



The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

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1.0 Introduction

The senior population in Hingham is growing, and the Town of Hingham (Town) would like to expand upon its programming and services to improve the quality of life for its residents. Currently, the Town has a senior center; however, this existing facility is old and undersized.

Hingham would like to be known as a town that promotes an age-friendly community as residents strive to “Age in Place,” and a new senior center is a key step in supporting the residents. The proposed facility is expected to be approximately 28,000 square feet (SF) in size, roughly five times the size of the existing center located at 224 Central Street in Hingham, Massachusetts. The Locus Map is shown in Figure 1.

As part of the Feasibility Study for the new The Hingham Center for Active Living (HCAL) project, SLR International Corporation (SLR) previously prepared a traffic assessment to evaluate the site alternatives presented by EDM Studio and assist in the selection of a final site. The site alternatives were:

- Existing Town Hall, 210 Central Street
- Bare Cove Park – Building 12, 25 Bare Cove Park Drive

Ultimately, the Bare Cove Park site was chosen as the preferred site for the HCAL. Access to the site will be via two full access unsignalized driveways located on Bare Cove Park Drive.

This Traffic Impact Report (TIR) provides an assessment of safety, traffic circulation, and traffic access/egress associated with the proposed HCAL Development project to be constructed at Bare Cove Park site in Hingham, Massachusetts. This report also outlines the existing and future traffic volumes, operations, and safety of the adjacent surrounding roadways and intersections.

The standards used for analysis conform to the most recent edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) and the 7th edition of the *Highway Capacity Manual* (2022).

The following conditions are analyzed in this report:

- 2025 Existing Conditions
- Future 2032 No-Build
- Future 2032 Build



2.0 Existing Conditions

2.1 Study Area Roadways

The following are general descriptions of the characteristics of the roadways within the study area:

Bare Cove Park Drive

Bare Cove Park Drive is classified as a local roadway that runs generally in the east-west direction through Hingham. The posted speed limit along Bare Cove Park Drive is 20 miles per hour (MPH). Bare Cove Park Drive functions as a two-way roadway with one lane in each direction, separated by a double yellow centerline (DYCL). In the vicinity of the Project Site, the roadway transitions into two one-lane, one-way roadways operating in opposite directions and separated by a 55-foot-wide grass median. There are no sidewalks present along Bare Cove Park Drive. The roadway is under the jurisdiction of the Town. The center island of Bare Cove Park Drive will be extended at the westerly end and Bare Cove Park Drive will be repaved and restriped to improve safety and circulation of HCAL and Park users.

Fort Hill Street

Fort Hill Street is classified by the Massachusetts Department of Transportation (MassDOT) as an urban minor arterial and runs in a north-south direction. Fort Hill Street runs from its northern terminus at the intersection of South Street at West Street to its southern terminus at Fresh River Avenue. The posted speed limit on Fort Hill Street is 30 MPH. The land use along the roadway is primarily residential. The roadway is maintained by the Town.

South Street

South Street is classified by MassDOT as an urban minor arterial and runs in a north-south direction. South Street begins at its northern terminus at North Street and ends at its southern terminus at Fort Hill Street. The posted speed limit on South Street is 30 MPH. The land use along the roadway is primarily residential. The roadway is maintained by the Town.

West Street

West Street is classified by MassDOT as an urban major collector and runs in a northwest-southeast direction. West Street intersects with North Street at its northern terminus at North Street and ends at its southern terminus at Fort Hill Street. The posted speed limit on West Street is 20 MPH. The land use along the roadway is primarily residential. The roadway is maintained by the Town.

2.2 Study Area Intersections

For this traffic study, the following major intersections were included in the study area and are shown in Figure 1.

1. Fort Hill Street at Bare Cove Park Drive
2. Fort Hill Street at South Street and West Street

Fort Hill Street at Bare Cove Park Drive

Fort Hill Street and Bare Cove Park Drive intersect to form a four-way unsignalized intersection with Fort Hill Street approaching from the north and south, Bare Cove Park Drive approaching



from the west, and the Massachusetts Bay Transportation Authority (MBTA) Commuter Parking Driveway (Driveway) approaching from the east. Fort Hill Street operates freely with no control while both Bare Cove Park Drive and the Driveway operate under “STOP” control. There are crosswalks across the eastbound and westbound approaches to the intersection, with sidewalk ramps only at the westbound approach (MBTA Driveway).

From the north, Fort Hill Street is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection consists of a single general-purpose lane and an exclusive left-turn lane. There is one southbound receiving lane. Fort Hill Street is approximately 50 feet wide at the intersection, with sidewalks along both sides.

From the south, Fort Hill Street is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection consists of a single general-purpose lane and an exclusive left-turn lane. There is one northbound receiving lane. Fort Hill Street is approximately 50 feet wide at the intersection, with sidewalks along both sides.

From the west, Bare Cove Park Drive is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection consists of a shared left-turn and through lane and an exclusive right-turn lane. Bare Cove Park Drive is approximately 45 feet wide at the intersection, with sidewalks along the southern side of the road.

From the east, the Driveway is a two-way roadway with one lane in each direction, with no pavement markings separating the lanes. The approach to the intersection consists of a single general-purpose lane. The Driveway is approximately 32 feet wide at the intersection.

Fort Hill Street at South Street and West Street

Fort Hill Street, South Street, and West Street intersect to form a three-way signalized intersection with Fort Hill Street approaching from the south, South Street approaching from the east, and West Street approaching from the northwest. This intersection also has an at-grade railroad crossing.

From the south, Fort Hill Street is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection includes an exclusive through lane and an exclusive right-turn lane. Sidewalks are provided on both sides, and the roadway is approximately 38 feet wide at the intersection.

From the east, South Street is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection consists of a single general-purpose lane. A railroad crossing is located immediately before the intersection, with gates and signals to control vehicle movements when a train is approaching. The width of South Street at the intersection is approximately 38 feet. Sidewalks are present on both sides of the street.

From the northwest, West Street is a two-way roadway with one lane in each direction, separated by a DYCL. The approach to the intersection consists of an exclusive left-turn lane and an exclusive through lane. The width of South Street at the intersection is approximately 42 feet. A sidewalk is present on westerly side of the street.



3.0 Safety Analysis

3.1 Crash Data

SLR reviewed the crash data from MassDOT for the 5 most recent years available (completed) – 2017 to 2021 – for the study intersections. A summary of the crashes, including the severity and the manner of collision, are shown in Table 1.

Table 1 – Crash Summary

Location	Number of Crashes			Severity				Manner of Collision					Percent During		
	Year	Total Crashes	Average	PD ^a	PI ^b	NR ^c	F ^d	A ^e	RE ^f	HO ^g	Other ^h	Incl. Ped-Bike ^j	Peak Hrs ^k	Wet/Icy Cond.	
Fort Hill Street at Bare Cove Park Drive	2017	1	0.4	1	0	0	0	0	0	0	1	0	100%	0%	
	2018	1		1	0	0	0	0	0	0	1	0	0%	100%	
	2019	0		0	0	0	0	0	0	0	0	0	0	0%	0%
	2020	0		0	0	0	0	0	0	0	0	0	0	0%	0%
	2021	0		0	0	0	0	0	0	0	0	0	0	0%	0%
	TOTAL	2		2	0	0	0	0	0	0	0	2	0	0%	0%
Fort Hill Street at South Street and West Street	2017	1	1.20	1	0	0	0	0	1	0	0	0	0%	100%	
	2018	3		3	0	0	0	0	1	0	2	0	33%	0%	
	2019	0		0	0	0	0	0	0	0	0	0	0%	0%	
	2020	0		0	0	0	0	0	0	0	0	0	0%	0%	
	2021	2		1	1	0	0	1	0	0	1	0	50%	50%	
	TOTAL	6		5	1	0	0	1	2	0	3	0	0%	0%	
TOTAL	8	1.60	7	1	0	0	1	2	0	5	0	43%	43%		

^aProperty Damage Only; ^bPersonal Injury Only (non-Fatal Injury); ^cNot Reported; ^dFatality; ^eAngle; ^fRear end; ^gHead on; ^hSideswipe, opposite direction; sideswipe, same direction, single vehicle crash, rear-to-rear, not reported, unknown, etc.; ⁱIncludes pedestrian or cyclist; ^kOccurred between 7 a.m. to 9:00 a.m. or 4:00 p.m. to 6:00 p.m.

A total of eight crashes were reported within the study areas for the two intersections from 2017 to 2021. In terms of severity, seven of the crashes involved property damage, and one reported personal injury. In terms of manner of collision, one of the crashes was an angle collision, two were rear-end crashes, four were sideswipe, and one was a single-vehicle crash. None of the crashes involved a pedestrian or bicyclist. Approximately 43 percent of the crashes occurred during the peak hours of 7:00 a.m. to 9:00 a.m. or 3:00 p.m. to 6:00 p.m., and 43 percent occurred during wet/icy conditions. Analyzing the crash data, as most crashes were sideswipe, the crashes were most likely caused by driver carelessness or inattentiveness.

3.2 Intersection Crash Rates

The intersection crash rate is recognized as an effective tool to measure the safety of intersections. For intersections, crash rates are expressed by the number of crashes per million entering vehicles (MEV). As of June 26, 2018, the average statewide crash rate for unsignalized



intersections is 0.57 crashes per MEV and 0.78 crashes per MEV for signalized intersections. For District 5, which includes the Town of Hingham, the rate for unsignalized intersections is 0.57 crashes per MEV and 0.75 crashes per MEV for signalized intersections. As shown in Table 2 – Crash Rate Summary, crash rates at both study intersections are below both statewide and districtwide averages. Intersection crash rate worksheets can be found in Appendix C.

Table 2 – Crash Rate Summary

Location	Control	Total Crashes	Crash Rate	Compared to Average			
				Statewide		District 5	
Fort Hill Street at Bare Cove Park Drive	Unsignalized	2	0.09	0.75	Below	0.57	Below
Fort Hill Street at South Street and West Street	Signalized	6	0.26	0.78	Below	0.57	Below

3.3 Existing Public Transportation Facilities

The Project Site is not directly served by any bus routes. However, it is within walking distance of the MBTA Greenbush Line at the West Hingham Train Station, located at 20 Fort Hill Street. This station is situated directly across Bare Cove Park Drive from the intersection of Fort Hill Street and Bare Cove Park Drive. The Greenbush Line provides commuter rail service between Boston’s South Station and Greenbush, offering convenient access to downtown Boston and the surrounding areas. The Greenbush Line schedule can be found in Appendix D.



4.0 Existing (2025) Traffic Conditions

4.1 2025 Traffic Data

SLR completed a traffic data collection effort within the study area, including both Automatic Traffic Recorder (ATR) counts and Turning Movement Counts (TMCs), to fully characterize existing conditions within the study area.

4.1.1 Automatic Traffic Recorder Data

New England Traffic Counts (NETC) of Westfield, Massachusetts, collected ATR counts for a continuous 48-hour period at Fort Hill Street, approximately midway between Bare Cove Park Drive and South Street. The ATR counts were collected from Tuesday, June 9, 2025, to Wednesday, June 10, 2025. The goal of the ATRs is to establish an Average Daily Traffic (ADT) and to note the fluctuation in traffic throughout the day. The traffic counts between the two daily 24-hour periods were averaged. The ATR counts are summarized in Table 3. Additional detail is available in Appendix A.

Table 3 – Automatic Traffic Recorder (ATR) Summary

Location	Period	ADT ^a		Peak-Hour Traffic			K factor ^d
		Volumes (VPD) ^b	Directional Distribution	Period	Volumes (VPH) ^c	Directional Distribution	
Fort Hill Street, approximately midway between Bare Cove Park Drive and South Street	Weekday	16,447	60% NB 40% SB	Morning	1,360	57% NB	0.83
				Evening	1,198	57% NB	0.73

^a Average Daily Traffic; ^b Vehicles per day; ^c Vehicles per hour; ^d Percent of daily traffic

4.1.2 Turning Movement Count (TMC) Data

NETC also collected TMC data at the study intersections on Wednesday, June 10, 2025, from 7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. and on Saturday, June 14, 2025, from 11:00 a.m. to 1:00 p.m. to capture both the morning and afternoon weekday peak periods as well as the weekend midday peak period, including bicycle and pedestrian counts.

Based on the counts, the peak hours within the study area were established as 8:00 a.m. to 9:00 a.m. during the weekday morning period, 4:30 p.m. to 5:30 p.m. during the evening period, and 11:30 a.m. to 12:30 p.m. during the Saturday midday peak period. The 2025 existing traffic volumes are shown in Figure 2.

4.1.3 Seasonal Adjustment

SLR researched data from MassDOT to establish if any seasonal adjustment to the traffic counts was necessary. We researched and used MassDOT’s 2024 Weekday Seasonal Adjustment Factors, which is the latest data set available. The data compares monthly traffic volumes from different types of roadways across the Commonwealth to compare the traffic volumes from each individual month to the annual average. The composition of the study area falls within “U4-7 – Urban Arterials, and Collectors.” Counts within Group U4-7 collected during



the month of June are 10 percent higher than the average counted volume. To present conservative traffic volumes in this study, we made no reduction in the counted volumes. The Weekday Seasonal Adjustment Factors are included in Appendix B.

4.1.4 Vehicle Travel Speeds

NETC measured vehicle travel speeds at the ATR location at the time of the traffic count. The 85th percentile speed, meaning the speed at which 85 percent of the vehicles are at or below, is noted because of its importance in determining appropriate roadway speed limits. The speed data is shown in Table 4.

Table 4 – Vehicle Travel Speeds

Intersection	Posted Speed (MPH ^a)	85th Percentile Speed (MPH ^a)
Fort Hill Street, approximately midway between Bare Cove Park Drive and South Street		
Northbound	30	24
Southbound	30	28

a = Miles per hour
Note: 85th Percentile Speeds were averaged between the full 2 days of data collected.



5.0 Future No-Build (2032) Traffic Conditions

The Future No-Build (2032) Condition reflects a future scenario that incorporates anticipated traffic volume changes associated with other planned specific developments and planned infrastructure improvements that will affect travel patterns throughout the study area.

5.1 Proposed Background Developments

The traffic volumes associated with known, larger, or adjacent development projects can affect traffic patterns throughout the study area within the future analysis time horizon. We understand that a **Nine-Court Pickleball Facility** is proposed to be constructed adjacent to the project site, and a 100-unit senior housing development will be constructed at **100 Beal Street** in Hingham.

5.2 Background Growth

MassDOT records traffic volumes at various stations throughout the Commonwealth over multiple years to establish the growth rate and identify regional shifts in traffic. SLR researched MassDOT count stations in the vicinity of the study area, limiting the search to stations that included data for multiple years in order to determine a traffic volume trend and to calculate the growth rate. SLR used the previous 10-year data from MassDOT count station #7002, located on South Street west of Main Street approximately 0.75 miles northeast of the intersection of Fort Hill Street at Bare Cove Park Drive, to calculate the background traffic growth. The volume trend at this count station indicates an average annual growth rate of approximately 0.5 percent over the past 10 years. To be extremely conservative and also include the additional traffic associated with the Proposed Pickleball Facility and the 100-Unit senior housing development, we used an annual background traffic growth factor of 1 percent, which is also consistent with recent MassDOT projects in eastern Massachusetts.

5.3 No-Build Traffic Volumes

SLR used the 2025 existing traffic volumes as the baseline for projecting traffic volumes to the future 2032 condition. To determine the future 2032 condition, the following steps are included:

- Project existing 2025 traffic volumes 7 years in the future to the horizon year (2032) using the annual background traffic growth factor.
- Analyze the study area location to determine future operational statistics.

Figure 3 shows the 2032 Future No-Build Traffic Volumes used in the traffic analysis.



6.0 Future Build (2032) Traffic Conditions

6.1 Proposed Hingham Center for Active Living Development

The proposed facility is expected to be approximately 28,000 SF in size, roughly five times the size of the existing center located at 224 Central Street in Hingham, Massachusetts.

The site is located at the end of Bare Cove Park Drive across from the South Shore Model Railway Club & Museum and adjacent to the Bare Cove Fire Museum. The area identified for development is approximately 5.4 acres.

6.1.1 Site Access

The site will be accessed by two entry driveways:

- The first driveway (easterly driveway) will be a right-in/right-out two-way 35-foot driveway with two 12-foot lanes and a 10-foot median island between). This driveway will allow vehicle access to a drop-off area and parking for staff and visitors.
- The second driveway (westerly driveway) will be a two-way 24-foot full-access driveway.

6.2 Proposed Trip Generation

SLR based the trip generation rates for the proposed HCAL on Land Use Code (LUC) 495 (Recreational Community Center) from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, to estimate vehicle trip rates for the proposed HCAL. Table 5 presents the site trips associated with the proposed HCAL during the weekday morning, weekday afternoon, and Saturday midday peak periods.

Table 5 – Proposed Trip Generation

Time Period		Center with 28,000 SF GFA (LUC 495)
Weekday	Entering	403
	Exiting	404
	Total	807
Weekday a.m.	Entering	35
	Exiting	18
	Total	53
Weekday p.m.	Entering	50
	Exiting	57
	Total	107
Saturday Midday	Entering	16
	Exiting	14
	Total	30



Based on ITE *Trip Generation*, the proposed HCAL with 28,000-foot gross floor area (GFA) would result in approximately 807 new daily trips (403 trips in and 404 trips out), with 53 trips (35 trips in and 18 trips out) during the weekday morning peak hour, 107 trips (50 trips in and 57 trips out) during the weekday afternoon peak hour, and 30 trips (16 trips in and 14 trips out) during the Saturday peak hour.

6.3 Trip Distribution, Diversion, and Assignment

The trips to/from the development were distributed and assigned to the surrounding roadway network based on the existing travel patterns at the study area intersections and logical travel routes. The trip distribution percentages specific to the project are shown in Figure 4.

In order to properly assess the effect of trips associated with the development, projected peak-hour trips generated by the development as described in Section 6.2 were then assigned to study intersections based on the trip distribution percentages.

6.4 Proposed 2032 Build Volumes

SLR added the corresponding trip assignment volumes to the 2032 No-Build Volumes to yield the 2032 Build Volumes. These volumes are representative of future 2032 conditions with the proposed development in place. The 2032 Build Volumes for the development are shown in Figure 6.

6.5 Parking Generation and Adequacy

SLR utilized the Town's Zoning Bylaws for Recreational Facility which requires 1 parking space per 3 users/people. Based upon a projected building occupancy of 420 people this facility will require 140 parking spaces. This approach reflects established practice in comparable community and senior center projects in other municipalities and has been positively received. When completed, the proposed parking lot will provide 140 parking spaces.

6.6 Sight Distance

Intersection Sight Distance (ISD) was evaluated for the proposed development. ISD is the length of the leg of the departure sight triangle along the major road in both directions for a vehicle stopped on the minor road waiting to depart. The critical departure sight triangles for the development driveway are for traffic approaching from either the left or right for left turns from the site driveways onto the Bare Cove Park Drive. The site distance evaluations for the driveways are shown in Table 6.

Bare Cove Park Drive in the study area is posted with a regulatory speed limit of 20 MPH, which was used for our analysis.



The available ISD for vehicles turning onto Bare Cove Park Drive at the intersections of both site driveways meets the minimum required standards.

Table 6 – Proposed Sight Distance Evaluation

Intersection	Posted Speed (MPH)	85th Percentile Speed (MPH)	Required Minimum (FT) ^{1,2}	Measured (FT)	Obstruction
Intersection Sight Distance: Looking to the left from the site driveways	20	-	225	250	n/a
Source: <i>A Policy on Geometric Design of Highways and Streets, AASHTO, Washington DC (2011)</i> ² Table 9-6. Design Intersection Sight Distance - Case B1, Left Turn from Stop					



7.0 Operations Analysis

7.1 Level of Service Criteria

Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream. Six LOS criteria are used to describe the quality of traffic flow for any type of facility controls. LOS A represents the best operating conditions, and LOS F represents the worst operating conditions. LOS D or better is generally considered acceptable LOS in an urban or suburban setting. SLR analyzed the LOS for the study intersections using *Synchro 8* software, which is based on the traffic operational analysis methodology of the *Highway Capacity Manual*¹ (HCM). The methodology for signalized intersections assesses the effects of signal type, timing, phasing, progression, vehicle mix, and geometrics on control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Table 7 summarizes the relationship between LOS and average control delay for signalized and unsignalized intersections.

