	m43	277	m11	52	262		57	158	0	33	184	49
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	352	982	897	481	1870		278	426	465	317	393	454
Starvation Cap Reductn	0	194	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.60	0.08	0.21	0.47		0.27	0.44	0.11	0.12	0.55	0.34

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 24 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 22.0

Intersection LOS: C

Intersection Capacity Utilization 59.1%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
9 s	47 s	8 s	26 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
9 s	47 s	9 s	25 s

Timings

3: Wilcox Street & 3rd Street

Background Traffic Conditions

Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	10	33	13	42	95	30	360	43	34	322	74
Future Volume (vph)	18	10	33	13	42	95	30	360	43	34	322	74
Satd. Flow (prot)	1770	1649	0	1770	1669	0	1770	1833	0	1770	1811	0
Flt Permitted	0.662			0.726			0.512			0.508		
Satd. Flow (perm)	1233	1649	0	1352	1669	0	954	1833	0	946	1811	0
Satd. Flow (RTOR)		36			103			17			32	
Lane Group Flow (vph)	20	47	0	14	149	0	33	438	0	37	430	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	20.0	20.0		20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	7.7	7.7		7.7	7.7		43.8	43.8		43.8	43.8	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.73	0.73		0.73	0.73	
v/c Ratio	0.13	0.19		0.08	0.49		0.05	0.33		0.05	0.32	
Control Delay	23.3	12.5		22.2	14.9		4.4	5.1		4.4	4.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.3	12.5		22.2	14.9		4.4	5.1		4.4	4.9	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		15.7			15.5			5.1			4.9	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	7	4		5	15		3	50		4	47	
Queue Length 95th (ft)	22	26		17	56		13	114		14	109	
Internal Link Dist (ft)		266			304			257			304	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	287	412		315	468		695	1341		689	1329	
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	0.07	0.11		0.04	0.32		0.05	0.33		0.05	0.32	
Intersection Summary												
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Background Traffic Conditions
Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 7.1

Intersection LOS: A

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
40 s	20 s
 Ø5 (R)	 Ø8
40 s	20 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Background Traffic Conditions

Year 2041 - AM Peak Hour

Intersection				
Intersection Delay, s/veh	5.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	91	154	296	406
Demand Flow Rate, veh/h	93	157	302	414
Vehicles Circulating, veh/h	388	307	75	137
Vehicles Exiting, veh/h	163	70	406	327
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.9	5.1	4.9	6.4
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	93	157	302	414
Cap Entry Lane, veh/h	929	1009	1278	1200
Entry HV Adj Factor	0.983	0.983	0.980	0.981
Flow Entry, veh/h	91	154	296	406
Cap Entry, veh/h	913	991	1253	1177
V/C Ratio	0.100	0.156	0.236	0.345
Control Delay, s/veh	4.9	5.1	4.9	6.4
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	2

HCM 6th TWSC
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2041 - AM Peak Hour

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	4	74	7	271	51	39	331	16
Future Vol, veh/h	0	0	0	61	4	74	7	271	51	39	331	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	66	4	80	8	295	55	42	360	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	792	800	323	377	0	0
Stage 1	339	339	-	-	-	-
Stage 2	453	461	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	2.218
Pot Cap-1 Maneuver	358	318	718	1181	-	1209
Stage 1	722	640	-	-	-	-
Stage 2	640	565	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	343	0	718	1181	-	1209
Mov Cap-2 Maneuver	343	0	-	-	-	-
Stage 1	716	0	-	-	-	-
Stage 2	618	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0.2	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1181	-	343 718	1209	-	-
HCM Lane V/C Ratio	0.006	-	0.193 0.118	0.035	-	-
HCM Control Delay (s)	8.1	0	18 10.7	8.1	-	-
HCM Lane LOS	A	A	C B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.7 0.4	0.1	-	-

HCM 6th Roundabout
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2041 - AM Peak Hour

Intersection				
Intersection Delay, s/veh	5.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	150	358	419
Demand Flow Rate, veh/h	0	153	365	427
Vehicles Circulating, veh/h	477	309	43	79
Vehicles Exiting, veh/h	29	99	434	383
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.1	5.2	6.0
Approach LOS	-	A	A	A
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	153	365	427	
Cap Entry Lane, veh/h	1007	1321	1273	
Entry HV Adj Factor	0.980	0.981	0.981	
Flow Entry, veh/h	150	358	419	
Cap Entry, veh/h	987	1296	1249	
V/C Ratio	0.152	0.276	0.335	
Control Delay, s/veh	5.1	5.2	6.0	
LOS	A	A	A	
95th %tile Queue, veh	1	1	1	

Timings
1: Wilcox Street & 5th Street

Background Traffic Conditions
Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	342	68	221	283	341	82	385	218	489	373	19
Future Volume (vph)	51	342	68	221	283	341	82	385	218	489	373	19
Satd. Flow (prot)	1770	1816	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.573			0.144			0.514			0.151		
Satd. Flow (perm)	1067	1816	0	268	1863	1583	957	1863	1583	281	1850	0
Satd. Flow (RTOR)		9				371			207		3	
Lane Group Flow (vph)	55	446	0	240	308	371	89	418	237	532	426	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	7.0	29.0		14.0	36.0	36.0	9.0	30.0	30.0	27.0	48.0	
Total Split (%)	7.0%	29.0%		14.0%	36.0%	36.0%	9.0%	30.0%	30.0%	27.0%	48.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	28.2	23.0		39.7	32.1	32.1	30.1	23.3	23.3	52.3	43.1	
Actuated g/C Ratio	0.28	0.23		0.40	0.32	0.32	0.30	0.23	0.23	0.52	0.43	
v/c Ratio	0.17	1.05		0.90	0.52	0.49	0.27	0.97	0.45	1.09	0.53	
Control Delay	22.2	95.9		59.7	33.0	16.3	16.7	74.3	9.6	93.9	24.3	
Queue Delay	0.0	8.1		0.0	1.1	0.4	0.0	0.0	0.1	9.0	0.0	
Total Delay	22.2	104.1		59.7	34.1	16.8	16.7	74.3	9.7	102.8	24.3	
LOS	C	F		E	C	B	B	E	A	F	C	
Approach Delay		95.1			33.8			46.8			67.9	
Approach LOS		F			C			D			E	
Queue Length 50th (ft)	22	~308		135	189	112	27	262	15	~325	198	
Queue Length 95th (ft)	47	#502		#254	271	174	51	#446	78	#531	294	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	323	424		267	598	760	330	447	537	489	798	
Starvation Cap Reductn	0	0		0	123	111	0	0	0	0	0	
Spillback Cap Reductn	0	9		0	0	0	0	0	23	174	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	1.07		0.90	0.65	0.57	0.27	0.94	0.46	1.69	0.53	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 99 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Timings