Table 7 – Level of Service Criteria

Signalized Intersections		Unsignalized Intersections		
Level of Service	Control Delay (seconds/vehicle)	Level of Service by Volume-to-Capacity (v/c) Ratio		Control Delay (seconds/vehicle)
		v/c ≤ 1.0	v/c > 1.0	
A	0 to 10	A	F	0 to 10
B	>10 to 20	B	F	>10 to 15
C	>20 to 35	C	F	>15 to 25
D	>35 to 55	D	F	>25 to 35
E	>55 to 80	E	F	>35 to 50
F	>80	F	F	>50

Source: 2010 *Highway Capacity Manual*, Transportation Research Board, Washington D.C. 2010

7.2 Capacity Analysis

SLR performed traffic analyses to evaluate traffic operations for the 2025 Existing Conditions, 2032 No-Build Conditions, and 2032 Build Conditions during the weekday morning, weekday afternoon, and Saturday midday peak hours at the study intersections. The analyses determine the volume-to-capacity (v/c) ratio, vehicle delay, LOS, and the 50th/95th percentile vehicle queues.

¹ *Highway Capacity Manual*, 2010 Edition, Transportation Research Board (TRB), Washington, D.C.



7.3 2025 Existing Capacity Analysis

SLR analyzed the 2025 Existing Conditions traffic operations at the study intersections based on the existing traffic counts. The LOS summaries are shown in Tables 8A and 8B. The analysis worksheets are provided in Appendix E.

Table 8A – Level of Service Summary – 2025 Existing Conditions - Weekday

Location	Direction / Movement	Weekday Morning Peak Hour					Weekday Evening Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	0.40	53.0	F	-	43	0.16	31.0	D	-	14
	Bare Cove Park Dr EB-R	0.40	53.0	F	-	43	0.16	31.0	D	-	14
	T Parking Dr WB-LTR	0.06	31.2	D	-	6	0.55	43.9	E	-	72
	Fort Hill St NB-L	0.02	8.9	A	-	1	0.01	9.3	A	-	0
	Fort Hill St NB-TR	0.48	0.0	A	-	0	0.39	0.0	A	-	0
	Fort Hill S SB-L	0.02	9.5	A	-	1	0.0	8.8	A	-	0
	Fort Hill St SB-TR	0.37	0.0	A	-	0	0.42	0.0	A	-	0
Fort Hill Street at South Street and West Street	South St WB-LR	0.70	44.9	D	105	134	0.66	43.0	D	97	128
	Fort Hill SNB-T	0.81	41.2	D	228	#520	0.69	33.8	C	190	#402
	Fort Hill St NB-R	0.44	7.6	A	14	89	0.34	5.8	A	3	51
	West St SB- L	0.16	41.6	D	10	32	0.20	42.2	D	13	40
	West St SB- T	0.56	24.8	C	169	257	0.81	33.9	C	278	#502
	Total	0.81	29.9	C			0.81	30.7	C		

Table 8B – LOS – 2025 Existing Conditions - Saturday

Location	Direction / Movement ¹	Saturday Peak Hour				
		V/C ²	Delay ³	LOS	50th Q	95th Q
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	2.12	584.4	F	-	571
	Bare Cove Park Dr EB-R	2.12	584.4	F	-	571
	T Parking Dr WB-LTR	0.00	0.0	-	-	-
	Fort Hill St NB-L	0.05	9.7	A	-	4
	Fort Hill St NB-TR	0.38	0.0	A	-	0
	Fort Hill S SB-L	0.00	8.8	A	-	0
	Fort Hill St SB-TR	0.44	0.0	A	-	0
Fort Hill Street at South Street and West Street	South St WB-LR	0.84	55.0	D	161	195
	Fort Hill SNB-T	0.79	40.6	D	238	#454
	Fort Hill St NB-R	0.47	7.4	A	15	74
	West St SB- L	0.15	42.1	D	10	31
	West St SB- T	0.73	31.4	C	254	378
	Total	0.84	33.5	C		



As shown in Tables 8A and 8B, under existing conditions, the study area intersections generally operate at acceptable LOS during the a.m., p.m., and Saturday peak hours, with the exception of the Bare Cove Park Drive and T Parking Lot Driveway approaches, which operate at failing LOS (LOS E and F). All other individual intersection approaches operate at LOS D or better during the a.m., p.m., and Saturday peak hours.

7.4 2032 No-Build Capacity Analysis

SLR analyzed the 2032 No-Build Conditions traffic operations at the study intersections. The 2032 No-Build Condition represents future 2032 conditions without the proposed HCAL development. The LOS summaries are shown in Tables 9A and 9B. The analysis worksheets are provided in Appendix E.

Table 9A – Level of Service Summary – 2032 Future No-Build Conditions

Location	Direction / Movement ¹	Weekday Morning Peak Hour					Weekday Evening Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	0.54	76.7	F	-	62	0.23	40.8	E	-	21
	Bare Cove Park Dr EB-R	0.54	76.7	F	-	62	0.23	40.8	E	-	21
	T Parking Dr WB-LTR	0.10	37.6	E	-	8	0.73	73.5	F	-	110
	Fort Hill St NB-L	0.02	9.1	A	-	2	0.01	9.6	A	-	0
	Fort Hill St NB-TR	0.51	0.0	A	-	0	0.41	0.0	A	-	0
	Fort Hill S SB-L	0.02	9.7	A	-	2	0.0	9.0	A	-	0
	Fort Hill St SB-TR	0.40	0.0	A	-	0	0.44	0.0	A	-	0
Fort Hill Street at South Street and West Street	South St WB-LR	0.73	46.3	D	113	144	0.69	44.1	D	105	136
	Fort Hill SNB-T	0.87	47.0	D	254	#566	0.74	36.5	D	211	#440
	Fort Hill St NB-R	0.48	8.7	A	21	106	0.37	6.8	A	9	60
	West St SB- L	0.17	42.1	D	11	33	0.22	42.8	D	14	42
	West St SB- T	0.61	26.2	C	187	278	0.87	39.3	D	312	#556
	Total	0.87	32.8	C			0.87	33.9	C		



Table 9B – LOS – 2032 Future No-Build - Saturday

Location	Direction / Movement ¹	Saturday Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	2.90	948.3	F		703
	Bare Cove Park Dr EB-R	2.90	948.3	F		703
	T Parking Dr WB-LTR	-	-	-		-
	Fort Hill St NB-L	0.06	10.0	B		4
	Fort Hill St NB-TR	0.41	0.0	A		0
	Fort Hill S SB-L	0.00	9.0	A		0
	Fort Hill St SB-TR	0.47	0.0	A		0
Fort Hill Street at South Street and West Street	South St WB-LR	0.88	58.8	E	176	210
	Fort Hill SNB-T	0.86	45.8	D	261	#499
	Fort Hill St NB-R	0.51	8.7	A	24	92
	West St SB- L	0.16	42.5	D	11	33
	West St SB- T	0.79	34.9	C	280	#448
	Total	0.88	37.1	D		

Tables 9A and 9B show that under the 2032 No-Build conditions, all intersections will continue to operate at acceptable LOS during a.m., p.m., and Saturday peak hours, with again the exception of the Bare Cove Park Drive and T Parking Lot Driveway approaches, which will operate at failing LOS (LOS E and F). All other individual approaches at the intersections will operate at LOS D or better.

7.5 2032 Build Capacity Analysis

SLR analyzed the 2032 Build Conditions traffic operations at the study intersections. The 2032 Build Conditions represents the 2032 conditions with the proposed development in place. The LOS summaries are shown in Tables 10A and 10B. The analysis worksheets are provided in Appendix E.



Table 10A – Level of Service Summary – 2032 Future Build Conditions

Location	Direction / Movement	Weekday Morning Peak Hour					Weekday Evening Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Drop-off Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-TR	0.02	0.0	A	-	0	0.03	0.0	A	-	0
	Driveway SB-R	0.01	8.5	A	-	1	0.04	8.6	A	-	3
Parking Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-LR	0.02	8.8	A	-	2	0.06	8.7	A	-	5
	Driveway SB-T	0.00	0.0	A	-	0	0.01	0.0	A	-	0
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	0.84	118.4	F	-	114	1.09	150.5	F	-	168
	Bare Cove Park Dr EB-R	0.84	118.4	F	-	114	1.09	150.5	F	-	168
	T Parking Dr WB-LTR	0.11	41.8	E	-	9	0.93	130.7	F	-	151
	Fort Hill St NB-L	0.04	9.3	A	-	3	0.04	9.9	A	-	3
	Fort Hill St NB-TR	0.51	0.0	A	-	0	0.41	0.0	A	-	0
	Fort Hill S SB-L	0.02	9.7	A	-	2	0.0	9.0	A	-	0
	Fort Hill St SB-TR	0.41	0.0	A	-	0	0.46	0.0	A	-	0
Fort Hill Street at South Street and West Street	South St WB-LR	0.75	47.5	D	119	150	0.70	44.8	D	110	142
	Fort Hill SNB-T	0.89	48.5	D	262	#572	0.78	38.8	D	227	#469
	Fort Hill St NB-R	0.48	9.0	A	23	110	0.39	7.5	A	13	67
	West St SB- L	0.17	42.1	D	11	33	0.22	43.0	D	15	42
	West St SB- T	0.62	26.8	C	196	287	0.90	42.6	D	329	#577
	Total	0.89	33.7	C			0.90	36.0	D		



Table 10B – LOS – 2032 Future Build Conditions- Saturday

Location	Direction / Movement	Saturday Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q
Drop-off Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-TR	0.01	0.0	A	-	0
	Driveway SB-R	0.01	8.4	A	-	1
Parking Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-LR	0.02	8.9	A	-	1
	Driveway SB-T	0.00	0.0	A	-	0
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	3.28	>900.1	F		>900
	Bare Cove Park Dr EB-R	3.28	>900.1	F		>900
	T Parking Dr WB-LTR	-	-	-	-	-
	Fort Hill St NB-L	0.07	10.1	B		5
	Fort Hill St NB-TR	0.41	0.0	A		0
	Fort Hill S SB-L	0.00	9.0	A		0
	Fort Hill St SB-TR	0.48	0.0	A		0
Fort Hill Street at South Street and West Street	South St WB-LR	0.88	60.0	E	178	213
	Fort Hill SNB-T	0.86	46.7	D	265	#505
	Fort Hill St NB-R	0.51	8.9	A	26	95
	West St SB- L	0.16	42.5	D	11	33
	West St SB- T	0.80	35.4	D	284	#455
	Total	0.88	37.8	D		

As shown in Tables 10A and 10B, under the 2032 Build, all intersections will continue to operate at acceptable LOS during a.m., p.m., and Saturday peak hours, with all individual approaches at the intersections, with the exception of Bare Cove Park Drive and the T parking lot driveway during the morning and evening peak hours, operating at LOS D or better.

A comparison of the delay, LOS, and queue length indicated in Tables 9A and 9B (2032 Future No Build Conditions) and Tables 10A and 10B (2032 Future Build Conditions) reveals that the proposed development has very little or no impact to the studied intersections.



8.0 Mitigation

The Bare Cove Park Drive approach at Fort Hill Street currently operates at LOS F and is projected to remain at LOS F under Future (2032) No Build and Build conditions. As a potential mitigation measure, SLR evaluated the intersection as signalized.

Given the proximity of the Fort Hill Street/Bare Cove Park Drive and Fort Hill Street/South Street/West Street intersections, the signals were modeled as a coordinated system to assess operational improvements, particularly for the Bare Cove Park Drive and T Parking Drive approaches. LOS summaries are provided in Tables 11A and 11B, with detailed analysis worksheets in Appendix E.

Table 11A – LOS Summary – 2032 Future Build Conditions with Mitigation

Location	Direction / Movement	Weekday Morning Peak Hour					Weekday Evening Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q	V/C	Delay	LOS	50th Q	95th Q
Drop-off Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-TR	0.02	0.0	A	-	0	0.03	0.0	A	-	0
	Driveway SB-R	0.01	8.5	A	-	1	0.04	8.6	A	-	3
Parking Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-LR	0.02	8.8	A	-	2	0.06	8.7	A	-	5
	Driveway SB-T	0.00	0.0	A	-	0	0.01	0.0	A	-	0
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	0.18	23.3	C	16	33	0.18	23.5	C	17	37
	Bare Cove Park Dr EB-R	0.10	0.6	A	0	0	0.15	3.4	A	0	11
	T Parking Dr WB-LTR	0.03	0.2	A	0	0	0.31	10.6	B	10	0
	Fort Hill St NB-L	0.03	7.0	A	5	22	0.03	8.4	A	4	20
	Fort Hill St NB-TR	0.85	21.9	C	208	#627	0.68	15.4	B	121	#428
	Fort Hill S SB-L	0.09	5.7	A	2	m6	0.01	4.0	A	0	m1
	Fort Hill St SB-TR	0.61	9.2	A	135	166	0.64	7.5	A	124	162
	Total	0.85	15.7	B			0.68	11.2	B		
Fort Hill Street at South Street and West Street	South St WB-LR	0.68	34.6	C	90	113	0.64	33.3	C	86	108
	Fort Hill SNB-T	0.47	7.0	A	52	m115	0.44	8.9	A	57	132
	Fort Hill St NB-R	0.31	1.6	A	0	m15	0.25	2.3	A	0	16
	West St SB- L	0.14	32.5	C	9	27	0.18	32.5	C	11	34
	West St SB- T	0.36	6.7	A	72	127	0.52	8.2	A	118	236
	Total	0.85	10.2	B			0.68	11.1	B		



Table 11B – LOS – 2032 Build with Mitigation

Location	Direction / Movement	Saturday Peak Hour				
		V/C	Delay	LOS	50th Q	95th Q
Drop-off Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-TR	0.01	0.0	A	-	0
	Driveway SB-R	0.01	8.4	A	-	1
Parking Driveway at Bare Cove Park Drive	Bare Cove Park Dr WB-LR	0.02	8.9	A	-	1
	Driveway SB-T	0.00	0.0	A	-	0
Fort Hill Street at Bare Cove Park Drive	Bare Cove Park Dr EB-LT	0.66	35.4	D	72	112
	Bare Cove Park Dr EB-R	0.34	6.5	A	0	26
	T Parking Dr WB-LTR	-	-	-	-	-
	Fort Hill St NB-L	0.04	8.8	A	7	26
	Fort Hill St NB-TR	0.68	15.7	B	128	#387
	Fort Hill S SB-L	0.02	4.2	A	1	m2
	Fort Hill St SB-TR	0.87	21.0	C	378	#518
	Total	0.87	19.2	B		
Fort Hill Street at South Street and West Street	South St WB-LR	0.82	42.7	D	129	161
	Fort Hill SNB-T	0.45	10.0	B	81	156
	Fort Hill St NB-R	0.32	2.5	A	6	m32
	West St SB- L	0.16	33.4	C	9	27
	West St SB- T	0.44	8.4	A	106	154
	Total	0.87	15.0	B		

As shown in Tables 11A and 11B, under the 2032 Build with Mitigation measures, both intersections will operate at acceptable LOS during a.m. and p.m. peak hours, with all individual approaches at the intersections operating at LOS C or better. It should be noted, however, that a detailed signal warrant analysis will have to be conducted prior to local/state approval for the design and installation of a traffic signal.

To further address both existing transportation conditions and future needs, the project team proposes a comprehensive package of mitigation strategies under the following two categories:

- Transportation Demand Management (TDM)
- Short-term impacts and construction management

8.1 Transportation Demand Management

The project is committed to implementing TDM measures to reduce dependence on automobiles. TDM will be facilitated by the nature and location of the project.



A supply of transit information (schedules, maps, and fare information) will be kept on site and made available to the patrons of the project site. The project is prepared to take advantage of the good transit access in marketing the project site to future patrons by working with them to implement the following TDM measures to encourage the use of nonvehicular modes of travel.

TDM measures for the project may include but are not limited to the following:

- **Onsite Orientation and Information Packages:** Orientation packets will be provided to new patrons by the HCAL. The packets will contain information on available transportation choices, including transit routes and schedules.
- **Electric Vehicle (EV) Charging Stations:** Seventeen standard spaces will have EV chargers installed, with an additional 25 spaces having conduit ready. Two accessible spaces will have EV chargers installed, with an additional two spaces having conduit ready.
- **Bicycle Incentives and Amenities:** To encourage bicycling as an alternative mode of transportation, secure bicycle storage will be provided for the employees of the Center. Bicycle racks for the general public and visitors will be placed near the building entrance.
- **Information Dissemination and Website:** The website will include transportation-related information for employees and visitors.

8.2 Short-Term Impacts and Construction Management

Development on tight sites, combined with concerns for avoiding traffic congestion and hazards to pedestrian and vehicular traffic, has led to increasing requirements for sophisticated construction period traffic management plans, which usually need to be approved by the municipality as a precondition to the issuance of a building permit for the development. The Construction Management Plans (CMP) will discuss and address the following in detail:

- Construction activity schedule
- Construction staging area
- Delivery schedule
- Pedestrian and public safety
- Perimeter protection
- Employee parking
- Material handling
- Truck routes
- Police details
- Utilities
- Construction noise
- Construction air quality
- Street cleaning and snow removal
- Rodent control
- Site dewatering

The CMP will also address the need for pedestrian detours, lane closures, and/or parking restrictions, if necessary, to accommodate a safe and secure work zone.

To minimize transportation impacts during the construction period, the following measures may be incorporated into the CMP:



- Construction workers are to be encouraged to use public transportation and/or carpool.
- A subsidy for MBTA passes may be considered for full-time employees.
- Secure spaces may be provided on site for workers' supplies and tools, so they do not have to be brought to the project site each day.



9.0 Summary

SLR has prepared a comprehensive assessment of safety, traffic circulation, and traffic access/egress associated with the New Hingham Center for Active Living (HCAL) Development project in Hingham, Massachusetts. The proposed facility is expected to be approximately 26,000 SF in size, roughly five times the size of the existing center located at 224 Central Street in Hingham, Massachusetts.

SLR examined the future conditions as well as site circulation with respect to the projected traffic volumes at the new HCAL. The project is anticipated to result in an increase in traffic volumes within the project area during the weekday morning, weekday evening, and Saturday midday peak hours, totaling approximately 53 additional trips (35 trips in and 18 trips out) during the weekday morning, 107 additional trips (50 trips in and 57 trips out) during the weekday evening, and approximately 30 additional trips (16 trips in and 14 trips out) during the Saturday midday peak hours.

Sightlines at the site driveways meet the minimum requirements, and the crash data within the project area do not indicate any safety concerns.

Finally, per the traffic analysis results, the program for the Hingham Center for Active Living Development project will have minimum traffic impacts on the intersections within the project area.



10.0 Closure

We hope this report is useful to you and the Town of Hingham. If you have any questions or need anything further, please do not hesitate to contact the undersigned.