1: Wilcox Street & 5th Street

Background Traffic Conditions

Year 2041 - PM Peak Hour

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 57.2

Intersection LOS: E

Intersection Capacity Utilization 98.4%

ICU Level of Service F

Analysis Period (min) 15

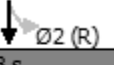
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)		 Ø3	 Ø4
9 s	48 s		7 s	36 s
 Ø5		 Ø6 (R)	 Ø7	 Ø8
27 s		30 s	14 s	29 s

Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	828	63	100	636	30	74	340	146	113	388	156
Future Volume (vph)	163	828	63	100	636	30	74	340	146	113	388	156
Satd. Flow (prot)	1770	1863	1583	1770	3514	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.279			0.089			0.175			0.202		
Satd. Flow (perm)	520	1863	1583	166	3514	0	326	1863	1583	376	1863	1583
Satd. Flow (RTOR)			120		6				164			164
Lane Group Flow (vph)	177	900	68	109	724	0	80	370	159	123	422	170
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0	3.5	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	13.0	55.0	55.0	8.0	50.0		8.0	29.0	29.0	8.0	29.0	29.0
Total Split (%)	13.0%	55.0%	55.0%	8.0%	50.0%		8.0%	29.0%	29.0%	8.0%	29.0%	29.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	59.3	49.7	49.7	52.2	45.9		28.0	22.0	22.0	28.8	23.6	23.6
Actuated g/C Ratio	0.59	0.50	0.50	0.52	0.46		0.28	0.22	0.22	0.29	0.24	0.24
v/c Ratio	0.43	0.97	0.08	0.70	0.45		0.54	0.90	0.33	0.75	0.96	0.34
Control Delay	6.5	35.1	1.2	38.1	19.8		38.9	64.9	6.9	56.8	74.1	7.8
Queue Delay	0.0	41.0	0.0	0.0	0.0		0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	76.1	1.2	38.1	19.8		39.1	64.9	6.9	56.8	74.1	7.8
LOS	A	E	A	D	B		D	E	A	E	E	A
Approach Delay		60.9			22.2			46.4			55.3	
Approach LOS		E			C			D			E	
Queue Length 50th (ft)	39	599	0	28	165		35	228	0	56	269	3
Queue Length 95th (ft)	m39	m590	m0	#81	216		70	#387	48	#132	#465	56
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	424	925	846	156	1615		149	428	490	163	438	498
Starvation Cap Reductn	0	194	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		2	0	0	0	0	8
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	1.23	0.08	0.70	0.45		0.54	0.86	0.32	0.75	0.96	0.35

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Background Traffic Conditions

Year 2041 - PM Peak Hour

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 47.3

Intersection LOS: D

Intersection Capacity Utilization 90.3%

ICU Level of Service E

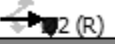
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
8 s	55 s	8 s	29 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	50 s	8 s	29 s

Timings

3: Wilcox Street & 3rd Street

Background Traffic Conditions

Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	76	110	44	28	98	48	488	69	83	461	64
Future Volume (vph)	95	76	110	44	28	98	48	488	69	83	461	64
Satd. Flow (prot)	1770	1697	0	1770	1645	0	1770	1827	0	1770	1829	0
Flt Permitted	0.669			0.515			0.407			0.386		
Satd. Flow (perm)	1246	1697	0	959	1645	0	758	1827	0	719	1829	0
Satd. Flow (RTOR)		91			107			17			17	
Lane Group Flow (vph)	103	203	0	48	137	0	52	605	0	90	571	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	24.0	24.0		24.0	24.0		51.0	51.0		51.0	51.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%		68.0%	68.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	11.4	11.4		11.4	11.4		51.6	51.6		51.6	51.6	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.69	0.69		0.69	0.69	
v/c Ratio	0.54	0.60		0.33	0.40		0.10	0.48		0.18	0.45	
Control Delay	39.1	23.6		32.9	12.4		5.6	7.6		6.3	7.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.1	23.6		32.9	12.4		5.6	7.6		6.3	7.2	
LOS	D	C		C	B		A	A		A	A	
Approach Delay		28.8			17.7			7.4			7.1	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)	45	48		20	12		7	106		13	97	
Queue Length 95th (ft)	85	103		47	54		23	216		37	198	
Internal Link Dist (ft)		240			303			255			306	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	299	476		230	476		521	1261		494	1262	
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	0.34	0.43		0.21	0.29		0.10	0.48		0.18	0.45	
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 28 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Background Traffic Conditions
Year 2041 - PM Peak Hour

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 73.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
51 s	24 s
 Ø5 (R)	 Ø8
51 s	24 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Background Traffic Conditions

Year 2041 - PM Peak Hour

Intersection				
Intersection Delay, s/veh 9.2				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	296	138	503	612
Demand Flow Rate, veh/h	301	141	513	624
Vehicles Circulating, veh/h	599	613	291	135
Vehicles Exiting, veh/h	160	191	609	619
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.2	7.1	9.6	8.9
Approach LOS	B	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	301	141	513	624
Cap Entry Lane, veh/h	749	738	1026	1202
Entry HV Adj Factor	0.982	0.978	0.981	0.981
Flow Entry, veh/h	296	138	503	612
Cap Entry, veh/h	735	722	1006	1179
V/C Ratio	0.402	0.191	0.500	0.519
Control Delay, s/veh	10.2	7.1	9.6	8.9
LOS	B	A	A	A
95th %tile Queue, veh	2	1	3	3

HCM 6th TWSC
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2041 - PM Peak Hour