Sincerely,

SLR International Corporation



Nick H. Havan, PE, PTOE, ENV SP
Principal Transportation Engineer

Attachments

Figures

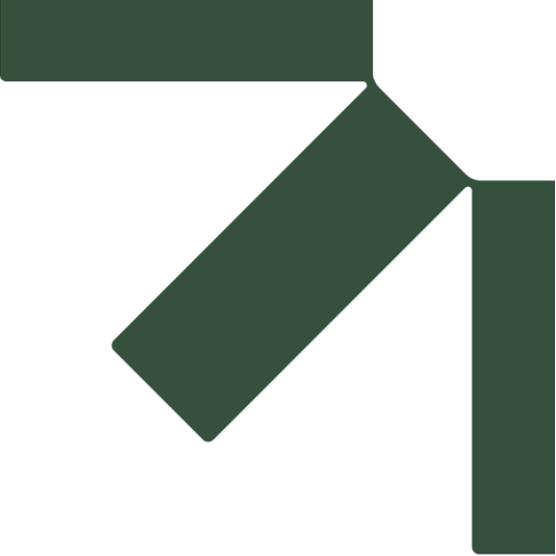
- Figure 1: Locus Map
- Figure 2: 2025 Existing Peak-Hour Volumes
- Figure 3: 2032 No-Build Peak-Hour Volumes
- Figure 4: Trip Distribution
- Figure 5: Trip Assignment
- Figure 6: 2032 Build Peak-Hour Volumes

Appendix

- A. Traffic Counts
- B. The Weekday Seasonal Adjustment Factors
- C. Crash Reports
- D. Public Transportation
- E. *Synchro* Analysis Worksheets

141.21840.00008.o925.rpt





Figures/Drawings

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

December 4, 2025



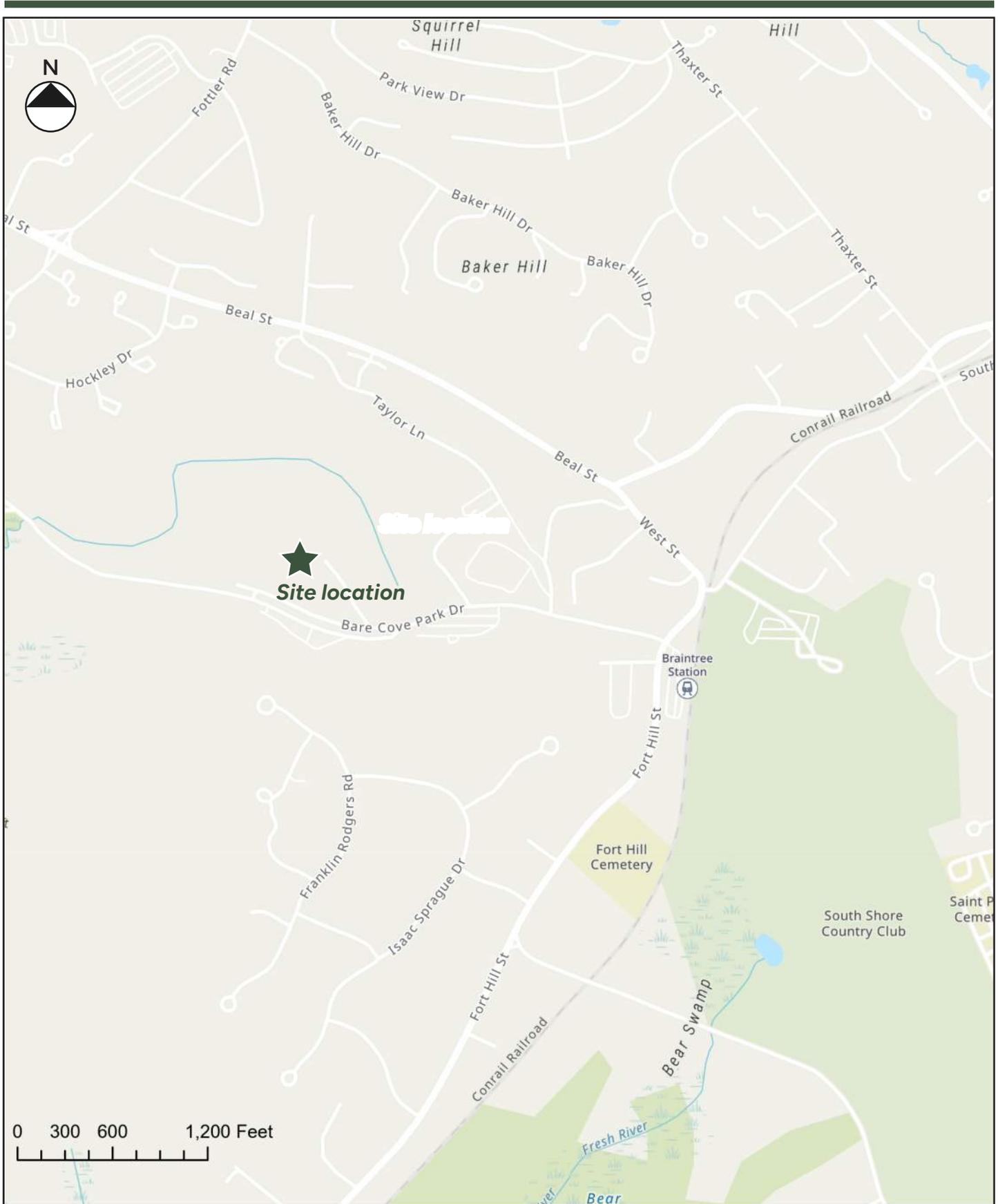


Figure 1
Locus Map



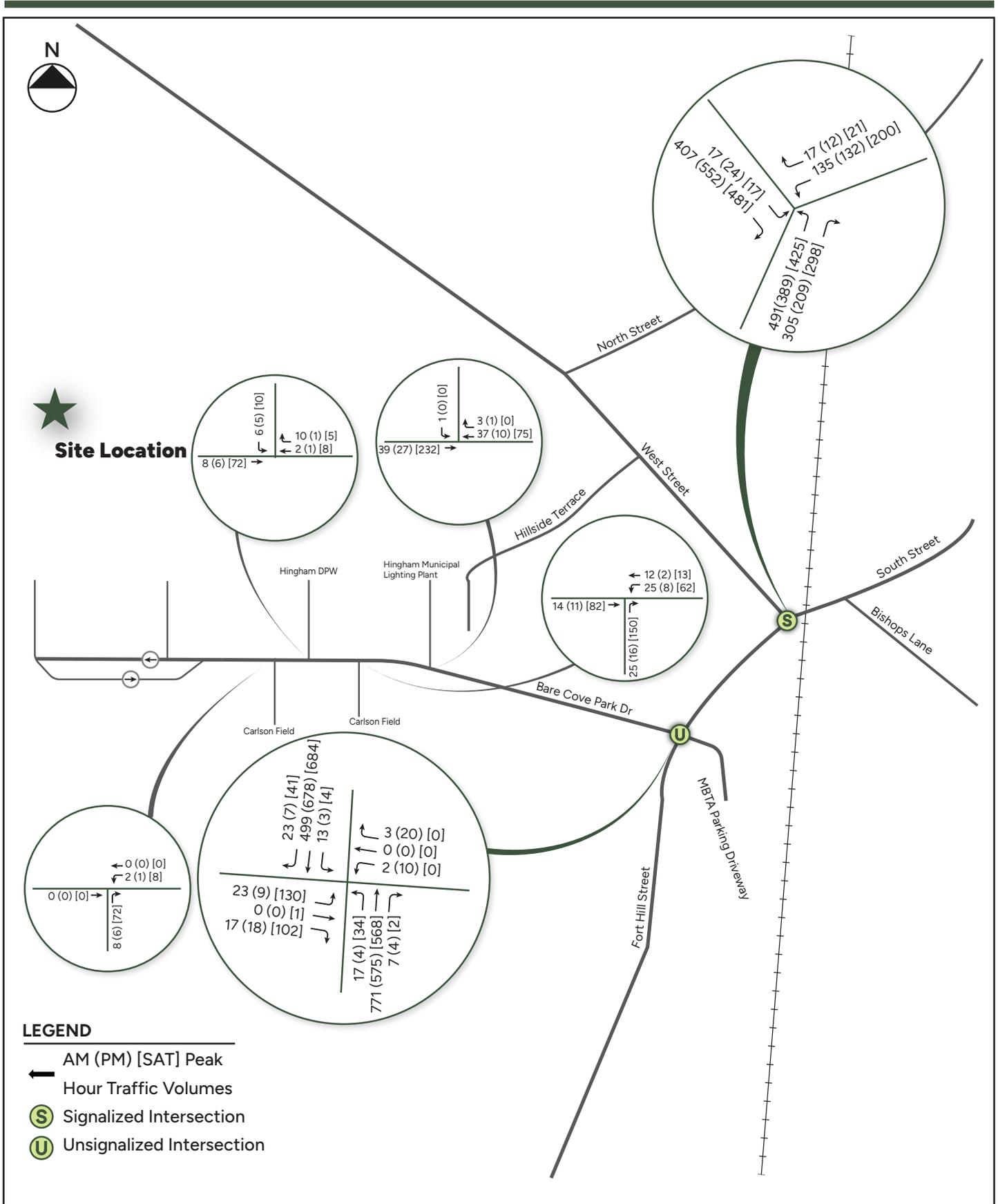


Figure 2
 2025 Existing Peak Hour Volumes



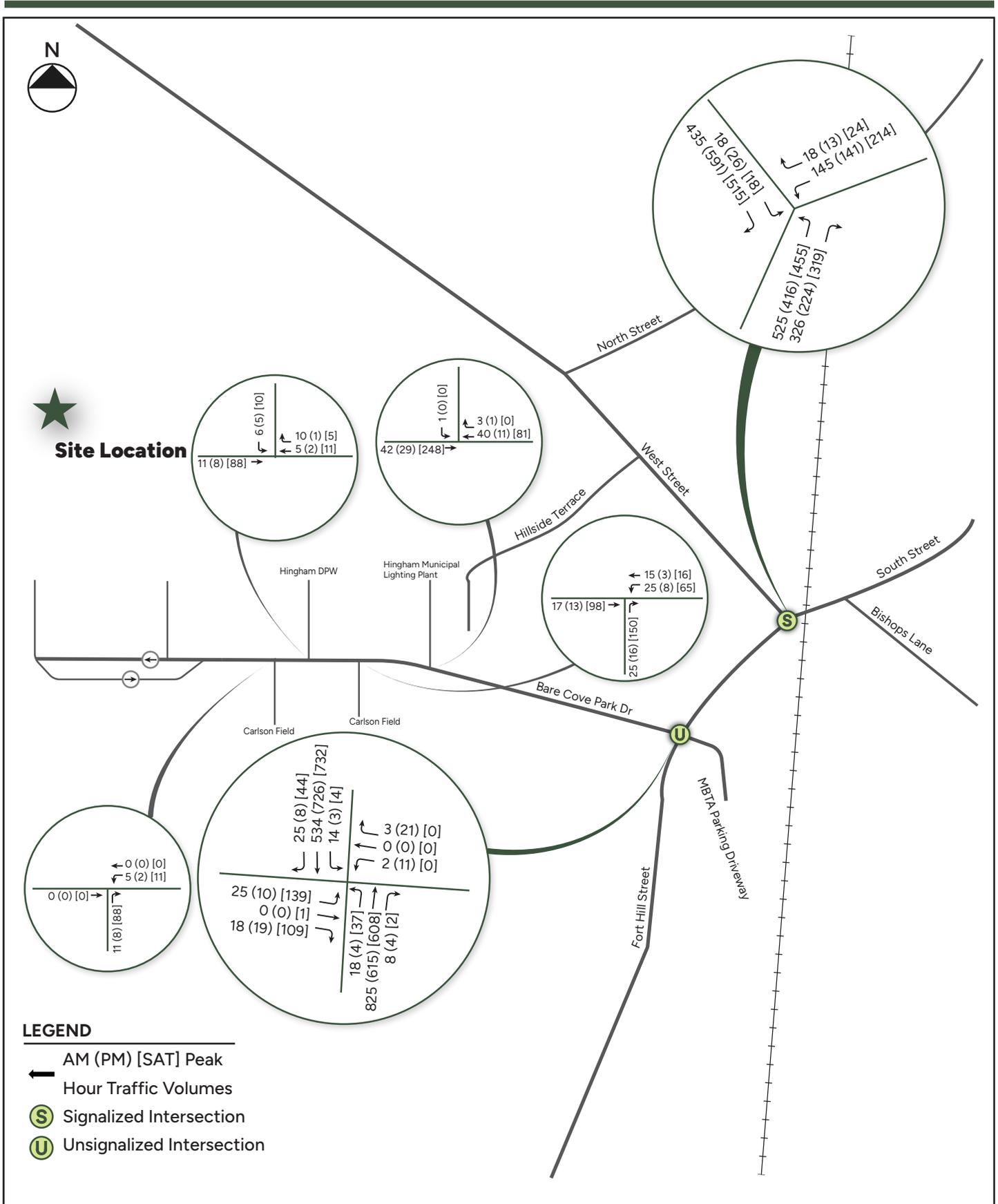


Figure 3
 2032 No-Build Peak Hour Volumes



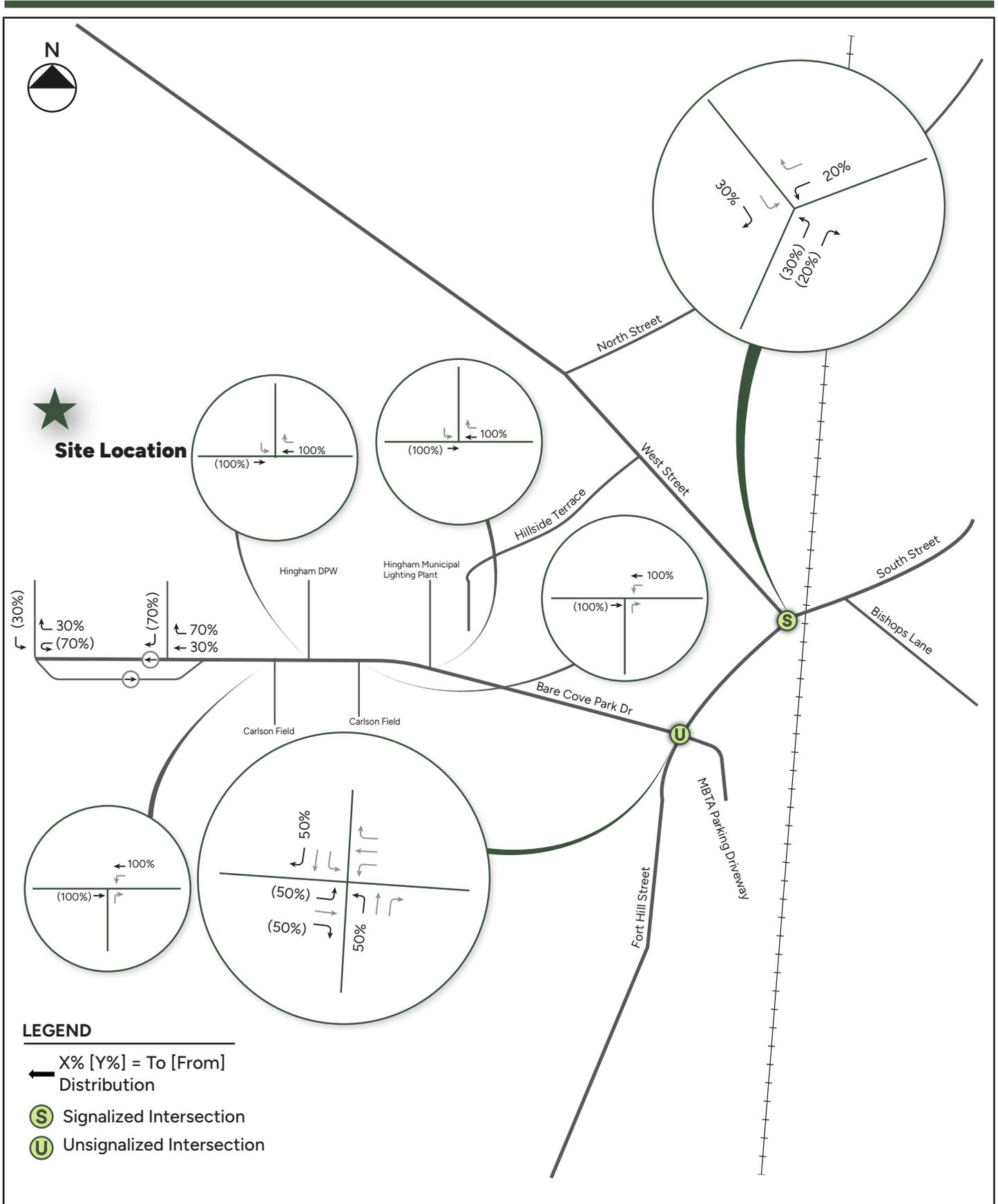


Figure 4
 Trip Distribution



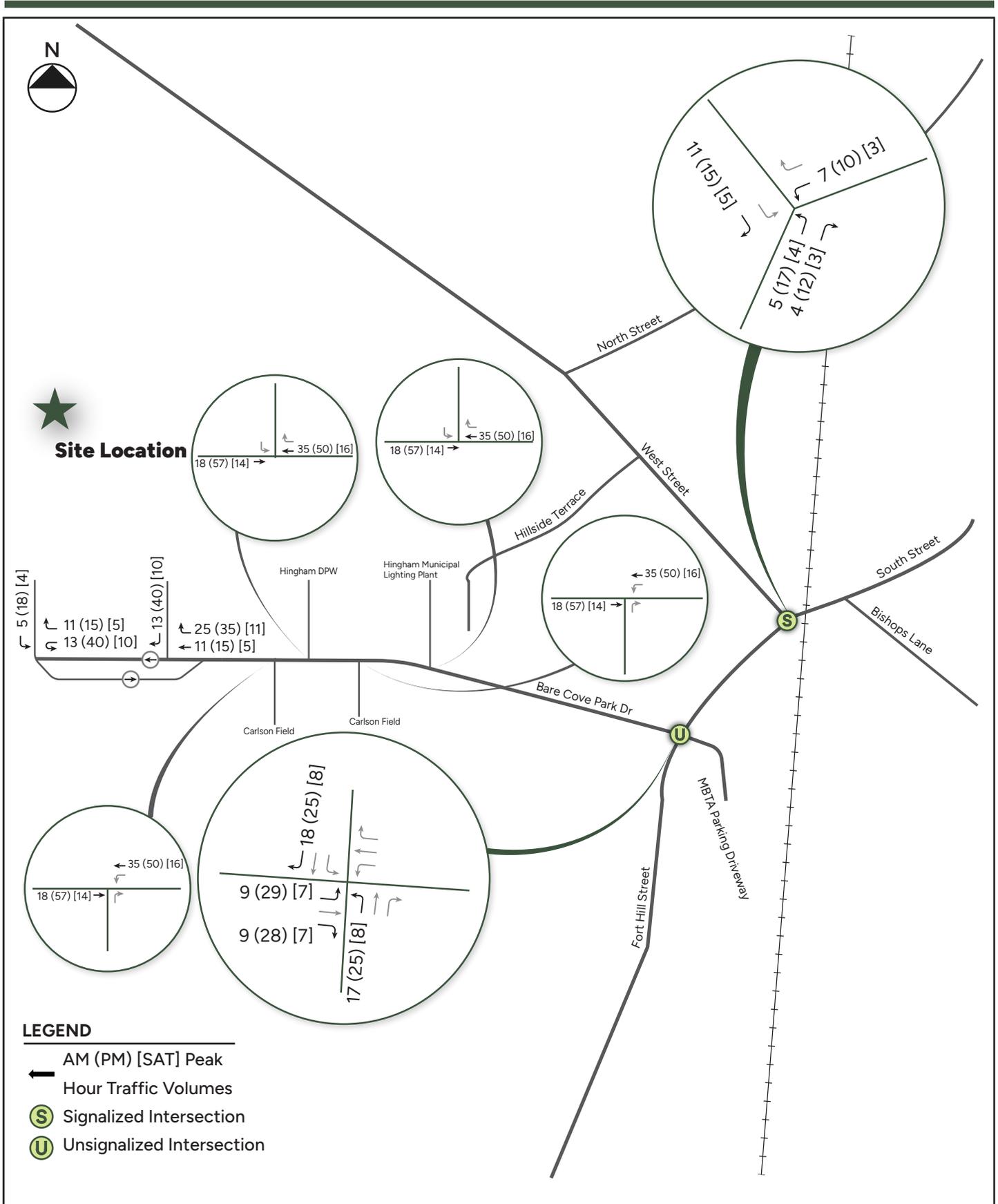


Figure 5
 Trip Assignment



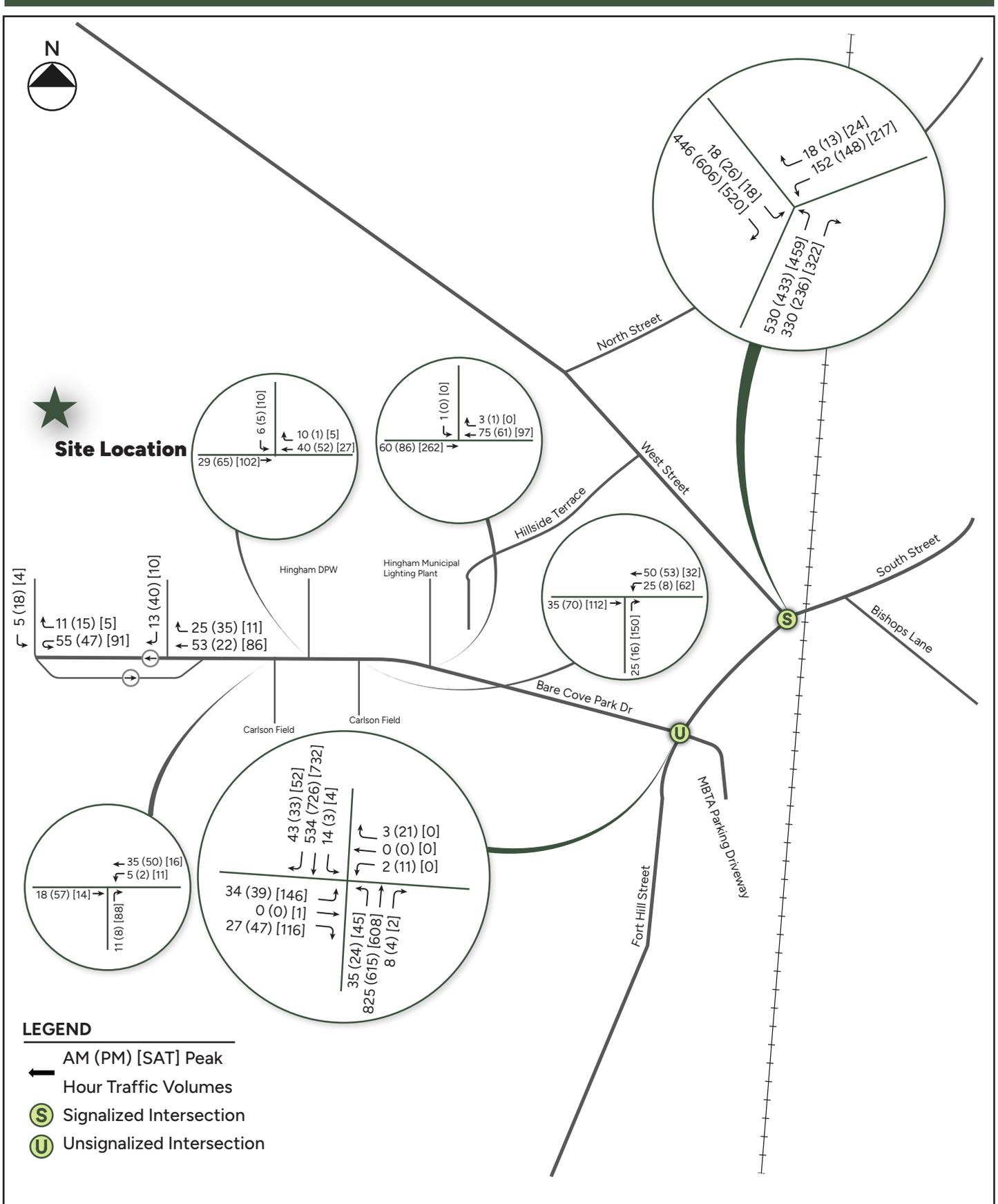
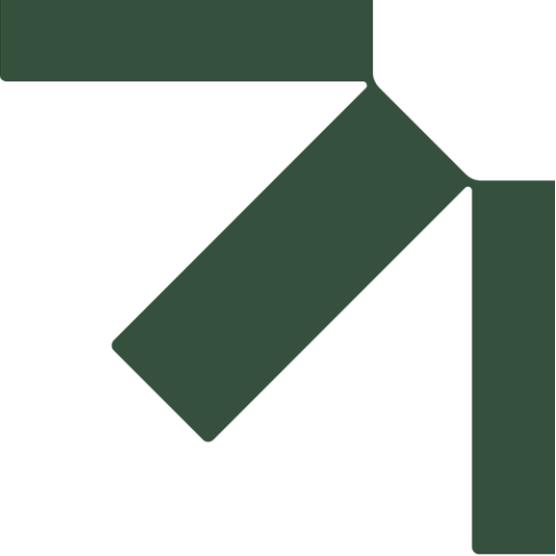


Figure 6
 2032 Build Peak Hour Volumes





Appendix A Traffic Counts

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

December 4, 2025

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

6/9/2025	Monday		Tuesday		Wednesday		Thursday		Friday		Weekday Average		Saturday		Sunday	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	29	17	31	18	*	*	*	*	30	18	*	*	*	*
1:00	*	*	9	10	25	28	*	*	*	*	17	19	*	*	*	*
2:00	*	*	13	9	11	8	*	*	*	*	12	8	*	*	*	*
3:00	*	*	18	8	16	7	*	*	*	*	17	8	*	*	*	*
4:00	*	*	60	20	60	20	*	*	*	*	60	20	*	*	*	*
5:00	*	*	131	78	177	105	*	*	*	*	154	92	*	*	*	*
6:00	*	*	429	250	401	234	*	*	*	*	415	242	*	*	*	*
7:00	*	*	814	388	599	286	*	*	*	*	706	337	*	*	*	*
8:00	*	*	877	429	658	322	*	*	*	*	768	376	*	*	*	*
9:00	*	*	726	374	552	284	*	*	*	*	639	329	*	*	*	*
10:00	*	*	670	337	555	279	*	*	*	*	612	308	*	*	*	*
11:00	*	*	670	643	565	542	*	*	*	*	618	592	*	*	*	*
12:00 PM	*	*	745	545	573	419	*	*	*	*	659	482	*	*	*	*
1:00	*	*	707	568	582	468	*	*	*	*	644	518	*	*	*	*
2:00	*	*	743	436	609	357	*	*	*	*	676	396	*	*	*	*
3:00	*	*	707	541	645	494	*	*	*	*	676	518	*	*	*	*
4:00	*	*	685	469	676	463	*	*	*	*	680	466	*	*	*	*
5:00	*	*	645	445	678	468	*	*	*	*	662	456	*	*	*	*
6:00	*	*	505	320	529	335	*	*	*	*	517	328	*	*	*	*
7:00	*	*	396	290	469	344	*	*	*	*	432	317	*	*	*	*
8:00	*	*	329	357	406	441	*	*	*	*	368	399	*	*	*	*
9:00	*	*	194	186	272	261	*	*	*	*	233	224	*	*	*	*
10:00	*	*	122	89	167	122	*	*	*	*	144	106	*	*	*	*
11:00	*	*	75	60	91	73	*	*	*	*	83	66	*	*	*	*
Total	0	0	10299	6869	9347	6378	0	0	0	0	9822	6625	0	0	0	0
Day	0		17168		15725		0		0		16447		0		0	
AM Peak			8:00	11:00	8:00	11:00					8:00	11:00				
Volume			877	643	658	542					768	592				
PM Peak			12:00 PM	1:00	5:00	3:00					4:00	1:00				
Volume			745	568	678	494					680	518				
Comb Total	0		17168		15725		0		0		16447		0		0	
ADT	ADT: 16,446		AADT: 16,446													

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: NB

6/10/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	24	4	0	1	0	0	0	0	0	0	0	0	29
1:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:00	0	11	0	1	0	1	0	0	0	0	0	0	0	13
3:00	0	13	3	0	0	2	0	0	0	0	0	0	0	18
4:00	0	47	7	2	2	2	0	0	0	0	0	0	0	60
5:00	0	92	30	0	4	5	0	0	0	0	0	0	0	131
6:00	0	317	51	8	32	16	2	2	1	0	0	0	0	429
7:00	0	621	71	29	44	32	2	11	3	1	0	0	0	814
8:00	0	665	83	38	40	23	2	19	3	2	2	0	0	877
9:00	0	518	110	18	32	39	0	8	0	0	0	0	1	726
10:00	0	506	89	12	36	23	0	3	1	0	0	0	0	670
11:00	0	503	82	16	38	24	2	2	2	1	0	0	0	670
12:00 PM	0	687	21	14	7	12	0	3	0	0	0	0	1	745
1:00	0	698	4	2	3	0	0	0	0	0	0	0	0	707
2:00	0	729	2	7	3	1	0	0	1	0	0	0	0	743
3:00	0	568	67	27	19	16	0	5	5	0	0	0	0	707
4:00	0	540	77	22	21	13	0	10	1	1	0	0	0	685
5:00	0	520	80	16	17	9	0	2	0	1	0	0	0	645
6:00	0	404	58	8	16	15	0	3	0	1	0	0	0	505
7:00	0	313	56	2	11	9	0	2	2	0	0	0	1	396
8:00	0	278	32	3	8	7	0	0	0	0	0	0	0	328
9:00	0	158	23	0	3	10	0	0	0	0	0	0	0	194
10:00	0	104	13	0	4	1	0	0	0	0	0	0	0	122
11:00	0	59	10	0	3	3	0	0	0	0	0	0	0	75
Total	0	8383	974	225	344	263	8	70	19	7	2	0	3	10298
Percent	0.0%	81.4%	9.5%	2.2%	3.3%	2.6%	0.1%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak		8:00	9:00	8:00	7:00	9:00	6:00	8:00	7:00	8:00	8:00		9:00	8:00
	*	665	110	38	44	39	2	19	3	2	2	*	1	877
PM Peak		2:00	5:00	3:00	4:00	3:00		4:00	3:00	4:00			12:00 PM	12:00 PM
	*	729	80	27	21	16	*	10	5	1	*	*	1	745

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: NB

6/11/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	26	4	0	1	0	0	0	0	0	0	0	0	31
1:00	0	22	3	0	0	0	0	0	0	0	0	0	0	25
2:00	0	9	0	1	0	1	0	0	0	0	0	0	0	11
3:00	0	12	3	0	0	2	0	0	0	0	0	0	0	17
4:00	0	47	7	2	2	2	0	0	0	0	0	0	0	60
5:00	0	124	41	0	5	7	0	0	0	0	0	0	0	177
6:00	0	296	48	7	30	15	2	2	1	0	0	0	0	401
7:00	0	457	52	21	32	24	1	8	2	1	0	0	0	598
8:00	0	499	62	29	30	17	2	14	2	2	2	0	0	659
9:00	0	394	84	14	24	30	0	6	0	0	0	0	1	553
10:00	0	419	74	10	30	19	0	2	1	0	0	0	0	555
11:00	0	424	69	13	32	20	2	2	2	1	0	0	0	565
12:00 PM	0	528	16	11	5	9	0	2	0	0	0	0	1	572
1:00	0	575	3	2	2	0	0	0	0	0	0	0	0	582
2:00	0	598	2	6	2	1	0	0	1	0	0	0	0	610
3:00	0	518	61	24	17	15	0	5	5	0	0	0	0	645
4:00	0	533	76	22	21	13	0	10	1	1	0	0	0	677
5:00	0	548	84	16	17	10	0	2	0	1	0	0	0	678
6:00	0	423	61	8	17	15	0	3	0	1	0	0	0	528
7:00	0	371	67	2	14	10	0	2	2	0	0	0	1	469
8:00	0	345	40	3	10	8	0	0	0	0	0	0	0	406
9:00	0	221	33	0	4	15	0	0	0	0	0	0	0	273
10:00	0	141	18	0	6	2	0	0	0	0	0	0	0	167
11:00	0	71	12	0	4	4	0	0	0	0	0	0	0	91
Total	0	7601	920	191	305	239	7	58	17	7	2	0	3	9350
Percent	0.0%	81.3%	9.8%	2.0%	3.3%	2.6%	0.1%	0.6%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak		8:00	9:00	8:00	7:00	9:00	6:00	8:00	7:00	8:00	8:00		9:00	8:00
	*	499	84	29	32	30	2	14	2	2	2	*	1	659
PM Peak		2:00	5:00	3:00	4:00	3:00		4:00	3:00	4:00			12:00 PM	5:00
	*	598	84	24	21	15	*	10	5	1	*	*	1	678
Grand Total	0	15984	1894	416	649	502	15	128	36	14	4	0	6	19648
Percent	0.0%	81.4%	9.6%	2.1%	3.3%	2.6%	0.1%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: SB

6/10/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	15	1	1	0	0	0	0	0	0	0	0	0	17
1:00	0	5	4	0	1	0	0	0	0	0	0	0	0	10
2:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
3:00	0	4	2	0	2	0	0	0	0	0	0	0	0	8
4:00	0	16	3	0	1	0	0	0	0	0	0	0	0	20
5:00	0	60	16	0	2	0	0	0	0	0	0	0	0	78
6:00	0	181	47	5	13	0	0	2	1	0	1	0	0	250
7:00	0	303	56	7	17	1	1	2	0	0	1	0	0	388
8:00	0	312	72	19	18	0	0	5	2	1	0	0	0	429
9:00	0	266	75	13	15	0	0	5	0	0	0	0	0	374
10:00	1	229	69	5	25	1	0	7	0	0	0	0	0	337
11:00	2	441	134	8	41	3	0	12	2	0	0	0	0	643
12:00 PM	0	387	109	19	22	0	0	8	0	0	0	0	0	545
1:00	2	385	117	9	43	2	0	11	0	0	0	0	0	569
2:00	1	299	91	6	28	2	0	8	1	0	0	0	0	436
3:00	0	417	92	13	13	0	0	3	0	0	3	0	0	541
4:00	0	352	81	9	22	1	0	3	0	0	1	0	0	469
5:00	1	345	71	7	18	1	0	2	0	0	0	0	0	445
6:00	0	241	57	4	18	0	0	0	0	0	0	0	0	320
7:00	0	233	42	1	13	0	0	1	0	0	0	0	0	290
8:00	1	294	55	1	6	0	0	0	0	0	0	0	0	357
9:00	0	156	25	0	5	0	0	0	0	0	0	0	0	186
10:00	0	75	14	0	0	0	0	0	0	0	0	0	0	89
11:00	0	53	6	0	1	0	0	0	0	0	0	0	0	60
Total	8	5077	1240	127	324	11	1	69	6	1	6	0	0	6870
Percent	0.1%	73.9%	18.0%	1.8%	4.7%	0.2%	0.0%	1.0%	0.1%	0.0%	0.1%	0.0%	0.0%	
AM Peak	11:00	11:00	11:00	8:00	11:00	11:00	7:00	11:00	8:00	8:00	6:00			11:00
	2	441	134	19	41	3	1	12	2	1	1	*	*	643
PM Peak	1:00	3:00	1:00	12:00	1:00	1:00		1:00	2:00		3:00			1:00
	2	417	117	19	43	2	*	11	1	*	3	*	*	569

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: SB

6/11/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	16	1	1	0	0	0	0	0	0	0	0	0	18
1:00	0	14	11	0	3	0	0	0	0	0	0	0	0	28
2:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
3:00	0	3	2	0	2	0	0	0	0	0	0	0	0	7
4:00	0	16	3	0	1	0	0	0	0	0	0	0	0	20
5:00	0	80	22	0	3	0	0	0	0	0	0	0	0	105
6:00	0	169	44	5	12	0	0	2	1	0	1	0	0	234
7:00	0	222	42	5	12	1	1	2	0	0	1	0	0	286
8:00	0	234	54	14	13	0	0	4	2	1	0	0	0	322
9:00	0	202	57	10	11	0	0	4	0	0	0	0	0	284
10:00	1	189	57	5	21	1	0	5	0	0	0	0	0	279
11:00	1	372	113	7	35	3	0	10	1	0	0	0	0	542
12:00 PM	0	298	84	14	17	0	0	6	0	0	0	0	0	419
1:00	0	318	96	8	35	2	0	9	0	0	0	0	0	468
2:00	1	244	75	5	23	2	0	6	1	0	0	0	0	357
3:00	0	380	84	12	12	0	0	3	0	0	3	0	0	494
4:00	0	347	80	9	22	1	0	3	0	0	1	0	0	463
5:00	0	363	75	8	19	1	0	2	0	0	0	0	0	468
6:00	0	352	60	4	19	0	0	0	0	0	0	0	0	435
7:00	0	276	50	1	16	0	0	1	0	0	0	0	0	344
8:00	0	364	68	2	7	0	0	0	0	0	0	0	0	441
9:00	0	219	35	0	7	0	0	0	0	0	0	0	0	261
10:00	0	103	19	0	0	0	0	0	0	0	0	0	0	122
11:00	0	64	7	0	2	0	0	0	0	0	0	0	0	73
Total	3	4852	1140	110	292	11	1	57	5	1	6	0	0	6478
Percent	0.0%	74.9%	17.6%	1.7%	4.5%	0.2%	0.0%	0.9%	0.1%	0.0%	0.1%	0.0%	0.0%	
AM Peak	10:00	11:00	11:00	8:00	11:00	11:00	7:00	11:00	8:00	8:00	6:00			11:00
	1	372	113	14	35	3	1	10	2	1	1	*	*	542
PM Peak	2:00	3:00	1:00	12:00	1:00	1:00		1:00	2:00		3:00			3:00
	1	380	96	14	35	2	*	9	1	*	3	*	*	494
Grand Total	11	9929	2380	237	616	22	2	126	11	2	12	0	0	13348
Percent	0.1%	74.4%	17.8%	1.8%	4.6%	0.2%	0.0%	0.9%	0.1%	0.0%	0.1%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: Combined

6/10/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	39	5	1	1	0	0	0	0	0	0	0	0	46
1:00	0	13	5	0	1	0	0	0	0	0	0	0	0	19
2:00	0	19	1	1	0	1	0	0	0	0	0	0	0	22
3:00	0	17	5	0	2	2	0	0	0	0	0	0	0	26
4:00	0	63	10	2	3	2	0	0	0	0	0	0	0	80
5:00	0	152	46	0	6	5	0	0	0	0	0	0	0	209
6:00	0	498	98	13	45	16	2	4	2	0	1	0	0	679
7:00	0	924	127	36	61	33	3	13	3	1	1	0	0	1202
8:00	0	977	155	57	58	23	2	24	5	3	2	0	0	1306
9:00	0	784	185	31	47	39	0	13	0	0	0	0	1	1100
10:00	1	735	158	17	61	24	0	10	1	0	0	0	0	1007
11:00	2	944	216	24	79	27	2	14	4	1	0	0	0	1313
12:00 PM	0	1074	130	33	29	12	0	11	0	0	0	0	1	1290
1:00	2	1083	121	11	46	2	0	11	0	0	0	0	0	1276
2:00	1	1028	93	13	31	3	0	8	2	0	0	0	0	1179
3:00	0	985	159	40	32	16	0	8	5	0	3	0	0	1248
4:00	0	892	158	31	43	14	0	13	1	1	1	0	0	1154
5:00	1	865	151	23	35	10	0	4	0	1	0	0	0	1090
6:00	0	645	115	12	34	15	0	3	0	1	0	0	0	825
7:00	0	546	98	3	24	9	0	3	2	0	0	0	1	686
8:00	1	572	87	4	14	7	0	0	0	0	0	0	0	685
9:00	0	314	48	0	8	10	0	0	0	0	0	0	0	380
10:00	0	179	27	0	4	1	0	0	0	0	0	0	0	211
11:00	0	112	16	0	4	3	0	0	0	0	0	0	0	135
Total	8	13460	2214	352	668	274	9	139	25	8	8	0	3	17168
Percent	0.0%	78.4%	12.9%	2.1%	3.9%	1.6%	0.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	8:00	11:00	8:00	11:00	9:00	7:00	8:00	8:00	8:00	8:00		9:00	11:00
	2	977	216	57	79	39	3	24	5	3	2	*	1	1313
PM Peak	1:00	1:00	3:00	3:00	1:00	3:00		4:00	3:00	4:00	3:00		12:00 PM	12:00 PM
	2	1083	159	40	46	16	*	13	5	1	3	*	1	1290

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: Combined

6/11/2025 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12:00 AM	0	42	5	1	1	0	0	0	0	0	0	0	0	49
1:00	0	36	14	0	3	0	0	0	0	0	0	0	0	53
2:00	0	16	1	1	0	1	0	0	0	0	0	0	0	19
3:00	0	15	5	0	2	2	0	0	0	0	0	0	0	24
4:00	0	63	10	2	3	2	0	0	0	0	0	0	0	80
5:00	0	204	63	0	8	7	0	0	0	0	0	0	0	282
6:00	0	465	92	12	42	15	2	4	2	0	1	0	0	635
7:00	0	679	94	26	44	25	2	10	2	1	1	0	0	884
8:00	0	733	116	43	43	17	2	18	4	3	2	0	0	981
9:00	0	596	141	24	35	30	0	10	0	0	0	0	1	837
10:00	1	608	131	15	51	20	0	7	1	0	0	0	0	834
11:00	1	796	182	20	67	23	2	12	3	1	0	0	0	1107
12:00 PM	0	826	100	25	22	9	0	8	0	0	0	0	1	991
1:00	0	893	99	10	37	2	0	9	0	0	0	0	0	1050
2:00	1	842	77	11	25	3	0	6	2	0	0	0	0	967
3:00	0	898	145	36	29	15	0	8	5	0	3	0	0	1139
4:00	0	880	156	31	43	14	0	13	1	1	1	0	0	1140
5:00	0	911	159	24	36	11	0	4	0	1	0	0	0	1146
6:00	0	775	121	12	36	15	0	3	0	1	0	0	0	963
7:00	0	647	117	3	30	10	0	3	2	0	0	0	1	813
8:00	0	709	108	5	17	8	0	0	0	0	0	0	0	847
9:00	0	440	68	0	11	15	0	0	0	0	0	0	0	534
10:00	0	244	37	0	6	2	0	0	0	0	0	0	0	289
11:00	0	135	19	0	6	4	0	0	0	0	0	0	0	164
Total	3	12453	2060	301	597	250	8	115	22	8	8	0	3	15828
Percent	0.0%	78.7%	13.0%	1.9%	3.8%	1.6%	0.1%	0.7%	0.1%	0.1%	0.1%	0.0%	0.0%	
AM Peak	10:00	11:00	11:00	8:00	11:00	9:00	6:00	8:00	8:00	8:00	8:00	8:00	9:00	11:00
	1	796	182	43	67	30	2	18	4	3	2	*	1	1107
PM Peak	2:00	5:00	5:00	3:00	4:00	3:00		4:00	3:00	4:00	3:00		12:00 PM	5:00
	1	911	159	36	43	15	*	13	5	1	3	*	1	1146
Grand Total	11	25913	4274	653	1265	524	17	254	47	16	16	0	6	32996
Percent	0.0%	78.5%	13.0%	2.0%	3.8%	1.6%	0.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: NB