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	0	98	3	477	110	67	604	15
Future Vol, veh/h	0	0	0	61	0	98	3	477	110	67	604	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	66	0	107	3	518	120	73	657	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1395	1403	578	673	0	0
Stage 1	584	584	-	-	-	-
Stage 2	811	819	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	156	140	516	918	-	-
Stage 1	557	498	-	-	-	-
Stage 2	437	389	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	143	0	516	918	-	-
Mov Cap-2 Maneuver	143	0	-	-	-	-
Stage 1	554	0	-	-	-	-
Stage 2	403	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.8	0	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	918	-	-	143	516	946	-	-
HCM Lane V/C Ratio	0.004	-	-	0.464	0.206	0.077	-	-
HCM Control Delay (s)	8.9	0	-	50.3	13.8	9.1	-	-
HCM Lane LOS	A	A	-	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.1	0.8	0.2	-	-

HCM 6th Roundabout
5: Perry Street & 2nd Street

Background Traffic Conditions
Year 2041 - PM Peak Hour

Intersection				
Intersection Delay, s/veh	8.9			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	173	641	746
Demand Flow Rate, veh/h	0	176	653	760
Vehicles Circulating, veh/h	811	531	74	70
Vehicles Exiting, veh/h	19	196	737	637
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	6.9	8.4	9.9
Approach LOS	-	A	A	A
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	176	653	760	
Cap Entry Lane, veh/h	803	1280	1285	
Entry HV Adj Factor	0.983	0.981	0.981	
Flow Entry, veh/h	173	641	746	
Cap Entry, veh/h	789	1255	1261	
V/C Ratio	0.219	0.510	0.592	
Control Delay, s/veh	6.9	8.4	9.9	
LOS	A	A	A	
95th %tile Queue, veh	1	3	4	

Timings
1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	138	36	139	252	312	51	182	57	211	223	11
Future Volume (vph)	17	138	36	139	252	312	51	182	57	211	223	11
Satd. Flow (prot)	1770	1805	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.591			0.435			0.602			0.549		
Satd. Flow (perm)	1101	1805	0	810	1863	1583	1121	1863	1583	1023	1850	0
Satd. Flow (RTOR)		15				339			133		3	
Lane Group Flow (vph)	18	189	0	151	274	339	55	198	62	229	254	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	26.0	
Total Split (s)	12.0	35.0		12.0	35.0	35.0	12.0	31.0	31.0	12.0	31.0	
Total Split (%)	13.3%	38.9%		13.3%	38.9%	38.9%	13.3%	34.4%	34.4%	13.3%	34.4%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	20.9	14.3		30.1	24.4	24.4	43.2	35.9	35.9	51.8	42.2	
Actuated g/C Ratio	0.23	0.16		0.33	0.27	0.27	0.48	0.40	0.40	0.58	0.47	
v/c Ratio	0.06	0.63		0.40	0.54	0.50	0.10	0.27	0.09	0.34	0.29	
Control Delay	18.4	41.7		17.3	23.0	3.5	11.3	22.5	0.2	12.1	18.3	
Queue Delay	0.0	0.0		0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.4	41.7		17.3	23.3	3.7	11.3	22.5	0.2	12.1	18.3	
LOS	B	D		B	C	A	B	C	A	B	B	
Approach Delay		39.7			13.4			16.2			15.4	
Approach LOS		D			B			B			B	
Queue Length 50th (ft)	7	94		33	64	0	13	74	0	60	89	
Queue Length 95th (ft)	19	152		46	82	7	35	158	0	120	174	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	356	591		379	600	739	628	751	717	676	868	
Starvation Cap Reductn	0	0		0	66	81	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.05	0.32		0.40	0.51	0.52	0.09	0.26	0.09	0.34	0.29	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 72 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings 1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 17.5

Intersection LOS: B

Intersection Capacity Utilization 55.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	31 s	12 s	35 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	31 s	12 s	35 s

Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	304	51	71	558	15	50	125	37	24	143	99
Future Volume (vph)	47	304	51	71	558	15	50	125	37	24	143	99
Satd. Flow (prot)	1770	1863	1583	1770	3525	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.397			0.496			0.483			0.670		
Satd. Flow (perm)	740	1863	1583	924	3525	0	900	1863	1583	1248	1863	1583
Satd. Flow (RTOR)			133		4				133			133
Lane Group Flow (vph)	51	330	55	77	623	0	54	136	40	26	155	108
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	12.0	44.0	44.0	12.0	44.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	13.3%	48.9%	48.9%	13.3%	48.9%		13.3%	24.4%	24.4%	13.3%	24.4%	24.4%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	55.5	48.8	48.8	57.3	51.1		21.9	16.6	16.6	18.4	11.8	11.8
Actuated g/C Ratio	0.62	0.54	0.54	0.64	0.57		0.24	0.18	0.18	0.20	0.13	0.13
v/c Ratio	0.10	0.33	0.06	0.12	0.31		0.19	0.40	0.10	0.09	0.64	0.33
Control Delay	11.6	18.7	2.8	7.9	13.1		24.1	35.1	0.5	22.6	48.4	6.8
Queue Delay	0.0	0.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	19.1	2.8	7.9	13.1		24.1	35.1	0.5	22.6	48.4	6.8
LOS	B	B	A	A	B		C	D	A	C	D	A
Approach Delay		16.1			12.6			26.5			30.5	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	14	117	0	15	104		23	62	0	11	85	0
Queue Length 95th (ft)	35	189	8	38	172		46	120	0	27	140	30
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	562	1015	923	670	2006		298	384	431	326	333	392
Starvation Cap Reductn	0	271	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.44	0.06	0.11	0.31		0.18	0.35	0.09	0.08	0.47	0.28

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 24 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Timings 2: Perry Street & 5th Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 47.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	44 s	12 s	22 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
12 s	44 s	12 s	22 s

Timings
3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	7	23	12	28	70	21	252	32	27	226	52
Future Volume (vph)	12	7	23	12	28	70	21	252	32	27	226	52
Satd. Flow (prot)	1770	1650	0	1770	1662	0	1770	1831	0	1770	1811	0
Flt Permitted	0.689			0.736			0.575			0.572		
Satd. Flow (perm)	1283	1650	0	1371	1662	0	1071	1831	0	1065	1811	0
Satd. Flow (RTOR)		25			76			17			31	
Lane Group Flow (vph)	13	33	0	13	106	0	23	309	0	29	303	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	21.0	21.0		21.0	21.0		39.0	39.0		39.0	39.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		65.0%	65.0%		65.0%	65.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	7.2	7.2		7.2	7.2		44.3	44.3		44.3	44.3	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.74	0.74		0.74	0.74	
v/c Ratio	0.08	0.15		0.08	0.40		0.03	0.23		0.04	0.23	
Control Delay	23.4	13.6		23.2	14.6		3.9	4.1		3.9	3.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.4	13.6		23.2	14.6		3.9	4.1		3.9	3.9	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		16.4			15.6			4.1			3.9	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	4	3		4	10		2	30		3	28	
Queue Length 95th (ft)	17	22		17	45		9	70		11	66	
Internal Link Dist (ft)		266			304			257			304	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	320	431		342	472		791	1357		787	1346	
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	0.08		0.04	0.22		0.03	0.23		0.04	0.23	
Intersection Summary												
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 6.4

Intersection LOS: A

Intersection Capacity Utilization 39.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R) 39 s	 Ø4 21 s
 Ø5 (R) 39 s	 Ø8 21 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Intersection				
Intersection Delay, s/veh 4.6				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	84	109	208	295
Demand Flow Rate, veh/h	86	111	212	301
Vehicles Circulating, veh/h	284	226	64	97
Vehicles Exiting, veh/h	114	50	305	240
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.2	4.2	5.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	86	111	212	301
Cap Entry Lane, veh/h	1033	1096	1293	1250
Entry HV Adj Factor	0.972	0.980	0.983	0.980
Flow Entry, veh/h	84	109	208	295
Cap Entry, veh/h	1003	1074	1271	1225
V/C Ratio	0.083	0.101	0.164	0.241
Control Delay, s/veh	4.3	4.2	4.2	5.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	43	4	52	7	190	35	28	233	26
Future Vol, veh/h	0	0	0	43	4	52	7	190	35	28	233	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	47	4	57	8	207	38	30	253	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	569	583	226	281	0	0
Stage 1	242	242	-	-	-	-
Stage 2	327	341	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	484	424	813	1282	-	-
Stage 1	798	705	-	-	-	-
Stage 2	731	639	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	469	0	813	1282	-	-
Mov Cap-2 Maneuver	469	0	-	-	-	-
Stage 1	792	0	-	-	-	-
Stage 2	714	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0.2	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1282	-	-	469	813	1321	-	-
HCM Lane V/C Ratio	0.006	-	-	0.1	0.075	0.023	-	-
HCM Control Delay (s)	7.8	0	-	13.5	9.8	7.8	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

HCM 6th Roundabout
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2023 - AM Peak Hour

Intersection				
Intersection Delay, s/veh	4.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	108	253	311
Demand Flow Rate, veh/h	0	110	258	318
Vehicles Circulating, veh/h	337	219	31	60
Vehicles Exiting, veh/h	41	70	306	269
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.2	4.4	5.0
Approach LOS	-	A	A	A
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	110	258	318	
Cap Entry Lane, veh/h	1104	1337	1298	
Entry HV Adj Factor	0.981	0.980	0.978	
Flow Entry, veh/h	108	253	311	
Cap Entry, veh/h	1083	1310	1269	
V/C Ratio	0.100	0.193	0.245	
Control Delay, s/veh	4.2	4.4	5.0	
LOS	A	A	A	
95th %tile Queue, veh	0	1	1	

Timings
1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	241	49	155	200	240	58	272	153	344	264	14
Future Volume (vph)	35	241	49	155	200	240	58	272	153	344	264	14
Satd. Flow (prot)	1770	1816	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.622			0.279			0.576			0.387		
Satd. Flow (perm)	1159	1816	0	520	1863	1583	1073	1863	1583	721	1850	0
Satd. Flow (RTOR)		11				261			164		3	
Lane Group Flow (vph)	38	315	0	168	217	261	63	296	166	374	302	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	12.0	39.0		11.0	33.0	33.0	12.0	24.0	24.0	26.0	38.0	
Total Split (%)	12.0%	39.0%		11.0%	33.0%	33.0%	12.0%	24.0%	24.0%	26.0%	38.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	29.6	22.2		34.3	28.0	28.0	40.3	32.5	32.5	55.9	45.8	
Actuated g/C Ratio	0.30	0.22		0.34	0.28	0.28	0.40	0.32	0.32	0.56	0.46	
v/c Ratio	0.10	0.77		0.61	0.42	0.41	0.13	0.49	0.27	0.64	0.36	
Control Delay	19.7	47.2		35.1	34.4	16.8	14.3	34.3	6.9	18.9	21.2	
Queue Delay	0.0	0.0		0.0	0.0	0.1	0.0	0.0	0.1	2.7	0.0	
Total Delay	19.7	47.2		35.1	34.4	16.9	14.3	34.3	7.0	21.7	21.2	
LOS	B	D		D	C	B	B	C	A	C	C	
Approach Delay		44.3			27.5			23.3			21.5	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	16	183		92	134	71	17	148	1	125	123	
Queue Length 95th (ft)	34	254		143	199	135	42	#335	56	221	223	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	421	606		277	602	688	512	606	625	640	848	
Starvation Cap Reductn	0	0		0	0	60	0	0	0	0	0	
Spillback Cap Reductn	0	1		0	0	0	0	0	40	162	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.52		0.61	0.36	0.42	0.12	0.49	0.28	0.78	0.36	
Intersection Summary												
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 99 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings 1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 27.3

Intersection LOS: C

Intersection Capacity Utilization 74.3%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
12 s	38 s	12 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
26 s	24 s	11 s	39 s