6/10/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	29	0	0	0	0	0	0	0	0	0	0	0	0	29
1:00	9	0	0	0	0	0	0	0	0	0	0	0	0	9
2:00	13	0	0	0	0	0	0	0	0	0	0	0	0	13
3:00	18	0	0	0	0	0	0	0	0	0	0	0	0	18
4:00	59	1	0	0	0	0	0	0	0	0	0	0	0	60
5:00	131	0	0	0	0	0	0	0	0	0	0	0	0	131
6:00	429	0	0	0	0	0	0	0	0	0	0	0	0	429
7:00	814	0	0	0	0	0	0	0	0	0	0	0	0	814
8:00	874	3	0	0	0	0	0	0	0	0	0	0	0	877
9:00	726	0	0	0	0	0	0	0	0	0	0	0	0	726
10:00	670	0	0	0	0	0	0	0	0	0	0	0	0	670
11:00	670	0	0	0	0	0	0	0	0	0	0	0	0	670
12:00 PM	745	0	0	0	0	0	0	0	0	0	0	0	0	745
1:00	707	0	0	0	0	0	0	0	0	0	0	0	0	707
2:00	743	0	0	0	0	0	0	0	0	0	0	0	0	743
3:00	707	0	0	0	0	0	0	0	0	0	0	0	0	707
4:00	685	0	0	0	0	0	0	0	0	0	0	0	0	685
5:00	643	2	0	0	0	0	0	0	0	0	0	0	0	645
6:00	505	0	0	0	0	0	0	0	0	0	0	0	0	505
7:00	396	0	0	0	0	0	0	0	0	0	0	0	0	396
8:00	329	0	0	0	0	0	0	0	0	0	0	0	0	329
9:00	194	0	0	0	0	0	0	0	0	0	0	0	0	194
10:00	122	0	0	0	0	0	0	0	0	0	0	0	0	122
11:00	75	0	0	0	0	0	0	0	0	0	0	0	0	75
Total	10293	6	0	0	0	0	0	0	0	0	0	0	0	10299

New Line	Percentile	15th	50th	85th	95th
	Speed	12	22	24	29
	Mean Speed (Average)	18.3			
	10 MPH Pace Speed	26-35			
	Number in Pace	3054			
	Percent in Pace	30.0%			
	Number > 45 MPH	0			
	Percent > 45 MPH	0.0%			

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: NB

6/11/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	31	0	0	0	0	0	0	0	0	0	0	0	0	31
1:00	25	0	0	0	0	0	0	0	0	0	0	0	0	25
2:00	11	0	0	0	0	0	0	0	0	0	0	0	0	11
3:00	16	0	0	0	0	0	0	0	0	0	0	0	0	16
4:00	60	0	0	0	0	0	0	0	0	0	0	0	0	60
5:00	177	0	0	0	0	0	0	0	0	0	0	0	0	177
6:00	401	0	0	0	0	0	0	0	0	0	0	0	0	401
7:00	599	0	0	0	0	0	0	0	0	0	0	0	0	599
8:00	657	1	0	0	0	0	0	0	0	0	0	0	0	658
9:00	551	1	0	0	0	0	0	0	0	0	0	0	0	552
10:00	555	0	0	0	0	0	0	0	0	0	0	0	0	555
11:00	565	0	0	0	0	0	0	0	0	0	0	0	0	565
12:00 PM	573	0	0	0	0	0	0	0	0	0	0	0	0	573
1:00	582	0	0	0	0	0	0	0	0	0	0	0	0	582
2:00	609	0	0	0	0	0	0	0	0	0	0	0	0	609
3:00	645	0	0	0	0	0	0	0	0	0	0	0	0	645
4:00	676	0	0	0	0	0	0	0	0	0	0	0	0	676
5:00	675	3	0	0	0	0	0	0	0	0	0	0	0	678
6:00	529	0	0	0	0	0	0	0	0	0	0	0	0	529
7:00	469	0	0	0	0	0	0	0	0	0	0	0	0	469
8:00	406	0	0	0	0	0	0	0	0	0	0	0	0	406
9:00	271	1	0	0	0	0	0	0	0	0	0	0	0	272
10:00	167	0	0	0	0	0	0	0	0	0	0	0	0	167
11:00	91	0	0	0	0	0	0	0	0	0	0	0	0	91
Total	9341	6	0	0	0	0	0	0	0	0	0	0	0	9347

New Line	Percentile	15th	50th	85th	95th	
	Speed	13	21	25	30	
	Mean Speed (Average)	18.3				
	10 MPH Pace Speed	26-35				
	Number in Pace	2685				
	Percent in Pace	30.0%				
	Number > 45 MPH	0				
	Percent > 45 MPH	0.0%				
	Grand Total	Percentile	15th	50th	85th	95th
		Speed	12	22	24	30
Mean Speed (Average)		18.3				
10 MPH Pace Speed		26-35				
Number in Pace		5789				
Percent in Pace		30.0%				
Number > 45 MPH		0				
Percent > 45 MPH	0.0%					

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: SB

6/10/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	17	0	0	0	0	0	0	0	0	0	0	0	0	17
1:00	10	0	0	0	0	0	0	0	0	0	0	0	0	10
2:00	9	0	0	0	0	0	0	0	0	0	0	0	0	9
3:00	8	0	0	0	0	0	0	0	0	0	0	0	0	8
4:00	20	0	0	0	0	0	0	0	0	0	0	0	0	20
5:00	78	0	0	0	0	0	0	0	0	0	0	0	0	78
6:00	249	1	0	0	0	0	0	0	0	0	0	0	0	250
7:00	388	0	0	0	0	0	0	0	0	0	0	0	0	388
8:00	429	0	0	0	0	0	0	0	0	0	0	0	0	429
9:00	374	0	0	0	0	0	0	0	0	0	0	0	0	374
10:00	337	0	0	0	0	0	0	0	0	0	0	0	0	337
11:00	641	2	0	0	0	0	0	0	0	0	0	0	0	643
12:00 PM	545	0	0	0	0	0	0	0	0	0	0	0	0	545
1:00	568	0	0	0	0	0	0	0	0	0	0	0	0	568
2:00	436	0	0	0	0	0	0	0	0	0	0	0	0	436
3:00	541	0	0	0	0	0	0	0	0	0	0	0	0	541
4:00	469	0	0	0	0	0	0	0	0	0	0	0	0	469
5:00	445	0	0	0	0	0	0	0	0	0	0	0	0	445
6:00	319	1	0	0	0	0	0	0	0	0	0	0	0	320
7:00	290	0	0	0	0	0	0	0	0	0	0	0	0	290
8:00	357	0	0	0	0	0	0	0	0	0	0	0	0	357
9:00	186	0	0	0	0	0	0	0	0	0	0	0	0	186
10:00	89	0	0	0	0	0	0	0	0	0	0	0	0	89
11:00	60	0	0	0	0	0	0	0	0	0	0	0	0	60
Total	6865	4	0	0	0	0	0	0	0	0	0	0	0	6869

New Line	Percentile	15th	50th	85th	95th
	Speed	2	24	28	30
	Mean Speed (Average)	18.4			
	10 MPH Pace Speed	26-35			
	Number in Pace	2080			
	Percent in Pace	30.0%			
	Number > 45 MPH	0			
	Percent > 45 MPH	0.0%			

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: SB

6/11/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	18	0	0	0	0	0	0	0	0	0	0	0	0	18
1:00	28	0	0	0	0	0	0	0	0	0	0	0	0	28
2:00	8	0	0	0	0	0	0	0	0	0	0	0	0	8
3:00	7	0	0	0	0	0	0	0	0	0	0	0	0	7
4:00	20	0	0	0	0	0	0	0	0	0	0	0	0	20
5:00	105	0	0	0	0	0	0	0	0	0	0	0	0	105
6:00	234	0	0	0	0	0	0	0	0	0	0	0	0	234
7:00	286	0	0	0	0	0	0	0	0	0	0	0	0	286
8:00	320	2	0	0	0	0	0	0	0	0	0	0	0	322
9:00	284	0	0	0	0	0	0	0	0	0	0	0	0	284
10:00	279	0	0	0	0	0	0	0	0	0	0	0	0	279
11:00	542	0	0	0	0	0	0	0	0	0	0	0	0	542
12:00 PM	419	0	0	0	0	0	0	0	0	0	0	0	0	419
1:00	468	0	0	0	0	0	0	0	0	0	0	0	0	468
2:00	357	0	0	0	0	0	0	0	0	0	0	0	0	357
3:00	494	0	0	0	0	0	0	0	0	0	0	0	0	494
4:00	461	2	0	0	0	0	0	0	0	0	0	0	0	463
5:00	468	0	0	0	0	0	0	0	0	0	0	0	0	468
6:00	335	0	0	0	0	0	0	0	0	0	0	0	0	335
7:00	343	1	0	0	0	0	0	0	0	0	0	0	0	344
8:00	441	0	0	0	0	0	0	0	0	0	0	0	0	441
9:00	261	0	0	0	0	0	0	0	0	0	0	0	0	261
10:00	122	0	0	0	0	0	0	0	0	0	0	0	0	122
11:00	73	0	0	0	0	0	0	0	0	0	0	0	0	73
Total	6373	5	0	0	0	0	0	0	0	0	0	0	0	6378

New Line	Percentile	15th	50th	85th	95th	
	Speed	8	22	28	30	
	Mean Speed (Average)	18.4				
	10 MPH Pace Speed	26-35				
	Number in Pace	1847				
	Percent in Pace	30.0%				
	Number > 45 MPH	0				
	Percent > 45 MPH	0.0%				
	Grand Total	Percentile	15th	50th	85th	95th
		Speed	9	23	28	30
Mean Speed (Average)		18.4				
10 MPH Pace Speed		26-35				
Number in Pace		3967				
Percent in Pace		30.0%				
Number > 45 MPH		0				
Percent > 45 MPH	0.0%					

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: Combined

6/10/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	46	0	0	0	0	0	0	0	0	0	0	0	0	46
1:00	19	0	0	0	0	0	0	0	0	0	0	0	0	19
2:00	22	0	0	0	0	0	0	0	0	0	0	0	0	22
3:00	26	0	0	0	0	0	0	0	0	0	0	0	0	26
4:00	79	1	0	0	0	0	0	0	0	0	0	0	0	80
5:00	209	0	0	0	0	0	0	0	0	0	0	0	0	209
6:00	678	1	0	0	0	0	0	0	0	0	0	0	0	679
7:00	1202	0	0	0	0	0	0	0	0	0	0	0	0	1202
8:00	1303	3	0	0	0	0	0	0	0	0	0	0	0	1306
9:00	1100	0	0	0	0	0	0	0	0	0	0	0	0	1100
10:00	1007	0	0	0	0	0	0	0	0	0	0	0	0	1007
11:00	1311	2	0	0	0	0	0	0	0	0	0	0	0	1313
12:00 PM	1290	0	0	0	0	0	0	0	0	0	0	0	0	1290
1:00	1275	0	0	0	0	0	0	0	0	0	0	0	0	1275
2:00	1179	0	0	0	0	0	0	0	0	0	0	0	0	1179
3:00	1248	0	0	0	0	0	0	0	0	0	0	0	0	1248
4:00	1154	0	0	0	0	0	0	0	0	0	0	0	0	1154
5:00	1088	2	0	0	0	0	0	0	0	0	0	0	0	1090
6:00	824	1	0	0	0	0	0	0	0	0	0	0	0	825
7:00	686	0	0	0	0	0	0	0	0	0	0	0	0	686
8:00	686	0	0	0	0	0	0	0	0	0	0	0	0	686
9:00	380	0	0	0	0	0	0	0	0	0	0	0	0	380
10:00	211	0	0	0	0	0	0	0	0	0	0	0	0	211
11:00	135	0	0	0	0	0	0	0	0	0	0	0	0	135
Total	17158	10	0	0	0	0	0	0	0	0	0	0	0	17168

New Line	Percentile	15th	50th	85th	95th
	Speed	7	23	26	29
	Mean Speed (Average)	18.3			
	10 MPH Pace Speed	26-35			
	Number in Pace	5134			
	Percent in Pace	30.0%			
	Number > 45 MPH	0			
	Percent > 45 MPH	0.0%			

NE TRAFFIC COUNTS

City: Hingham
 Location 1: Fort Hill St
 Location 2: S/O South St
 Tech: KM
 Latitude: 42.237093
 Longitude: -70.902794

Direction: Combined

6/11/2025	0 - 35	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70 -	> 75 -	> 80 -	> 85 -	> 90	Total
Time	MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	75 MPH	80 MPH	85 MPH	90 MPH	MPH	
12:00 AM	49	0	0	0	0	0	0	0	0	0	0	0	0	49
1:00	53	0	0	0	0	0	0	0	0	0	0	0	0	53
2:00	19	0	0	0	0	0	0	0	0	0	0	0	0	19
3:00	23	0	0	0	0	0	0	0	0	0	0	0	0	23
4:00	80	0	0	0	0	0	0	0	0	0	0	0	0	80
5:00	282	0	0	0	0	0	0	0	0	0	0	0	0	282
6:00	635	0	0	0	0	0	0	0	0	0	0	0	0	635
7:00	885	0	0	0	0	0	0	0	0	0	0	0	0	885
8:00	977	3	0	0	0	0	0	0	0	0	0	0	0	980
9:00	835	1	0	0	0	0	0	0	0	0	0	0	0	836
10:00	834	0	0	0	0	0	0	0	0	0	0	0	0	834
11:00	1107	0	0	0	0	0	0	0	0	0	0	0	0	1107
12:00 PM	992	0	0	0	0	0	0	0	0	0	0	0	0	992
1:00	1050	0	0	0	0	0	0	0	0	0	0	0	0	1050
2:00	966	0	0	0	0	0	0	0	0	0	0	0	0	966
3:00	1139	0	0	0	0	0	0	0	0	0	0	0	0	1139
4:00	1137	2	0	0	0	0	0	0	0	0	0	0	0	1139
5:00	1143	3	0	0	0	0	0	0	0	0	0	0	0	1146
6:00	864	0	0	0	0	0	0	0	0	0	0	0	0	864
7:00	812	1	0	0	0	0	0	0	0	0	0	0	0	813
8:00	847	0	0	0	0	0	0	0	0	0	0	0	0	847
9:00	532	1	0	0	0	0	0	0	0	0	0	0	0	533
10:00	289	0	0	0	0	0	0	0	0	0	0	0	0	289
11:00	164	0	0	0	0	0	0	0	0	0	0	0	0	164
Total	15714	11	0	0	0	0	0	0	0	0	0	0	0	15725

New Line	Percentile	15th	50th	85th	95th	
	Speed	10	21	27	30	
	Mean Speed (Average)	18.3				
	10 MPH Pace Speed	26-35				
	Number in Pace	4532				
	Percent in Pace	30.0%				
	Number > 45 MPH	0				
	Percent > 45 MPH	0.0%				
	Grand Total	Percentile	15th	50th	85th	95th
		Speed	10	22	26	30
Mean Speed (Average)		18.3				
10 MPH Pace Speed		26-35				
Number in Pace		9756				
Percent in Pace		30.0%				
Number > 45 MPH		0				
Percent > 45 MPH	0.0%					



New England Traffic Counts

(413) 579-8366

emayboroda@netrafficcunts.com

www.netrafficcunts.com

CLIENT	Bowman
CITY/TOWN	Hingham, MA
WEATHER	Sunny
INTERSECTION #	1

STREET 1	Fort Hill Street
STREET 2	Bare Cove Park Drive
DATE	06/10/2025

Pedestrians and Bicycles

Start Time	Fort Hill Street - Northbound				Fort Hill Street - Southbound				Bare Cove Park Drive - Eastbound				Driveway - Westbound			
	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOURS 8:00 AM	Fort Hill Street - Northbound				Fort Hill Street - Southbound				Bare Cove Park Drive - Eastbound				Driveway - Westbound			
	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
	0	0	0	1	0	0	0	0	5	1	0	0	0	0	0	0

PM PEAK HOURS 4:30 PM	Fort Hill Street - Northbound				Fort Hill Street - Southbound				Bare Cove Park Drive - Eastbound				Driveway - Westbound			
	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0





New England Traffic Counts

(413) 579-8366

emayboroda@netrafficcounts.com

www.netrafficcounts.com

CLIENT	Bowman
CITY/TOWN	Hingham, MA
WEATHER	Sunny
INTERSECTION #	1

STREET 1	Fort Hill Street
STREET 2	Bare Cove Park Drive
DATE	06/14/2025

Heavy Vehicles

Start Time	Fort Hill Street - Northbound				Fort Hill Street - Southbound				Bare Cove Park Drive - Eastbound				Driveway - Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOURS 11:30 AM	Fort Hill Street - Northbound				Fort Hill Street - Southbound				Bare Cove Park Drive - Eastbound				Driveway - Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



CLIENT	SLR
CITY/TOWN	Hingham, MA
WEATHER	Cloudy
INTERSECTION #	2

STREET 1	Fort Hill Street at West Street
STREET 2	South Street
DATE	06/10/2025

Passenger Cars & Heavy Vehicles Combined

Start Time	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
7:00 AM	0	79	36	0	3	72	0	17	1
7:15 AM	0	105	50	0	3	88	0	14	0
7:30 AM	0	132	57	0	0	83	0	31	1
7:45 AM	0	133	78	0	3	76	0	25	1
8:00 AM	0	131	73	0	3	84	0	29	6
8:15 AM	0	132	74	0	5	94	0	29	5
8:30 AM	0	123	68	0	4	109	0	29	1
8:45 AM	0	105	90	0	5	120	0	48	5
3:00 PM	0	90	55	0	4	137	0	31	1
3:15 PM	0	81	60	0	4	108	0	37	1
3:30 PM	0	83	65	0	9	101	0	41	5
3:45 PM	0	102	48	0	5	95	0	40	7
4:00 PM	0	89	62	0	8	113	0	31	4
4:15 PM	0	94	42	0	10	107	0	34	2
4:30 PM	0	76	51	0	5	136	0	43	6
4:45 PM	0	97	43	0	5	126	0	39	3
5:00 PM	0	103	73	0	4	143	0	28	2
5:15 PM	0	113	42	0	10	147	0	22	1
5:30 PM	0	82	58	0	2	115	0	20	6
5:45 PM	0	90	64	0	8	90	0	21	4

AM PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
8:00 AM	0	491	305	0	17	407	0	135	17
PHF	0.97			0.85			0.72		
HV%	0.0%	5.3%	5.2%	0.0%	0.0%	3.4%	0.0%	5.9%	5.9%

PM PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
4:30 PM	0	389	209	0	24	552	0	132	12
PHF	0.85			0.92			0.73		
HV%	0.0%	0.3%	0.0%	0.0%	0.0%	0.9%	0.0%	1.5%	0.0%

CLIENT	SLR	STREET 1	Fort Hill Street at West Street
CITY/TOWN	Hingham, MA	STREET 2	South Street
WEATHER	Cloudy	DATE	06/10/2025
INTERSECTION #	2		

Heavy Vehicles

Start Time	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
7:00 AM	0	5	3	0	0	1	0	0	0
7:15 AM	0	6	2	0	1	2	0	0	0
7:30 AM	0	10	7	0	0	5	0	1	0
7:45 AM	0	6	5	0	0	3	0	0	0
8:00 AM	0	10	4	0	0	1	0	0	0
8:15 AM	0	4	3	0	0	7	0	1	1
8:30 AM	0	7	5	0	0	1	0	3	0
8:45 AM	0	5	4	0	0	5	0	4	0
3:00 PM	0	1	3	0	0	5	0	0	0
3:15 PM	0	0	0	0	0	5	0	4	0
3:30 PM	0	0	0	0	0	1	0	7	0
3:45 PM	0	1	0	0	0	2	0	1	1
4:00 PM	0	1	1	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	2	0	1	0
4:30 PM	0	0	0	0	0	2	0	0	0
4:45 PM	0	1	0	0	0	2	0	1	0
5:00 PM	0	0	0	0	0	1	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0
5:30 PM	0	2	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0

AM PEAK HOURS 8:00 AM	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
	0	26	16	0	0	14	0	8	1

PM PEAK HOURS 4:30 PM	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
	0	1	0	0	0	5	0	2	0