Timings
2: Perry Street & 5th Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	580	48	77	445	21	55	242	108	79	276	109
Future Volume (vph)	114	580	48	77	445	21	55	242	108	79	276	109
Satd. Flow (prot)	1770	1863	1583	1770	3514	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.420			0.246			0.298			0.370		
Satd. Flow (perm)	782	1863	1583	458	3514	0	555	1863	1583	689	1863	1583
Satd. Flow (RTOR)			120		5				120			120
Lane Group Flow (vph)	124	630	52	84	507	0	60	263	117	86	300	118
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0	3.5	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	13.0	44.0	44.0	13.0	44.0		10.0	33.0	33.0	10.0	33.0	33.0
Total Split (%)	13.0%	44.0%	44.0%	13.0%	44.0%		10.0%	33.0%	33.0%	10.0%	33.0%	33.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	58.9	50.6	50.6	56.7	48.1		27.2	20.2	20.2	27.5	20.4	20.4
Actuated g/C Ratio	0.59	0.51	0.51	0.57	0.48		0.27	0.20	0.20	0.28	0.20	0.20
v/c Ratio	0.23	0.67	0.06	0.24	0.30		0.27	0.70	0.28	0.34	0.79	0.28
Control Delay	8.2	24.1	0.8	11.8	18.1		24.8	46.6	7.1	26.4	52.6	7.2
Queue Delay	0.0	1.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	25.4	0.8	11.8	18.1		24.8	46.6	7.1	26.4	52.6	7.2
LOS	A	C	A	B	B		C	D	A	C	D	A
Approach Delay		21.2			17.2			33.1			37.5	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)	35	366	0	22	104		26	156	0	38	183	0
Queue Length 95th (ft)	57	#593	m2	49	163		50	223	40	67	256	41
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	556	941	859	388	1693		226	503	515	257	503	515
Starvation Cap Reductn	0	141	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.79	0.06	0.22	0.30		0.27	0.52	0.23	0.33	0.60	0.23

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 25.9

Intersection LOS: C

Intersection Capacity Utilization 69.3%

ICU Level of Service C

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	44 s	10 s	33 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	44 s	10 s	33 s

Timings
3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	53	77	34	19	72	33	343	51	61	323	45
Future Volume (vph)	67	53	77	34	19	72	33	343	51	61	323	45
Satd. Flow (prot)	1770	1697	0	1770	1643	0	1770	1827	0	1770	1829	0
Flt Permitted	0.693			0.666			0.525			0.506		
Satd. Flow (perm)	1291	1697	0	1241	1643	0	978	1827	0	943	1829	0
Satd. Flow (RTOR)		84			78			16			15	
Lane Group Flow (vph)	73	142	0	37	99	0	36	428	0	66	400	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	28.0	28.0		28.0	28.0		47.0	47.0		47.0	47.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%		62.7%	62.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	9.6	9.6		9.6	9.6		53.4	53.4		53.4	53.4	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.71	0.71		0.71	0.71	
v/c Ratio	0.44	0.49		0.23	0.36		0.05	0.33		0.10	0.31	
Control Delay	37.6	19.3		31.4	13.9		4.3	5.2		4.5	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.6	19.3		31.4	13.9		4.3	5.2		4.5	5.0	
LOS	D	B		C	B		A	A		A	A	
Approach Delay		25.5			18.6			5.1			5.0	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)	32	25		16	9		4	58		8	53	
Queue Length 95th (ft)	66	71		39	46		14	119		23	109	
Internal Link Dist (ft)		240			303			255			306	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	378	557		364	537		696	1304		671	1306	
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	0.19	0.25		0.10	0.18		0.05	0.33		0.10	0.31	
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 28 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
47 s	28 s
 Ø5 (R)	 Ø8
47 s	28 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Intersection				
Intersection Delay, s/veh	6.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	226	98	353	439
Demand Flow Rate, veh/h	231	101	360	448
Vehicles Circulating, veh/h	431	441	217	95
Vehicles Exiting, veh/h	112	136	445	446
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.9	5.3	6.5	6.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	231	101	360	448
Cap Entry Lane, veh/h	889	880	1106	1252
Entry HV Adj Factor	0.979	0.972	0.980	0.979
Flow Entry, veh/h	226	98	353	439
Cap Entry, veh/h	871	856	1083	1227
V/C Ratio	0.260	0.115	0.326	0.358
Control Delay, s/veh	6.9	5.3	6.5	6.3
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	2

HCM 6th TWSC
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	43	1	69	4	335	77	48	424	25
Future Vol, veh/h	0	0	0	43	1	69	4	335	77	48	424	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	47	1	75	4	364	84	52	461	27

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	993	1006	406	488	0	0
Stage 1	414	414	-	-	-	-
Stage 2	579	592	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	272	241	645	1075	-	-
Stage 1	667	593	-	-	-	-
Stage 2	560	494	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	258	0	645	1075	-	-
Mov Cap-2 Maneuver	258	0	-	-	-	-
Stage 1	664	0	-	-	-	-
Stage 2	534	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0.1	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1075	-	-	258	645	1112	-	-
HCM Lane V/C Ratio	0.004	-	-	0.181	0.118	0.047	-	-
HCM Control Delay (s)	8.4	0	-	22	11.3	8.4	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.4	0.1	-	-

HCM 6th Roundabout
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2023 - PM Peak Hour

Intersection				
Intersection Delay, s/veh	6.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	123	452	540
Demand Flow Rate, veh/h	0	125	461	551
Vehicles Circulating, veh/h	571	375	53	53
Vehicles Exiting, veh/h	33	139	518	447
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.1	6.1	7.0
Approach LOS	-	A	A	A
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	125	461	551	
Cap Entry Lane, veh/h	941	1307	1307	
Entry HV Adj Factor	0.984	0.980	0.980	
Flow Entry, veh/h	123	452	540	
Cap Entry, veh/h	926	1281	1281	
V/C Ratio	0.133	0.353	0.422	
Control Delay, s/veh	5.1	6.1	7.0	
LOS	A	A	A	
95th %tile Queue, veh	0	2	2	

Timings
1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	197	52	199	359	445	72	259	82	301	317	16
Future Volume (vph)	24	197	52	199	359	445	72	259	82	301	317	16
Satd. Flow (prot)	1770	1803	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.499			0.331			0.545			0.391		
Satd. Flow (perm)	930	1803	0	617	1863	1583	1015	1863	1583	728	1850	0
Satd. Flow (RTOR)		14				484			230		3	
Lane Group Flow (vph)	26	271	0	216	390	484	78	282	89	327	362	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	7.0	27.0		15.0	35.0	35.0	7.0	28.0	28.0	20.0	41.0	
Total Split (%)	7.8%	30.0%		16.7%	38.9%	38.9%	7.8%	31.1%	31.1%	22.2%	45.6%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	23.6	17.3		34.5	29.3	29.3	34.8	28.2	28.2	47.5	38.5	
Actuated g/C Ratio	0.26	0.19		0.38	0.33	0.33	0.39	0.31	0.31	0.53	0.43	
v/c Ratio	0.09	0.76		0.57	0.64	0.58	0.18	0.48	0.14	0.61	0.46	
Control Delay	17.0	45.9		26.7	26.9	7.4	15.8	31.1	0.4	18.8	22.4	
Queue Delay	0.0	0.5		0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay	17.0	46.4		26.7	27.7	7.6	15.8	31.1	0.4	18.8	22.4	
LOS	B	D		C	C	A	B	C	A	B	C	
Approach Delay		43.9			18.6			22.4			20.7	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	9	138		43	84	1	22	136	0	108	158	
Queue Length 95th (ft)	24	215		144	222	118	47	227	0	175	234	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	283	431		387	630	856	431	596	662	572	815	
Starvation Cap Reductn	0	0		0	73	56	0	0	0	0	0	
Spillback Cap Reductn	0	24		0	0	0	0	0	3	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.67		0.56	0.70	0.60	0.18	0.47	0.14	0.57	0.44	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 72 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Timings 1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 22.8

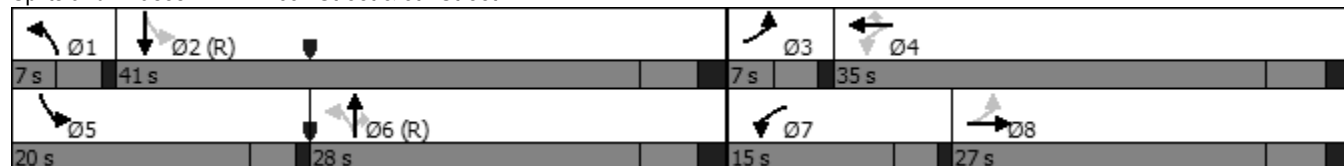
Intersection LOS: C

Intersection Capacity Utilization 71.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Wilcox Street & 5th Street



Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	434	72	99	796	21	70	177	51	34	204	141
Future Volume (vph)	67	434	72	99	796	21	70	177	51	34	204	141
Satd. Flow (prot)	1770	1863	1583	1770	3525	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.249			0.368			0.386			0.619		
Satd. Flow (perm)	464	1863	1583	685	3525	0	719	1863	1583	1153	1863	1583
Satd. Flow (RTOR)			133		4				133			153
Lane Group Flow (vph)	73	472	78	108	888	0	76	192	55	37	222	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0	5.0	4.0	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	9.0	47.0	47.0	9.0	47.0		9.0	26.0	26.0	8.0	25.0	25.0
Total Split (%)	10.0%	52.2%	52.2%	10.0%	52.2%		10.0%	28.9%	28.9%	8.9%	27.8%	27.8%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	52.3	45.7	45.7	53.3	46.2		24.5	17.7	17.7	21.6	14.7	14.7
Actuated g/C Ratio	0.58	0.51	0.51	0.59	0.51		0.27	0.20	0.20	0.24	0.16	0.16
v/c Ratio	0.21	0.50	0.09	0.23	0.49		0.27	0.52	0.13	0.12	0.73	0.40
Control Delay	14.8	23.9	4.9	10.0	17.7		23.3	37.4	0.6	20.8	49.8	8.6
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	24.4	4.9	10.0	17.7		23.3	37.4	0.6	20.8	49.8	8.6
LOS	B	C	A	A	B		C	D	A	C	D	A
Approach Delay		20.8			16.9			27.8			31.9	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	22	183	3	24	183		31	100	0	15	121	0
Queue Length 95th (ft)	m42	277	m12	54	262		58	160	0	33	187	49
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	351	979	894	479	1864		279	428	466	316	393	454
Starvation Cap Reductn	0	190	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.60	0.09	0.23	0.48		0.27	0.45	0.12	0.12	0.56	0.34

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 24 (27%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 22.1

Intersection LOS: C

Intersection Capacity Utilization 59.6%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
9 s	47 s	8 s	26 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
9 s	47 s	9 s	25 s

Timings

3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	10	33	16	42	98	30	360	45	37	322	74
Future Volume (vph)	18	10	33	16	42	98	30	360	45	37	322	74
Satd. Flow (prot)	1770	1649	0	1770	1667	0	1770	1831	0	1770	1811	0
Flt Permitted	0.660			0.726			0.512			0.507		
Satd. Flow (perm)	1229	1649	0	1352	1667	0	954	1831	0	944	1811	0
Satd. Flow (RTOR)		36			107			17			32	
Lane Group Flow (vph)	20	47	0	17	153	0	33	440	0	40	430	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	20.0	20.0		20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	7.8	7.8		7.8	7.8		43.7	43.7		43.7	43.7	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.73	0.73		0.73	0.73	
v/c Ratio	0.13	0.19		0.10	0.50		0.05	0.33		0.06	0.32	
Control Delay	23.3	12.4		22.5	14.7		4.4	5.1		4.5	4.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.3	12.4		22.5	14.7		4.4	5.1		4.5	4.9	
LOS	C	B		C	B		A	A		A	A	
Approach Delay		15.7			15.5			5.1			4.9	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	7	4		6	15		3	50		4	47	
Queue Length 95th (ft)	21	26		19	57		13	115		15	110	
Internal Link Dist (ft)		266			304			257			304	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	286	412		315	471		695	1339		688	1329	
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	0.07	0.11		0.05	0.32		0.05	0.33		0.06	0.32	
Intersection Summary												
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 7.1

Intersection LOS: A

Intersection Capacity Utilization 55.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
40 s	20 s
 Ø5 (R)	 Ø8
40 s	20 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Intersection				
Intersection Delay, s/veh 5.7				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	110	155	296	417
Demand Flow Rate, veh/h	113	158	302	425
Vehicles Circulating, veh/h	400	317	87	138
Vehicles Exiting, veh/h	163	72	426	337
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.2	5.1	5.0	6.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	113	158	302	425
Cap Entry Lane, veh/h	918	999	1263	1199
Entry HV Adj Factor	0.977	0.983	0.980	0.981
Flow Entry, veh/h	110	155	296	417
Cap Entry, veh/h	896	981	1237	1176
V/C Ratio	0.123	0.158	0.239	0.355
Control Delay, s/veh	5.2	5.1	5.0	6.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	2