CLIENT	SLR
CITY/TOWN	Hingham, MA
WEATHER	Cloudy
INTERSECTION #	2

STREET 1	Fort Hill Street at West Street
STREET 2	South Street
DATE	06/10/2025

Pedestrians and Bicycles

Start Time	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	Peds	Thru	Right	Peds	Left	Thru	Peds	Left	Right
7:00 AM	1	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	1	0	0	1	0	0
7:30 AM	0	0	0	1	0	1	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0
8:00 AM	0	1	0	2	0	0	0	0	0
8:15 AM	0	1	1	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	3	0	0	0	0	0
3:00 PM	0	0	0	0	0	1	0	0	0
3:15 PM	0	0	1	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	1	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	4	0	0	0	0	0
5:15 PM	0	0	0	1	0	0	1	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0

AM PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	Peds	Thru	Right	Peds	Left	Thru	Peds	Left	Right
8:00 AM	0	2	1	6	0	0	0	0	0

PM PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	Peds	Thru	Right	Peds	Left	Thru	Peds	Left	Right
4:30 PM	0	0	0	5	0	0	1	0	0



SLR_031

06/10/2025

CLIENT	SLR
CITY/TOWN	Hingham, MA
WEATHER	Cloudy
INTERSECTION #	2

STREET 1	Fort Hill Street at West Street
STREET 2	South Street
DATE	06/14/2025

Passenger Cars & Heavy Vehicles Combined

Start Time	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
11:00 AM	0	106	74	0	3	119	0	40	2
11:15 AM	0	83	76	0	5	103	0	61	6
11:30 AM	0	119	69	0	5	126	0	56	5
11:45 AM	0	117	79	0	4	133	0	43	8
12:00 PM	0	110	66	0	10	110	0	51	8
12:15 PM	0	94	57	0	4	156	0	52	5
12:30 PM	0	99	72	0	5	105	0	48	3
12:45 PM	0	89	55	0	10	105	0	47	6

PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
11:00 AM	0	425	298	0	17	481	0	200	21
PHF	0.92			0.91			0.82		
HV%	0.0%	0.7%	0.3%	0.0%	5.9%	0.8%	0.0%	0.0%	0.0%

CLIENT	SLR
CITY/TOWN	Hingham, MA
WEATHER	Cloudy
INTERSECTION #	2

STREET 1	Fort Hill Street at West Street
STREET 2	South Street
DATE	06/14/2025

Heavy Vehicles

Start Time	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
11:00 AM	0	0	0	0	0	1	0	0	0
11:15 AM	0	1	1	0	0	0	0	0	0
11:30 AM	0	1	0	0	1	2	0	0	0
11:45 AM	0	1	0	0	0	1	0	0	0
12:00 PM	0	0	1	0	0	0	0	1	0
12:15 PM	0	2	2	0	0	0	0	0	0
12:30 PM	0	0	1	0	0	0	0	0	0
12:45 PM	0	1	0	0	0	1	0	2	1

PEAK HOURS	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
	U-Turn	Thru	Right	U-Turn	Left	Thru	U-Turn	Left	Right
11:00 AM	0	3	1	0	1	4	0	0	0

CLIENT	SLR	STREET 1	Fort Hill Street at West Street
CITY/TOWN	Hingham, MA	STREET 2	South Street
WEATHER	Cloudy	DATE	06/14/2025
INTERSECTION #	2		

Pedestrians and Bicycles

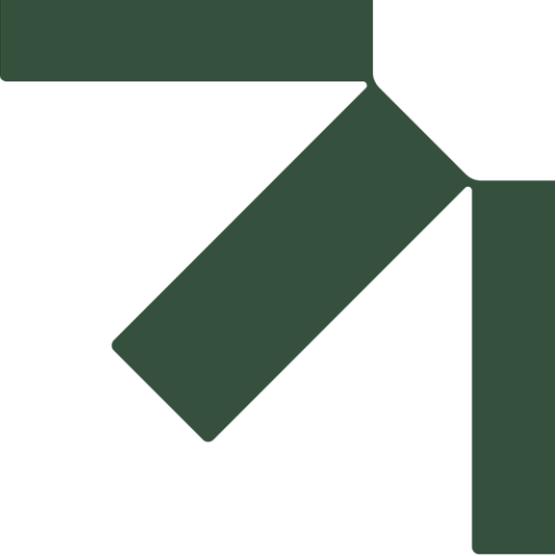
	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
Start Time	Peds	Thru	Right	Peds	Left	Thru	Peds	Left	Right
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	2	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0

	Fort Hill Street - Northbound			West Street - Southbound			South Street - Westbound		
PEAK HOURS	Peds	Thru	Right	Peds	Left	Thru	Peds	Left	Right
11:00 AM	0	0	0	2	0	0	0	0	0



SLR_031

06/10/2025



Appendix B The Weekly Seasonal Adjustment Factors

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

December 4, 2025



Massachusetts Highway Department
Statewide Traffic Data Collection
2024 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.17	1.12	1.11	1.06	1.00	0.96	0.94	0.92	1.00	0.98	1.06	1.07	0.78
R3	1.10	1.04	1.04	1.02	0.91	0.88	0.88	0.87	0.92	0.92	0.99	1.01	0.98
R4-R7	1.16	1.12	1.08	1.03	0.92	0.89	0.88	0.89	0.92	0.94	1.04	1.10	0.98
U1-Boston	1.07	1.03	0.98	0.97	0.94	0.91	0.94	0.91	0.94	0.94	0.98	1.02	0.94
U1-Essex	1.13	1.09	1.06	1.04	0.95	0.89	0.88	0.87	0.95	0.95	1.03	1.05	0.96
U1-Southeast	1.14	1.10	1.04	0.99	0.93	0.86	0.87	0.85	0.91	0.93	0.99	1.02	0.96
U1-West	1.10	1.02	0.98	0.96	0.95	0.92	0.94	0.91	0.91	0.91	0.96	1.00	0.83
U1-Worcester	1.08	1.03	0.99	0.98	0.94	0.91	0.93	0.91	0.92	0.91	0.95	1.00	0.93
U3	1.06	1.02	0.98	0.96	0.93	0.91	0.95	0.94	0.93	0.93	0.96	1.00	0.98
U4-U7	1.04	1.02	0.96	0.95	0.91	0.90	0.94	0.94	0.93	0.94	0.98	1.02	0.99
UR2	1.08	1.02	0.98	0.97	0.93	0.90	0.93	0.90	0.92	0.92	0.97	1.01	0.98
Rec - East	1.21	1.20	1.09	1.01	0.91	0.81	0.77	0.79	0.91	0.95	1.05	1.13	0.99
Rec - West	1.46	1.38	1.32	1.06	0.94	0.79	0.59	0.69	0.97	0.99	1.18	1.28	0.99

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

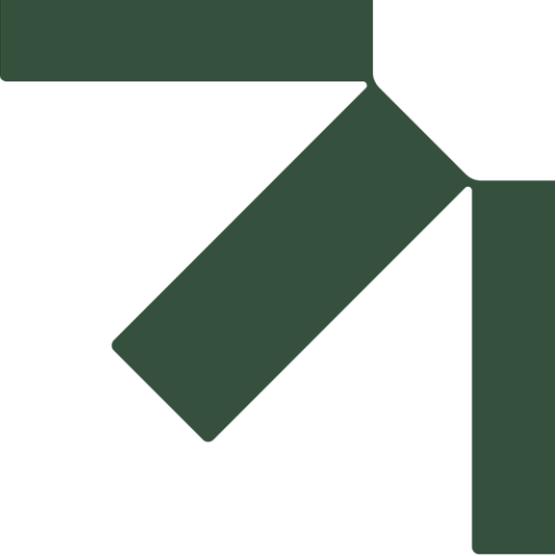
6 - Minor Collector

7 - Local Road and Street

UR2 Group - Combination of Urban Freeways and Expressways and Rural Freeways and Expressways.

Recreational - East Group - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

Recreational - West Group - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114,1116,2196,2197 and 2198.



Appendix C Crash Reports

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

December 4, 2025

INTERSECTION CRASH RATE WORKSHEET, 2017-2021

CITY/TOWN : HINGHAM COUNT DATE : Jun-25

DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

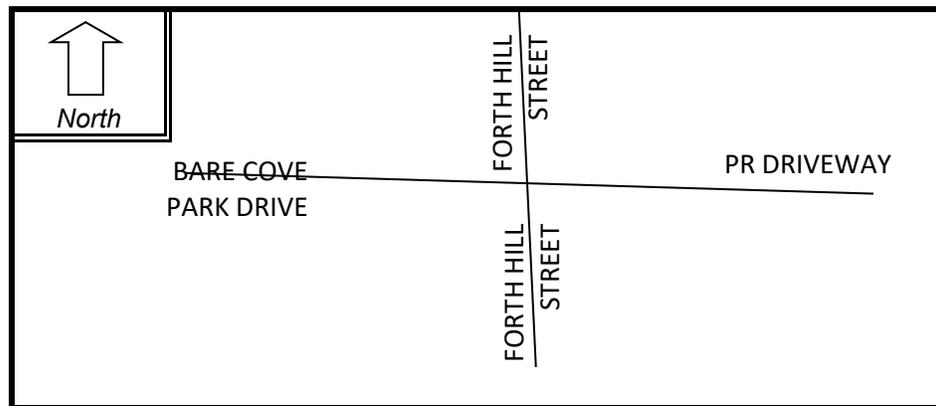
~ INTERSECTION DATA ~

MAJOR STREET : FORTH HILL STREET(NB AND SB)

MINOR STREET(S) : BARE COVE PARK DRIVE (EB)

PRIVATE DRIVEWAY (WB)

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	40	5	795	535		1,375

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION : RATE = $\frac{(A * 1,000,000)}{(V * 365)}$

Comments : To remain conservative Morning Peak Hour was used

Project Title & Date: Hingham Senior Center



Appendix D Public Transportation

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

December 4, 2025



Monday to Friday

Inbound to Boston

ZONE	STATION	TRAIN #	AM							PM				
			1054	1058	1060	1064	1070	1072	1074	1078	1082	1086	1090	1096
Bikes Allowed														
6	Greenbush		5:15	6:10	6:55	7:42	8:42	10:42	11:57	1:10	3:04	5:40	7:12	10:32
5	North Scituate		5:22	6:17	7:02	7:49	8:49	10:49	12:04	1:17	3:11	5:47	7:19	10:39
4	Cohasset		5:29	6:24	7:09	7:57	8:56	10:56	12:11	1:24	3:17	5:59	7:25	10:45
4	Nantasket Junction		5:32	6:27	7:12	8:00	8:59	10:59	12:14	1:27	3:20	6:02	7:28	10:48
3	West Hingham		5:37	6:32	7:17	8:05	9:04	11:04	12:19	1:32	3:25	6:07	7:33	10:53
2	East Weymouth		5:41	6:36	7:22	8:09	9:08	11:09	12:24	1:36	3:29	6:11	7:43	10:56
2	Weymouth Landing/East Braintree		5:46	6:42	7:28	8:15	9:14	11:15	12:30	1:41	3:34	6:16	7:48	11:01
1	Quincy Center		L 5:56	L 6:52	L 7:39	L 8:25	L 9:24	L 11:25	L 12:40	L 1:51	-	L 6:27	L 8:01	L 11:10
1A	JFK/UMass		L 6:04	L 7:01	L 7:48	L 8:34	L 9:33	-	-	-	-	-	-	-
1A	South Station		6:13	7:10	7:57	8:43	9:43	11:45	1:01	2:10	4:05	6:46	8:20	11:28

Weekend

Inbound to Boston

ZONE	STATION	TRAIN #	AM			PM						
			6056	6068	6074	6078	6082	6086	6090	6094		
Bikes Allowed												
6	Greenbush		5:52	8:37	11:04	1:04	3:04	5:35	7:02	10:02		
5	North Scituate		5:59	8:44	11:11	1:11	3:11	5:42	7:09	10:09		
4	Cohasset		6:05	8:50	11:17	1:17	3:17	5:48	7:15	10:15		
4	Nantasket Junction		6:08	8:53	11:20	1:20	3:20	5:51	7:18	10:18		
3	West Hingham		6:14	8:58	11:25	1:25	3:25	5:56	7:23	10:23		
2	East Weymouth		6:17	9:02	11:29	1:29	3:29	6:00	7:26	10:26		
2	Weymouth Landing/East Braintree		6:22	9:07	11:34	1:34	3:34	6:05	7:31	10:31		
1	Quincy Center		L 6:31	L 9:16	L 11:44	L 1:44	L 3:44	L 6:15	L 7:40	L 10:40		
1A	JFK/UMass		-	-	-	-	-	-	-	-		
1A	South Station		6:50	9:35	12:03	2:03	4:03	6:35	7:59	10:59		

Monday to Friday

Outbound from Boston

ZONE	STATION	TRAIN #	AM				PM							
			1057	1061	1063	1065	1069	1073	1077	1081	1085	1089	1093	1097
Bikes Allowed														
1A	South Station		7:05	8:57	10:30	11:45	1:45	3:17	4:20	5:13	5:59	7:07	9:20	11:50
1A	JFK/UMass		-	-	-	-	-	3:24	4:27	5:20	6:06	7:14	-	-
1	Quincy Center		7:21	9:12	10:46	12:00	2:01	3:33	4:36	5:29	6:15	7:23	9:35	12:05
2	Weymouth Landing/East Braintree		7:33	9:22	10:55	12:09	2:10	3:43	4:45	5:38	6:25	7:32	9:44	12:14
2	East Weymouth		7:38	9:27	11:00	12:14	2:15	3:48	4:50	5:43	6:30	7:37	9:49	12:19
3	West Hingham		7:41	9:30	11:10	12:18	2:18	3:52	4:54	5:47	6:34	7:41	9:52	12:22
4	Nantasket Junction		7:46	9:35	11:13	12:23	2:23	3:57	4:59	5:52	6:39	7:46	9:56	12:26
4	Cohasset		7:49	9:38	11:16	12:26	2:26	4:00	5:02	5:55	6:42	7:49	9:59	12:29
5	North Scituate		8:00	9:45	11:23	12:33	2:33	4:07	5:09	6:02	6:49	7:56	10:06	12:36
6	Greenbush		8:10	9:57	11:34	12:43	2:43	4:18	5:20	6:13	6:59	8:06	10:17	12:47

Weekend

Outbound from Boston

ZONE	STATION	TRAIN #	AM			PM					
			6057	6061	6065	6069	6075	6083	6091	6097	
Bikes Allowed											
1A	South Station		7:10	9:53	11:18	1:37	3:55	5:45	8:40	11:40	
1A	JFK/UMass		-	-	-	-	-	-	-	-	
1	Quincy Center		7:25	10:08	11:33	1:53	4:10	6:01	8:55	11:55	
2	Weymouth Landing/East Braintree		7:34	10:17	11:42	2:02	4:20	6:12	9:04	12:04	
2	East Weymouth		7:39	10:22	11:47	2:07	4:25	6:16	9:09	12:09	
3	West Hingham		7:42	10:25	11:50	2:10	4:28	6:19	9:12	12:12	
4	Nantasket Junction		7:47	10:30	11:55	2:15	4:33	6:24	9:17	12:17	
4	Cohasset		7:50	10:33	11:58	2:18	4:36	6:27	9:20	12:20	
5	North Scituate		7:57	10:40	12:05	2:25	4:43	6:34	9:27	12:27	
6	Greenbush		8:07	10:50	12:15	2:35	4:53	6:44	9:37	12:37	

Keep in Mind:

This schedule will be effective from July 21, 2025 and will replace the schedule of March 24, 2025 .

HOLIDAY SERVICE:

The following holidays will operate on a WEEKEND Schedule:

- LABOR DAY - Monday, September 1, 2025

WEEKDAY SERVICE:

The following holidays will operate on a WEEKDAY schedule:

- COLUMBUS DAY - Monday, October 13, 2025

For all holiday schedules, please check mbta.com/holidays or call 617-222-3200.



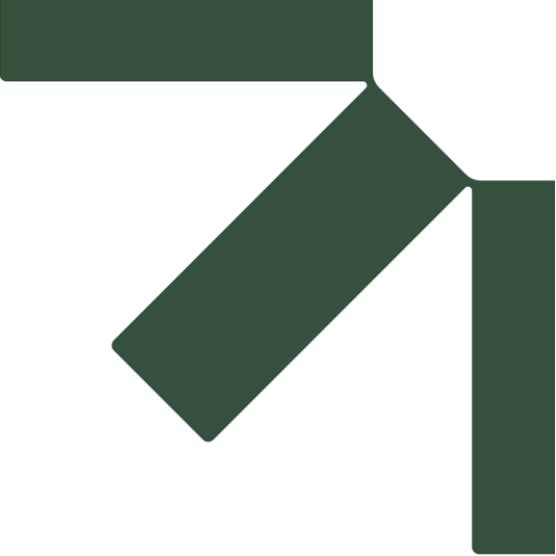
Times in blue indicate an early departure (L stop):
The train may leave ahead of schedule at these stops.



Bikes: Bicycles are allowed on all Kingston Line trains.



High-level platforms and bridge plates are available.
Visit mbta.com/accessibility for more information.



Appendix E *Synchro* Analysis Worksheets

The Hingham Center for Active Living Traffic Impact Study

Town of Hingham, Massachusetts

EDM Studio

45 South Main Street
Unionville, CT 06085

SLR Project No.: 141.051021.00001

Client Reference No: 21840.00008

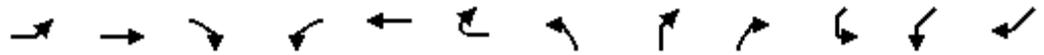
December 4, 2025



4: Fort Hill St & Bare Cove Park Dr/T parking Lot
Lanes, Volumes, Timings

2025 Existing Conditions AM

10/09/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations												
Traffic Volume (vph)	23	0	17	2	0	3	17	771	7	13	499	23
Future Volume (vph)	23	0	17	2	0	3	17	771	7	13	499	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		130	0		0	90	0			100	0
Storage Lanes	0		1	0		0	1	1			1	0
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.921			0.850			0.993	
Flt Protected		0.950			0.980		0.950			0.950	0.954	
Satd. Flow (prot)	0	1543	1369	0	1715	0	1805	1539	0	1805	1721	0
Flt Permitted		0.950			0.980		0.950			0.950	0.954	
Satd. Flow (perm)	0	1543	1369	0	1715	0	1805	1539	0	1805	1721	0
Link Speed (mph)		30			30		30				30	
Link Distance (ft)		713			153		621				434	
Travel Time (s)		16.2			3.5		14.1				9.9	
Peak Hour Factor	0.77	0.77	0.77	0.42	0.42	0.42	0.96	0.96	0.96	0.83	0.83	0.83
Heavy Vehicles (%)	17%	0%	18%	0%	0%	0%	0%	5%	0%	0%	3%	39%
Adj. Flow (vph)	30	0	22	5	0	7	18	803	7	16	601	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	22	0	12	0	18	810	0	16	629	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		0			0		12				24	
Link Offset(ft)		0			0		0				0	
Crosswalk Width(ft)		16			16		16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	9	15	15	9
Sign Control		Stop			Stop		Free				Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.2%
ICU Level of Service	B
Analysis Period (min)	15

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions AM
10/09/2025

							Ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (vph)	135	17	491	305	17	407	
Future Volume (vph)	135	17	491	305	17	407	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.985			0.850			
Flt Protected	0.958				0.950		
Satd. Flow (prot)	1691	0	1810	1538	1805	1845	
Flt Permitted	0.958				0.950		
Satd. Flow (perm)	1691	0	1810	1538	1805	1845	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	7			273			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.72	0.72	0.97	0.97	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	85%	
Heavy Vehicles (%)	6%	6%	5%	5%	0%	3%	
Adj. Flow (vph)	188	24	506	314	20	407	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	212	0	506	314	20	407	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions AM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Protected Phases	8		2		1	6	9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	0.2
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)			7.0	7.0			7.0
Flash Dont Walk (s)			11.0	11.0			19.0
Pedestrian Calls (#/hr)			0	0			2
Act Effct Green (s)	15.1		29.5	29.5	6.1	33.6	
Actuated g/C Ratio	0.18		0.34	0.34	0.07	0.39	
v/c Ratio	0.70		0.81	0.44	0.16	0.56	
Control Delay	44.9		41.2	7.6	41.6	24.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	44.9		41.2	7.6	41.6	24.8	
LOS	D		D	A	D	C	
Approach Delay	44.9		28.3			25.6	
Approach LOS	D		C			C	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	18.4		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Gap		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	15.6		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	13.0		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	9.4		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	134		356	55	18	263	
Fuel Used(gal)	3		8	2	0	5	
CO Emissions (g/hr)	201		541	126	22	322	
NOx Emissions (g/hr)	39		105	25	4	63	
VOC Emissions (g/hr)	47		125	29	5	75	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	105		228	14	10	169	
Queue Length 95th (ft)	134		#520	89	32	257	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		