HCM 6th TWSC
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	5	74	9	271	51	40	332	31
Future Vol, veh/h	0	0	0	61	5	74	9	271	51	40	332	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	66	5	80	10	295	55	43	361	34
Major/Minor				Minor1		Major1		Major2				
Conflicting Flow All				807	824	323	395	0	0	350	0	0
Stage 1				343	343	-	-	-	-	-	-	-
Stage 2				464	481	-	-	-	-	-	-	-
Critical Hdwy				6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1				5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2				5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy				3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver				351	308	718	1164	-	-	1209	-	-
Stage 1				719	637	-	-	-	-	-	-	-
Stage 2				633	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver				335	0	718	1164	-	-	1209	-	-
Mov Cap-2 Maneuver				335	0	-	-	-	-	-	-	-
Stage 1				711	0	-	-	-	-	-	-	-
Stage 2				610	0	-	-	-	-	-	-	-
Approach				WB		NB		SB				
HCM Control Delay, s				14.1		0.2		0.8				
HCM LOS				B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR				
Capacity (veh/h)	1164	-	-	335	718	1209	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.198	0.12	0.036	-	-				
HCM Control Delay (s)	8.1	0	-	18.4	10.7	8.1	-	-				
HCM Lane LOS	A	A	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.7	0.4	0.1	-	-				

HCM 6th Roundabout
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2041 - AM Peak Hour

Intersection				
Intersection Delay, s/veh	5.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	151	360	438
Demand Flow Rate, veh/h	0	154	367	447
Vehicles Circulating, veh/h	479	311	44	82
Vehicles Exiting, veh/h	50	100	435	383
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.1	5.2	6.2
Approach LOS	-	A	A	A
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	154	367	447	
Cap Entry Lane, veh/h	1005	1319	1269	
Entry HV Adj Factor	0.980	0.981	0.979	
Flow Entry, veh/h	151	360	438	
Cap Entry, veh/h	985	1294	1243	
V/C Ratio	0.153	0.278	0.352	
Control Delay, s/veh	5.1	5.2	6.2	
LOS	A	A	A	
95th %tile Queue, veh	1	1	2	

Timings
1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	343	69	221	284	342	83	387	218	490	375	19
Future Volume (vph)	51	343	69	221	284	342	83	387	218	490	375	19
Satd. Flow (prot)	1770	1816	0	1770	1863	1583	1770	1863	1583	1770	1850	0
Flt Permitted	0.572			0.144			0.513			0.151		
Satd. Flow (perm)	1065	1816	0	268	1863	1583	956	1863	1583	281	1850	0
Satd. Flow (RTOR)		9				372			207		3	
Lane Group Flow (vph)	55	448	0	240	309	372	90	421	237	533	429	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Detector Phase	3	8		7	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0	10.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	7.0	16.0		7.0	16.0	16.0	7.0	16.0	16.0	7.0	16.0	
Total Split (s)	7.0	29.0		14.0	36.0	36.0	9.0	30.0	30.0	27.0	48.0	
Total Split (%)	7.0%	29.0%		14.0%	36.0%	36.0%	9.0%	30.0%	30.0%	27.0%	48.0%	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effect Green (s)	28.2	23.0		39.7	32.1	32.1	30.2	23.3	23.3	52.3	43.1	
Actuated g/C Ratio	0.28	0.23		0.40	0.32	0.32	0.30	0.23	0.23	0.52	0.43	
v/c Ratio	0.17	1.06		0.90	0.52	0.49	0.27	0.97	0.45	1.09	0.54	
Control Delay	22.2	97.3		60.5	33.0	16.3	16.7	75.1	9.5	94.4	24.4	
Queue Delay	0.0	8.3		0.0	1.2	0.4	0.0	0.0	0.1	8.2	0.0	
Total Delay	22.2	105.6		60.5	34.2	16.7	16.7	75.1	9.7	102.6	24.4	
LOS	C	F		E	C	B	B	E	A	F	C	
Approach Delay		96.4			34.0			47.3			67.7	
Approach LOS		F			C			D			E	
Queue Length 50th (ft)	22	~310		135	189	111	27	264	15	~326	200	
Queue Length 95th (ft)	47	#505		#254	271	172	52	#452	78	#533	296	
Internal Link Dist (ft)		238			297			294			247	
Turn Bay Length (ft)	100			115		85	75		50	95		
Base Capacity (vph)	323	424		266	596	760	331	447	537	489	799	
Starvation Cap Reductn	0	0		0	123	112	0	0	0	0	0	
Spillback Cap Reductn	0	9		0	0	0	0	0	23	174	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.17	1.08		0.90	0.65	0.57	0.27	0.94	0.46	1.69	0.54	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 99 (99%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Timings 1: Wilcox Street & 5th Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 57.5

Intersection LOS: E

Intersection Capacity Utilization 98.7%

ICU Level of Service F

Analysis Period (min) 15

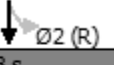
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Wilcox Street & 5th Street

 Ø1	 Ø2 (R)		 Ø3	 Ø4
9 s	48 s		7 s	36 s
 Ø5	 Ø6 (R)		 Ø7	 Ø8
27 s	30 s		14 s	29 s

Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	828	65	104	636	30	76	343	150	113	391	156
Future Volume (vph)	163	828	65	104	636	30	76	343	150	113	391	156
Satd. Flow (prot)	1770	1863	1583	1770	3514	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.280			0.089			0.175			0.197		
Satd. Flow (perm)	522	1863	1583	166	3514	0	326	1863	1583	367	1863	1583
Satd. Flow (RTOR)			120		6				164			164
Lane Group Flow (vph)	177	900	71	113	724	0	83	373	163	123	425	170
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0	3.5	5.0	5.0
Minimum Split (s)	8.0	11.0	11.0	8.0	11.0		8.0	11.0	11.0	8.0	11.0	11.0
Total Split (s)	13.0	55.0	55.0	8.0	50.0		8.0	29.0	29.0	8.0	29.0	29.0
Total Split (%)	13.0%	55.0%	55.0%	8.0%	50.0%		8.0%	29.0%	29.0%	8.0%	29.0%	29.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effect Green (s)	59.2	49.6	49.6	52.2	45.8		28.0	22.0	22.0	28.8	23.6	23.6
Actuated g/C Ratio	0.59	0.50	0.50	0.52	0.46		0.28	0.22	0.22	0.29	0.24	0.24
v/c Ratio	0.43	0.98	0.08	0.72	0.45		0.56	0.91	0.34	0.76	0.97	0.34
Control Delay	6.5	35.6	1.3	40.7	19.9		40.2	65.4	7.2	58.0	74.7	7.8
Queue Delay	0.0	40.7	0.0	0.0	0.0		0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	76.3	1.3	40.7	19.9		40.5	65.4	7.2	58.0	74.7	7.8
LOS	A	E	A	D	B		D	E	A	E	E	A
Approach Delay		60.9			22.7			46.7			56.0	
Approach LOS		E			C			D			E	
Queue Length 50th (ft)	39	600	0	29	165		37	230	0	56	272	3
Queue Length 95th (ft)	m39	m588	m1	#86	216		#75	#392	50	#134	#468	56
Internal Link Dist (ft)		297			149			293			280	
Turn Bay Length (ft)	115		85	100			130		130	150		150
Base Capacity (vph)	424	923	845	157	1611		149	428	490	161	440	499
Starvation Cap Reductn	0	195	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		3	0	0	0	0	9
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	1.24	0.08	0.72	0.45		0.57	0.87	0.33	0.76	0.97	0.35