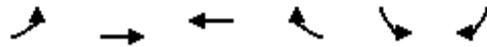
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Base Capacity (vph)	390		624	709	137	722	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.54		0.81	0.44	0.15	0.56	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	85.7
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	29.9
Intersection LOS:	C
Intersection Capacity Utilization:	41.0%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	88.9
50th %ile Actuated Cycle:	86.1
30th %ile Actuated Cycle:	83.5
10th %ile Actuated Cycle:	79.9
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 6: Fort Hill St/West St & South St





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	39	37	3	1	0
Future Volume (vph)	0	39	37	3	1	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.991					
Fl _t Protected					0.950	
Satd. Flow (prot)	0	1863	1846	0	1770	0
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	1863	1846	0	1770	0
Link Speed (mph)	30		30	30		
Link Distance (ft)	316		713	159		
Travel Time (s)	7.2		16.2	3.6		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	42	40	3	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	42	43	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		0	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	16		16	16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

11: Carlson Flds & Bare Cove Park Dr
Lanes, Volumes, Timings

2025 Existing Conditions AM
10/09/2025



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	14	0	25	12	0	25
Future Volume (vph)	14	0	25	12	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected						0.967
Satd. Flow (prot)	1863	0	0	1801	1611	0
Fl _t Permitted						0.967
Satd. Flow (perm)	1863	0	0	1801	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	197			316	129	
Travel Time (s)	4.5			7.2	2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	0	27	13	0	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	40	27	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.7%
Analysis Period (min)	15
	ICU Level of Service A

13: Bare Cove Park Dr & HDPW
Lanes, Volumes, Timings

2025 Existing Conditions AM
10/09/2025



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	0	8	2	10	6	0
Future Volume (vph)	0	8	2	10	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.886					
Fl _t Protected	0.950					
Satd. Flow (prot)	0	1863	1650	0	1770	0
Fl _t Permitted	0.950					
Satd. Flow (perm)	0	1863	1650	0	1770	0
Link Speed (mph)	30		30	30		
Link Distance (ft)	147		197	186		
Travel Time (s)	3.3		4.5	4.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	9	2	11	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	9	13	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		0	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	16		16	16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

14: Carlson Flds & Bare Cove Park Dr
Lanes, Volumes, Timings

2025 Existing Conditions AM
10/09/2025



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	2	0	0	8
Future Volume (vph)	0	0	2	0	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected						0.950
Satd. Flow (prot)	1863	0	0	1770	1611	0
Fl _t Permitted						0.950
Satd. Flow (perm)	1863	0	0	1770	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	340			147	169	
Travel Time (s)	7.7			3.3	3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	2	0	0	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2	9	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↗		↖	↗	
Traffic Vol, veh/h	23	0	17	2	0	3	17	771	7	13	499	23
Future Vol, veh/h	23	0	17	2	0	3	17	771	7	13	499	23
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	42	42	42	96	96	96	83	83	83
Heavy Vehicles, %	17	0	18	0	0	0	0	5	0	0	3	39
Mvmt Flow	30	0	22	5	0	7	18	803	7	16	601	28

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1493	1493	615	1501	1504	807	629	0	0	810	0	0
Stage 1	647	647	-	843	843	-	-	-	-	-	-	-
Stage 2	846	846	-	658	661	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.38	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.462	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	94	124	463	101	123	385	963	-	-	825	-	-
Stage 1	436	470	-	361	382	-	-	-	-	-	-	-
Stage 2	336	381	-	457	463	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	90	119	463	93	118	385	963	-	-	825	-	-
Mov Cap-2 Maneuver	90	119	-	93	118	-	-	-	-	-	-	-
Stage 1	428	461	-	354	375	-	-	-	-	-	-	-
Stage 2	324	374	-	427	454	-	-	-	-	-	-	-

Approach	EB		WB		NE		SW	
HCM Control Delay, s	42.2		27.6		0.2		0.2	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	963	-	-	90	463	171	825	-	-
HCM Lane V/C Ratio	0.018	-	-	0.332	0.048	0.07	0.019	-	-
HCM Control Delay (s)	8.8	-	-	63.7	13.2	27.6	9.4	-	-
HCM Lane LOS	A	-	-	F	B	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	0.1	0.2	0.1	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	39	37	3	1	0
Future Vol, veh/h	0	39	37	3	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	40	3	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	43	0	-	0	84 42
Stage 1	-	-	-	-	42 -
Stage 2	-	-	-	-	42 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1566	-	-	-	918 1029
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	980 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1566	-	-	-	918 1029
Mov Cap-2 Maneuver	-	-	-	-	918 -
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	980 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1566	-	-	-	918
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	5.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	0	25	12	0	25
Future Vol, veh/h	14	0	25	12	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	27	13	0	27

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	15	0	82
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	67
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1603	-	920
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	956
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1603	-	904
Mov Cap-2 Maneuver	-	-	-	-	904
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	940

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1065	-	-	1603	-
HCM Lane V/C Ratio	0.026	-	-	0.017	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	8	2	10	6	0
Future Vol, veh/h	0	8	2	10	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	2	11	7	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	13	0	-	0	17
Stage 1	-	-	-	-	8
Stage 2	-	-	-	-	9
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1606	-	-	-	1001
Stage 1	-	-	-	-	1015
Stage 2	-	-	-	-	1014
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1606	-	-	-	1001
Mov Cap-2 Maneuver	-	-	-	-	1001
Stage 1	-	-	-	-	1015
Stage 2	-	-	-	-	1014

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1606	-	-	-	1001
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	2	0	0	8
Future Vol, veh/h	0	0	2	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	2	0	0	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	5
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	4
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1017
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1019
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1016
Mov Cap-2 Maneuver	-	-	-	-	1016
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1018

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.3	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions PM
10/09/2025

							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	132	12	389	209	24	552	
Future Volume (vph)	132	12	389	209	24	552	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.989			0.850			
Flt Protected	0.956				0.950		
Satd. Flow (prot)	1764	0	1900	1615	1805	1881	
Flt Permitted	0.956				0.950		
Satd. Flow (perm)	1764	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	5			237			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	181	16	458	246	26	600	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	197	0	458	246	26	600	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions PM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	14.2		29.5	29.5	6.2	33.6	
Actuated g/C Ratio	0.17		0.35	0.35	0.07	0.40	
v/c Ratio	0.66		0.69	0.34	0.20	0.81	
Control Delay	43.0		33.8	5.8	42.2	33.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	43.0		33.8	5.8	42.2	33.9	
LOS	D		C	A	D	C	
Approach Delay	43.0		24.0			34.3	
Approach LOS	D		C			C	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	16.9		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Gap		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	14.4		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	12.0		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	8.8		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	126		295	28	24	454	
Fuel Used(gal)	3		6	1	0	9	
CO Emissions (g/hr)	185		393	77	30	598	
NOx Emissions (g/hr)	36		76	15	6	116	
VOC Emissions (g/hr)	43		91	18	7	139	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	97		190	3	13	278	
Queue Length 95th (ft)	128		#402	51	40	#502	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	410		661	717	138	744	

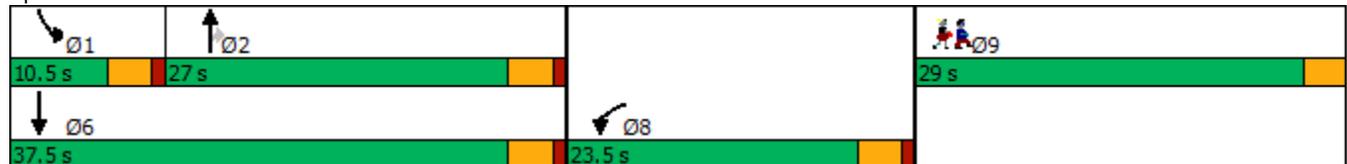


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.48		0.69	0.34	0.19	0.81	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	84.8
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	30.7
Intersection LOS:	C
Intersection Capacity Utilization:	43.8%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	87.4
50th %ile Actuated Cycle:	84.9
30th %ile Actuated Cycle:	82.5
10th %ile Actuated Cycle:	79.3
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↗		↖	↗	
Traffic Vol, veh/h	9	0	18	10	0	20	4	575	4	3	678	7
Future Vol, veh/h	9	0	18	10	0	20	4	575	4	3	678	7
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	11	0	21	36	0	71	5	653	5	3	699	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1410	1377	703	1385	1378	656	706	0	0	658	0	0
Stage 1	709	709	-	666	666	-	-	-	-	-	-	-
Stage 2	701	668	-	719	712	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	117	146	441	122	146	469	902	-	-	939	-	-
Stage 1	428	440	-	452	460	-	-	-	-	-	-	-
Stage 2	433	459	-	423	439	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	99	145	441	115	145	469	902	-	-	939	-	-
Mov Cap-2 Maneuver	99	145	-	115	145	-	-	-	-	-	-	-
Stage 1	425	439	-	449	457	-	-	-	-	-	-	-
Stage 2	365	456	-	401	438	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	24.3	33.4	0.1	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	902	-	-	99	441	231	939	-	-
HCM Lane V/C Ratio	0.005	-	-	0.108	0.049	0.464	0.003	-	-
HCM Control Delay (s)	9	-	-	45.7	13.6	33.4	8.8	-	-
HCM Lane LOS	A	-	-	E	B	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	2.3	0	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	27	10	0	1	0
Future Vol, veh/h	0	27	10	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	11	0	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	11	0	-	0	40 11
Stage 1	-	-	-	-	11 -
Stage 2	-	-	-	-	29 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1608	-	-	-	972 1070
Stage 1	-	-	-	-	1012 -
Stage 2	-	-	-	-	994 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1608	-	-	-	972 1070
Mov Cap-2 Maneuver	-	-	-	-	972 -
Stage 1	-	-	-	-	1012 -
Stage 2	-	-	-	-	994 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	972
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	5.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	11	0	8	2	0	16
Future Vol, veh/h	11	0	8	2	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	0	9	2	0	17

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	12	0	32
Stage 1	-	-	-	-	12
Stage 2	-	-	-	-	20
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1607	-	982
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	1003
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1607	-	976
Mov Cap-2 Maneuver	-	-	-	-	976
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	997

Approach	EB	WB	NB
HCM Control Delay, s	0	5.8	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1069	-	-	1607	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	6	1	1	5	0
Future Vol, veh/h	0	6	1	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	1	1	5	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	2	0	-	0	9
Stage 1	-	-	-	-	2
Stage 2	-	-	-	-	7
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1620	-	-	-	1011
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1016
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1620	-	-	-	1011
Mov Cap-2 Maneuver	-	-	-	-	1011
Stage 1	-	-	-	-	1021
Stage 2	-	-	-	-	1016

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1620	-	-	-	1011
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	7.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	1	0	0	6
Future Vol, veh/h	0	0	1	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1	0	0	7

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1	0	3
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	2
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1019
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1021
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1018
Mov Cap-2 Maneuver	-	-	-	-	1018
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1020

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	8.3	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions SAT
10/09/2025

							Ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	200	21	425	298	17	481	
Future Volume (vph)	200	21	425	298	17	481	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.987			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1763	0	1900	1615	1805	1881	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1763	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	5			309			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	274	29	500	351	18	523	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	303	0	500	351	18	523	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2025 Existing Conditions SAT
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	17.9		29.4	29.4	6.1	33.5	
Actuated g/C Ratio	0.20		0.33	0.33	0.07	0.38	
v/c Ratio	0.84		0.79	0.47	0.15	0.73	
Control Delay	55.0		40.6	7.4	42.1	31.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	55.0		40.6	7.4	42.1	31.4	
LOS	D		D	A	D	C	
Approach Delay	55.0		26.9			31.8	
Approach LOS	D		C			C	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	19.5		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Max		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	17.9		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	13.4		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	195		320	51	19	405	
Fuel Used(gal)	5		7	2	0	7	
CO Emissions (g/hr)	322		470	122	22	507	
NOx Emissions (g/hr)	63		91	24	4	99	
VOC Emissions (g/hr)	75		109	28	5	118	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	161		238	15	10	254	
Queue Length 95th (ft)	195		#454	74	31	378	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	392		631	742	132	713	

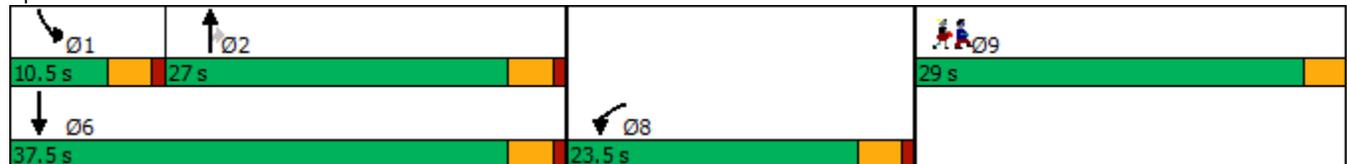


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.77		0.79	0.47	0.14	0.73	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	88.5
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	33.5
Intersection LOS:	C
Intersection Capacity Utilization:	44.3%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	90
50th %ile Actuated Cycle:	90
30th %ile Actuated Cycle:	88.4
10th %ile Actuated Cycle:	83.9
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	31.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	130	1	102	0	0	0	34	568	2	4	684	41
Future Vol, veh/h	130	1	102	0	0	0	34	568	2	4	684	41
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	155	1	121	0	0	0	39	645	2	4	705	42

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1458	1459	726	1519	1479	646	747	0	0	647	0	0
Stage 1	734	734	-	724	724	-	-	-	-	-	-	-
Stage 2	724	725	-	795	755	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 109	131	428	98	127	475	870	-	-	948	-	-
Stage 1	415	429	-	420	433	-	-	-	-	-	-	-
Stage 2	420	433	-	384	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 105	125	428	67	121	475	870	-	-	948	-	-
Mov Cap-2 Maneuver	~ 105	125	-	67	121	-	-	-	-	-	-	-
Stage 1	396	427	-	401	414	-	-	-	-	-	-	-
Stage 2	401	414	-	273	418	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	195.7	0	0.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	870	-	-	105	428	-	948	-	-
HCM Lane V/C Ratio	0.044	-	-	1.485	0.284	-	0.004	-	-
HCM Control Delay (s)	9.3	-	-	\$ 335.1	16.7	0	8.8	-	-
HCM Lane LOS	A	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	11.5	1.2	-	0	-	-

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	232	75	0	1	0
Future Vol, veh/h	0	232	75	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	252	82	0	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	82	0	-	0	334 82
Stage 1	-	-	-	-	82 -
Stage 2	-	-	-	-	252 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1515	-	-	-	661 978
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	790 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1515	-	-	-	661 978
Mov Cap-2 Maneuver	-	-	-	-	661 -
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	790 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1515	-	-	-	661
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	82	0	62	13	0	150
Future Vol, veh/h	82	0	62	13	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	0	67	14	0	163

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	89	0	237 89
Stage 1	-	-	-	-	89 -
Stage 2	-	-	-	-	148 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1506	-	751 969
Stage 1	-	-	-	-	934 -
Stage 2	-	-	-	-	880 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1506	-	717 969
Mov Cap-2 Maneuver	-	-	-	-	717 -
Stage 1	-	-	-	-	934 -
Stage 2	-	-	-	-	840 -

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	969	-	-	1506	-
HCM Lane V/C Ratio	0.168	-	-	0.045	-
HCM Control Delay (s)	9.5	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	72	8	5	10	0
Future Vol, veh/h	0	72	8	5	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	78	9	5	11	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	14	0	-	0	90
Stage 1	-	-	-	-	12
Stage 2	-	-	-	-	78
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1604	-	-	-	910
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	945
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1604	-	-	-	910
Mov Cap-2 Maneuver	-	-	-	-	910
Stage 1	-	-	-	-	1011
Stage 2	-	-	-	-	945

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1604	-	-	-	910
HCM Lane V/C Ratio	-	-	-	-	0.012
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	8	0	0	72
Future Vol, veh/h	0	0	8	0	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	9	0	0	78

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	19
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	18
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	998
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1005
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	992
Mov Cap-2 Maneuver	-	-	-	-	992
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	999

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.072	-	-	0.005	-
HCM Control Delay (s)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions AM

10/09/2025

							Ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	145	18	525	326	18	435	
Future Volume (vph)	145	18	525	326	18	435	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.985			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1690	0	1810	1538	1805	1845	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1690	0	1810	1538	1805	1845	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	6			274			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.72	0.72	0.97	0.97	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	85%	
Heavy Vehicles (%)	6%	6%	5%	5%	0%	3%	
Adj. Flow (vph)	201	25	541	336	21	435	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	226	0	541	336	21	435	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions AM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Protected Phases	8		2		1	6	9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	15.7		29.5	29.5	6.1	33.6	
Actuated g/C Ratio	0.18		0.34	0.34	0.07	0.39	
v/c Ratio	0.73		0.87	0.48	0.17	0.61	
Control Delay	46.3		47.0	8.7	42.1	26.2	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	46.3		47.0	8.7	42.1	26.2	
LOS	D		D	A	D	C	
Approach Delay	46.3		32.4			26.9	
Approach LOS	D		C			C	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	19.4		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Gap		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	16.4		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	13.6		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	10.0		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	144		377	68	20	289	
Fuel Used(gal)	3		9	2	0	5	
CO Emissions (g/hr)	218		621	144	24	354	
NOx Emissions (g/hr)	42		121	28	5	69	
VOC Emissions (g/hr)	50		144	33	5	82	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	113		254	21	11	187	
Queue Length 95th (ft)	144		#566	106	33	278	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		

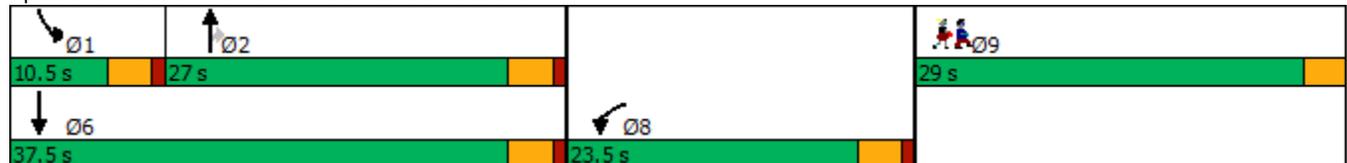


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Base Capacity (vph)	387		619	706	136	717	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.58		0.87	0.48	0.15	0.61	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	86.3
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	32.8
Intersection LOS:	C
Intersection Capacity Utilization:	43.4%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	89.9
50th %ile Actuated Cycle:	86.9
30th %ile Actuated Cycle:	84.1
10th %ile Actuated Cycle:	80.5
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔		↔	↔		↔	↔	
Traffic Vol, veh/h	25	0	18	2	0	3	18	825	8	14	534	25
Future Vol, veh/h	25	0	18	2	0	3	18	825	8	14	534	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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	42	42	42	96	96	96	83	83	83
Heavy Vehicles, %	17	0	18	0	0	0	0	5	0	0	3	39
Mvmt Flow	32	0	23	5	0	7	19	859	8	17	643	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1597	1597	658	1605	1608	863	673	0	0	867	0	0
Stage 1	692	692	-	901	901	-	-	-	-	-	-	-
Stage 2	905	905	-	704	707	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.38	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.462	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	79	108	437	86	106	357	927	-	-	785	-	-
Stage 1	411	448	-	335	360	-	-	-	-	-	-	-
Stage 2	311	358	-	431	441	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	75	103	437	79	102	357	927	-	-	785	-	-
Mov Cap-2 Maneuver	75	103	-	79	102	-	-	-	-	-	-	-
Stage 1	403	438	-	328	353	-	-	-	-	-	-	-
Stage 2	299	351	-	399	431	-	-	-	-	-	-	-

Approach	EB		WB		NE		SW	
HCM Control Delay, s	55.4		31.4		0.2		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	927	-	-	75	437	148	785	-	-
HCM Lane V/C Ratio	0.02	-	-	0.433	0.053	0.08	0.021	-	-
HCM Control Delay (s)	9	-	-	85.5	13.7	31.4	9.7	-	-
HCM Lane LOS	A	-	-	F	B	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.2	0.3	0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	42	40	3	0	0
Future Vol, veh/h	0	42	40	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	46	43	3	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	46	0	-	0	91 45
Stage 1	-	-	-	-	45 -
Stage 2	-	-	-	-	46 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1562	-	-	-	909 1025
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	976 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1562	-	-	-	909 1025
Mov Cap-2 Maneuver	-	-	-	-	909 -
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	976 -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	0	25	15	0	0
Future Vol, veh/h	17	0	25	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	27	16	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	18	0	88
Stage 1	-	-	-	-	18
Stage 2	-	-	-	-	70
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1599	-	913
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	953
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1599	-	897
Mov Cap-2 Maneuver	-	-	-	-	897
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	937