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 86 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Timings

2: Perry Street & 5th Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 47.6

Intersection LOS: D

Intersection Capacity Utilization 90.8%

ICU Level of Service E

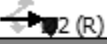
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Perry Street & 5th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
8 s	55 s	8 s	29 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	50 s	8 s	29 s

Timings

3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	76	110	47	28	101	48	488	71	86	461	64
Future Volume (vph)	95	76	110	47	28	101	48	488	71	86	461	64
Satd. Flow (prot)	1770	1697	0	1770	1643	0	1770	1827	0	1770	1829	0
Flt Permitted	0.668			0.517			0.407			0.385		
Satd. Flow (perm)	1244	1697	0	963	1643	0	758	1827	0	717	1829	0
Satd. Flow (RTOR)		91			110			17			17	
Lane Group Flow (vph)	103	203	0	51	140	0	52	607	0	93	571	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	24.0	24.0		24.0	24.0		51.0	51.0		51.0	51.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%		68.0%	68.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
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)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)	11.5	11.5		11.5	11.5		51.5	51.5		51.5	51.5	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.69	0.69		0.69	0.69	
v/c Ratio	0.54	0.60		0.35	0.41		0.10	0.48		0.19	0.45	
Control Delay	39.1	23.6		33.4	12.3		5.6	7.6		6.4	7.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.1	23.6		33.4	12.3		5.6	7.6		6.4	7.3	
LOS	D	C		C	B		A	A		A	A	
Approach Delay		28.8			17.9			7.5			7.1	
Approach LOS		C			B			A			A	
Queue Length 50th (ft)	45	48		22	12		7	107		13	97	
Queue Length 95th (ft)	85	103		49	55		23	218		39	199	
Internal Link Dist (ft)		240			303			255			306	
Turn Bay Length (ft)	45			50			70			75		
Base Capacity (vph)	298	476		231	477		520	1260		492	1262	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.35	0.43		0.22	0.29		0.10	0.48		0.19	0.45	
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 28 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green												
Natural Cycle: 40												
Control Type: Actuated-Coordinated												

Timings 3: Wilcox Street & 3rd Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 73.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 3rd Street

 Ø2 (R)	 Ø4
51 s	24 s
 Ø5 (R)	 Ø8
51 s	24 s

HCM 6th Roundabout
4: Perry Street & 3rd Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

Intersection				
Intersection Delay, s/veh	9.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	314	139	503	622
Demand Flow Rate, veh/h	320	142	513	634
Vehicles Circulating, veh/h	610	623	302	136
Vehicles Exiting, veh/h	160	192	627	629
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.8	7.2	9.8	9.1
Approach LOS	B	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	320	142	513	634
Cap Entry Lane, veh/h	741	731	1014	1201
Entry HV Adj Factor	0.983	0.978	0.981	0.981
Flow Entry, veh/h	314	139	503	622
Cap Entry, veh/h	728	715	994	1178
V/C Ratio	0.432	0.194	0.506	0.528
Control Delay, s/veh	10.8	7.2	9.8	9.1
LOS	B	A	A	A
95th %tile Queue, veh	2	1	3	3

HCM 6th TWSC
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2041 - PM 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	0	0	0	61	1	98	5	477	110	68	605	30
Future Vol, veh/h	0	0	0	61	1	98	5	477	110	68	605	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	55	-	-	-	-	-	75	-	-
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	0	0	0	66	1	107	5	518	120	74	658	33

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1411	1427	578	691	0	0
Stage 1	588	588	-	-	-	-
Stage 2	823	839	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	152	135	516	904	-	-
Stage 1	555	496	-	-	-	-
Stage 2	431	381	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	139	0	516	904	-	-
Mov Cap-2 Maneuver	139	0	-	-	-	-
Stage 1	550	0	-	-	-	-
Stage 2	397	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.6	0.1	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	904	-	-	139	516	946	-	-
HCM Lane V/C Ratio	0.006	-	-	0.477	0.209	0.078	-	-
HCM Control Delay (s)	9	0	-	52.5	13.8	9.1	-	-
HCM Lane LOS	A	A	-	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.2	0.8	0.3	-	-

HCM 6th Roundabout
5: Perry Street & 2nd Street

Total Traffic Conditions
Year 2041 - PM Peak Hour

Intersection				
Intersection Delay, s/veh	9.1			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	0	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	174	643	765
Demand Flow Rate, veh/h	0	177	655	780
Vehicles Circulating, veh/h	813	533	75	73
Vehicles Exiting, veh/h	40	197	738	637
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	7.0	8.4	10.3
Approach LOS	-	A	A	B
Lane	Left	Left	Left	
Designated Moves	LTR	LTR	LTR	
Assumed Moves	LTR	LTR	LTR	
RT Channelized				
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	
Entry Flow, veh/h	177	655	780	
Cap Entry Lane, veh/h	801	1278	1281	
Entry HV Adj Factor	0.983	0.981	0.981	
Flow Entry, veh/h	174	643	765	
Cap Entry, veh/h	788	1254	1256	
V/C Ratio	0.221	0.512	0.609	
Control Delay, s/veh	7.0	8.4	10.3	
LOS	A	A	B	
95th %tile Queue, veh	1	3	4	