Approach	EB	WB	NB
HCM Control Delay, s	0	4.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1599	-
HCM Lane V/C Ratio	-	-	-	0.017	-
HCM Control Delay (s)	0	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	11	5	10	0	0
Future Vol, veh/h	0	11	5	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	5	11	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	16	0	-	0	23 11
Stage 1	-	-	-	-	11 -
Stage 2	-	-	-	-	12 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1602	-	-	-	993 1070
Stage 1	-	-	-	-	1012 -
Stage 2	-	-	-	-	1011 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1602	-	-	-	993 1070
Mov Cap-2 Maneuver	-	-	-	-	993 -
Stage 1	-	-	-	-	1012 -
Stage 2	-	-	-	-	1011 -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1602	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	5	0	0	11
Future Vol, veh/h	0	0	5	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	5	0	0	12

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	11
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	10
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1009
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1013
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1006
Mov Cap-2 Maneuver	-	-	-	-	1006
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Control Delay (s)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions PM
10/09/2025

							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	141	13	416	224	26	591	
Future Volume (vph)	141	13	416	224	26	591	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.988			0.850			
Flt Protected	0.956				0.950		
Satd. Flow (prot)	1762	0	1900	1615	1805	1881	
Flt Permitted	0.956				0.950		
Satd. Flow (perm)	1762	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	5			238			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	193	18	489	264	28	642	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	211	0	489	264	28	642	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions PM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	14.8		29.5	29.5	6.2	33.6	
Actuated g/C Ratio	0.17		0.35	0.35	0.07	0.39	
v/c Ratio	0.69		0.74	0.37	0.22	0.87	
Control Delay	44.1		36.5	6.8	42.8	39.3	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	44.1		36.5	6.8	42.8	39.3	
LOS	D		D	A	D	D	
Approach Delay	44.1		26.1			39.4	
Approach LOS	D		C			D	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	17.8		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Gap		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	15.1		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	12.7		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	9.3		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	136		309	37	26	489	
Fuel Used(gal)	3		6	1	0	10	
CO Emissions (g/hr)	201		434	89	33	686	
NOx Emissions (g/hr)	39		84	17	6	133	
VOC Emissions (g/hr)	47		101	21	8	159	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	105		211	9	14	312	
Queue Length 95th (ft)	136		#440	60	42	#556	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	407		657	714	137	739	

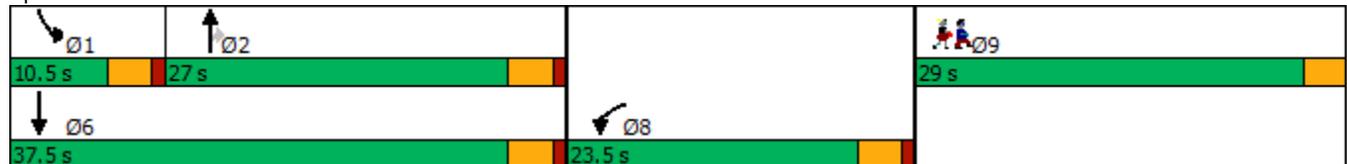


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.52		0.74	0.37	0.20	0.87	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	85.4
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	33.9
Intersection LOS:	C
Intersection Capacity Utilization:	46.4%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	88.3
50th %ile Actuated Cycle:	85.6
30th %ile Actuated Cycle:	83.2
10th %ile Actuated Cycle:	79.8
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↗		↖	↗	
Traffic Vol, veh/h	10	0	19	11	0	21	4	615	4	3	726	7
Future Vol, veh/h	10	0	19	11	0	21	4	615	4	3	726	7
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	12	0	23	39	0	75	5	699	5	3	748	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1507	1472	752	1481	1473	702	755	0	0	704	0	0
Stage 1	758	758	-	712	712	-	-	-	-	-	-	-
Stage 2	749	714	-	769	761	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	100	128	413	105	128	442	865	-	-	903	-	-
Stage 1	402	418	-	427	439	-	-	-	-	-	-	-
Stage 2	407	438	-	397	417	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	83	127	413	99	127	442	865	-	-	903	-	-
Mov Cap-2 Maneuver	83	127	-	99	127	-	-	-	-	-	-	-
Stage 1	400	417	-	424	436	-	-	-	-	-	-	-
Stage 2	336	435	-	374	416	-	-	-	-	-	-	-

Approach	EB		WB		NE		SW			
HCM Control Delay, s	28.4		43.8		0.1		0			
HCM LOS	D		E							

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	865	-	-	83	413	202	903	-	-
HCM Lane V/C Ratio	0.005	-	-	0.143	0.055	0.566	0.003	-	-
HCM Control Delay (s)	9.2	-	-	55.5	14.2	43.8	9	-	-
HCM Lane LOS	A	-	-	F	B	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	3.1	0	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	29	11	1	0	0
Future Vol, veh/h	0	29	11	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	12	1	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	13	0	-	0	45 13
Stage 1	-	-	-	-	13 -
Stage 2	-	-	-	-	32 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1606	-	-	-	965 1067
Stage 1	-	-	-	-	1010 -
Stage 2	-	-	-	-	991 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1606	-	-	-	965 1067
Mov Cap-2 Maneuver	-	-	-	-	965 -
Stage 1	-	-	-	-	1010 -
Stage 2	-	-	-	-	991 -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1606	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	4.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	0	8	3	0	16
Future Vol, veh/h	13	0	8	3	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	0	9	3	0	17

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	14	0	35
Stage 1	-	-	-	-	14
Stage 2	-	-	-	-	21
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1604	-	978
Stage 1	-	-	-	-	1009
Stage 2	-	-	-	-	1002
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1604	-	972
Mov Cap-2 Maneuver	-	-	-	-	972
Stage 1	-	-	-	-	1009
Stage 2	-	-	-	-	996

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1066	-	-	1604	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	8	2	1	5	0
Future Vol, veh/h	0	8	2	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	2	1	5	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	3	0	-	0	12
Stage 1	-	-	-	-	3
Stage 2	-	-	-	-	9
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1619	-	-	-	1008
Stage 1	-	-	-	-	1020
Stage 2	-	-	-	-	1014
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1619	-	-	-	1008
Mov Cap-2 Maneuver	-	-	-	-	1008
Stage 1	-	-	-	-	1020
Stage 2	-	-	-	-	1014

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1008
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	2	0	0	8
Future Vol, veh/h	0	0	2	0	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	2	0	0	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	5
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	4
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1017
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1019
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1016
Mov Cap-2 Maneuver	-	-	-	-	1016
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1018

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.3	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions SAT
10/09/2025

							Ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (vph)	214	24	455	319	18	515	
Future Volume (vph)	214	24	455	319	18	515	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.986			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1761	0	1900	1615	1805	1881	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1761	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	6			309			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	293	33	535	375	20	560	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	326	0	535	375	20	560	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 No-Build Conditions SAT
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	18.6		29.3	29.3	6.1	33.5	
Actuated g/C Ratio	0.21		0.33	0.33	0.07	0.38	
v/c Ratio	0.88		0.86	0.51	0.16	0.79	
Control Delay	58.8		45.8	8.7	42.5	34.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	58.8		45.8	8.7	42.5	34.9	
LOS	E		D	A	D	C	
Approach Delay	58.8		30.5			35.1	
Approach LOS	E		C			D	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	19.5		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Max		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	19.5		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Max		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	15.1		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	208		339	65	19	437	
Fuel Used(gal)	5		8	2	0	8	
CO Emissions (g/hr)	359		535	140	23	570	
NOx Emissions (g/hr)	70		104	27	5	111	
VOC Emissions (g/hr)	83		124	32	5	132	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	176		261	24	11	280	
Queue Length 95th (ft)	210		#499	92	33	#448	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	390		625	739	131	707	

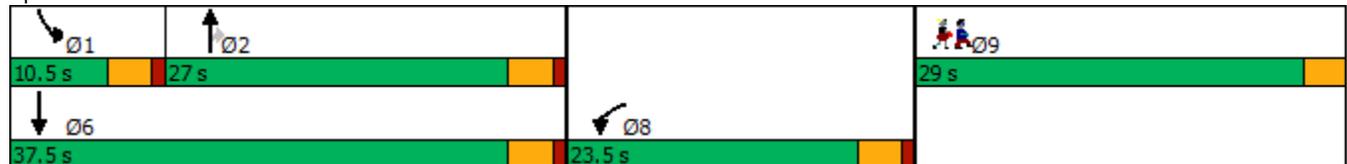


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.84		0.86	0.51	0.15	0.79	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	89.1
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	37.1
Intersection LOS:	D
Intersection Capacity Utilization:	47.1%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	90
50th %ile Actuated Cycle:	90
30th %ile Actuated Cycle:	90
10th %ile Actuated Cycle:	85.6
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	48											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	139	0	109	0	0	0	37	608	2	4	732	44
Future Vol, veh/h	139	0	109	0	0	0	37	608	2	4	732	44
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	165	0	130	0	0	0	42	691	2	4	755	45

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1562	1563	778	1627	1584	692	800	0	0	693	0	0
Stage 1	786	786	-	776	776	-	-	-	-	-	-	-
Stage 2	776	777	-	851	808	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 92	113	400	83	110	447	832	-	-	912	-	-
Stage 1	388	406	-	393	410	-	-	-	-	-	-	-
Stage 2	393	410	-	358	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 88	107	400	54	104	447	832	-	-	912	-	-
Mov Cap-2 Maneuver	~ 88	107	-	54	104	-	-	-	-	-	-	-
Stage 1	369	404	-	373	390	-	-	-	-	-	-	-
Stage 2	373	390	-	241	395	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	297.1	0	0.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	832	-	-	88	400	-	912	-	-
HCM Lane V/C Ratio	0.051	-	-	1.88	0.324	-	0.005	-	-
HCM Control Delay (s)	9.6	-	-	\$ 515.8	18.3	0	9	-	-
HCM Lane LOS	A	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	14.1	1.4	-	0	-	-

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	248	81	0	1	0
Future Vol, veh/h	0	248	81	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	270	88	0	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	88	0	-	0	358 88
Stage 1	-	-	-	-	88 -
Stage 2	-	-	-	-	270 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1508	-	-	-	640 970
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	775 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1508	-	-	-	640 970
Mov Cap-2 Maneuver	-	-	-	-	640 -
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	775 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1508	-	-	-	640
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	98	0	65	16	0	150
Future Vol, veh/h	98	0	65	16	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	0	71	17	0	163

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	107	0	266
Stage 1	-	-	-	-	107
Stage 2	-	-	-	-	159
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1484	-	723
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	870
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1484	-	688
Mov Cap-2 Maneuver	-	-	-	-	688
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	828

Approach	EB	WB	NB
HCM Control Delay, s	0	6.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	1484	-
HCM Lane V/C Ratio	0.172	-	-	0.048	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	88	11	5	10	0
Future Vol, veh/h	0	88	11	5	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	96	12	5	11	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	17	0	-	0	111
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	96
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1600	-	-	-	886
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	928
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1600	-	-	-	886
Mov Cap-2 Maneuver	-	-	-	-	886
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	928

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1600	-	-	-	886
HCM Lane V/C Ratio	-	-	-	-	0.012
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	0	0	88
Future Vol, veh/h	0	0	11	0	0	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	12	0	0	96

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	25
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	24
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	991
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	999
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	984
Mov Cap-2 Maneuver	-	-	-	-	984
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	992

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.088	-	-	0.007	-
HCM Control Delay (s)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	248	81	0	1	0
Future Vol, veh/h	0	248	81	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	270	88	0	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	88	0	-	0	358 88
Stage 1	-	-	-	-	88 -
Stage 2	-	-	-	-	270 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1508	-	-	-	640 970
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	775 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1508	-	-	-	640 970
Mov Cap-2 Maneuver	-	-	-	-	640 -
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	775 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1508	-	-	-	640
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	98	0	65	16	0	150
Future Vol, veh/h	98	0	65	16	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	0	71	17	0	163

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	107	0	266
Stage 1	-	-	-	-	107
Stage 2	-	-	-	-	159
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1484	-	723
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	870
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1484	-	688
Mov Cap-2 Maneuver	-	-	-	-	688
Stage 1	-	-	-	-	917
Stage 2	-	-	-	-	828

Approach	EB	WB	NB
HCM Control Delay, s	0	6.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	1484	-
HCM Lane V/C Ratio	0.172	-	-	0.048	-
HCM Control Delay (s)	9.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	88	11	5	10	0
Future Vol, veh/h	0	88	11	5	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	96	12	5	11	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	17	0	-	0	111
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	96
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1600	-	-	-	886
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	928
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1600	-	-	-	886
Mov Cap-2 Maneuver	-	-	-	-	886
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	928

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1600	-	-	-	886
HCM Lane V/C Ratio	-	-	-	-	0.012
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	0	0	88
Future Vol, veh/h	0	0	11	0	0	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	12	0	0	96

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	25
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	24
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	991
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	999
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	984
Mov Cap-2 Maneuver	-	-	-	-	984
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	992

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.088	-	-	0.007	-
HCM Control Delay (s)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions AM
10/09/2025

							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	152	18	530	330	18	446	
Future Volume (vph)	152	18	530	330	18	446	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.986			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1691	0	1810	1538	1805	1845	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1691	0	1810	1538	1805	1845	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	6			274			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.72	0.72	0.97	0.97	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	85%	
Heavy Vehicles (%)	6%	6%	5%	5%	0%	3%	
Adj. Flow (vph)	211	25	546	340	21	446	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	236	0	546	340	21	446	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions AM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Protected Phases	8		2		1	6	9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							1
Act Effct Green (s)	16.0		29.5	29.5	6.1	33.6	
Actuated g/C Ratio	0.18		0.34	0.34	0.07	0.39	
v/c Ratio	0.75		0.89	0.48	0.17	0.62	
Control Delay	47.5		48.5	9.0	42.1	26.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	47.5		48.5	9.0	42.1	26.8	
LOS	D		D	A	D	C	
Approach Delay	47.5		33.4			27.5	
Approach LOS	D		C			C	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	17.0		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	14.1		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	10.3		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	153		381	71	20	299	
Fuel Used(gal)	3		9	2	0	5	
CO Emissions (g/hr)	231		639	148	24	367	
NOx Emissions (g/hr)	45		124	29	5	71	
VOC Emissions (g/hr)	54		148	34	5	85	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	119		261	23	11	196	
Queue Length 95th (ft)	150		#572	110	33	287	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		

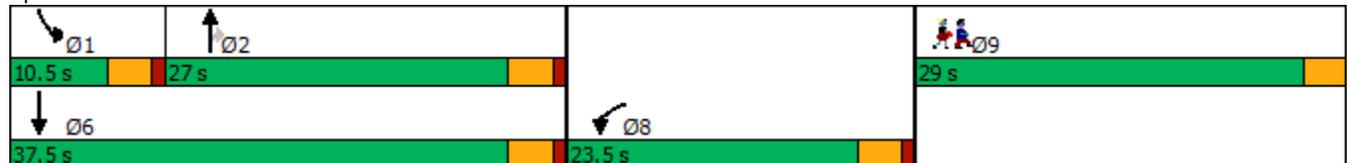


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Base Capacity (vph)	386		616	705	135	714	
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.61		0.89	0.48	0.16	0.62	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	86.6
Natural Cycle:	85
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	33.7
Intersection LOS:	C
Intersection Capacity Utilization:	44.1%
ICU Level of Service:	A
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	90
50th %ile Actuated Cycle:	87.5
30th %ile Actuated Cycle:	84.6
10th %ile Actuated Cycle:	80.8
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↕		↕		↕	↕		↕	↕	
Traffic Vol, veh/h	34	0	27	2	0	3	35	825	8	14	534	43
Future Vol, veh/h	34	0	27	2	0	3	35	825	8	14	534	43
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	42	42	42	96	96	96	83	83	83
Heavy Vehicles, %	17	0	18	0	0	0	0	5	0	0	3	39
Mvmt Flow	44	0	35	5	0	7	36	859	8	17	643	52

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1642	1642	669	1656	1664	863	695	0	0	867	0	0
Stage 1	703	703	-	935	935	-	-	-	-	-	-	-
Stage 2	939	939	-	721	729	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.5	6.38	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4	3.462	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	73	101	431	79	98	357	910	-	-	785	-	-
Stage 1	405	443	-	321	347	-	-	-	-	-	-	-
Stage 2	298	345	-	422	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	68	95	431	69	92	357	910	-	-	785	-	-
Mov Cap-2 Maneuver	68	95	-	69	92	-	-	-	-	-	-	-
Stage 1	389	433	-	308	333	-	-	-	-	-	-	-
Stage 2	280	331	-	379	422	-	-	-	-	-	-	-

Approach	EB		WB		NE		SW	
HCM Control Delay, s	76.6		34.5		0.4		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	910	-	-	68	431	134	785	-	-
HCM Lane V/C Ratio	0.04	-	-	0.649	0.081	0.089	0.021	-	-
HCM Control Delay (s)	9.1	-	-	126.3	14.1	34.5	9.7	-	-
HCM Lane LOS	A	-	-	F	B	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.8	0.3	0.3	0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	0 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022 1084
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022 1084
Mov Cap-2 Maneuver	-	-	-	-	1022 -
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	0 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022 1084
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022 1084
Mov Cap-2 Maneuver	-	-	-	-	1022 -
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	60	40	3	1	0
Future Vol, veh/h	0	60	40	3	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	43	3	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	46	0	-	0	110 45
Stage 1	-	-	-	-	45 -
Stage 2	-	-	-	-	65 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1562	-	-	-	887 1025
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	958 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1562	-	-	-	887 1025
Mov Cap-2 Maneuver	-	-	-	-	887 -
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	958 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	887
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	35	0	25	50	0	25
Future Vol, veh/h	35	0	25	50	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	0	27	54	0	27

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	38	0	146
Stage 1	-	-	-	-	38
Stage 2	-	-	-	-	108
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1572	-	846
Stage 1	-	-	-	-	984
Stage 2	-	-	-	-	916
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1572	-	831
Mov Cap-2 Maneuver	-	-	-	-	802
Stage 1	-	-	-	-	984
Stage 2	-	-	-	-	900

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1034	-	-	1572	-
HCM Lane V/C Ratio	0.026	-	-	0.017	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	29	40	10	6	0
Future Vol, veh/h	0	29	40	10	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	43	11	7	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	54	0	-	0	81 49
Stage 1	-	-	-	-	49 -
Stage 2	-	-	-	-	32 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1551	-	-	-	921 1020
Stage 1	-	-	-	-	973 -
Stage 2	-	-	-	-	991 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1551	-	-	-	921 1020
Mov Cap-2 Maneuver	-	-	-	-	868 -
Stage 1	-	-	-	-	973 -
Stage 2	-	-	-	-	991 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	868
HCM Lane V/C Ratio	-	-	-	-	0.008
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	0	5	35	0	11
Future Vol, veh/h	18	0	5	35	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	5	38	0	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	20	68
Stage 1	-	-	-	20
Stage 2	-	-	-	48
Critical Hdwy	-	4.12	-	6.22
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	1596	-	1058
Stage 1	-	-	-	1003
Stage 2	-	-	-	974
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	1596	-	934
Mov Cap-2 Maneuver	-	-	-	934
Stage 1	-	-	-	1003
Stage 2	-	-	-	971

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1058	-	-	1596	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions PM
10/09/2025

							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	148	13	435	236	26	606	
Future Volume (vph)	148	13	435	236	26	606	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.989			0.850			
Flt Protected	0.956				0.950		
Satd. Flow (prot)	1764	0	1900	1615	1805	1881	
Flt Permitted	0.956				0.950		
Satd. Flow (perm)	1764	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	5			239			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	203	18	512	278	28	659	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	221	0	512	278	28	659	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions PM
10/09/2025



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	15.1		29.5	29.5	6.2	33.6	
Actuated g/C Ratio	0.18		0.34	0.34	0.07	0.39	
v/c Ratio	0.70		0.78	0.39	0.22	0.90	
Control Delay	44.8		38.8	7.5	43.0	42.6	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	44.8		38.8	7.5	43.0	42.6	
LOS	D		D	A	D	D	
Approach Delay	44.8		27.8			42.6	
Approach LOS	D		C			D	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	18.4		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Gap		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	15.7		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	13.1		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	9.6		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	143		319	43	26	500	
Fuel Used(gal)	3		7	1	0	10	
CO Emissions (g/hr)	212		466	98	33	731	
NOx Emissions (g/hr)	41		91	19	6	142	
VOC Emissions (g/hr)	49		108	23	8	170	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	110		227	13	15	329	
Queue Length 95th (ft)	142		#469	67	42	#577	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	405		654	712	137	736	

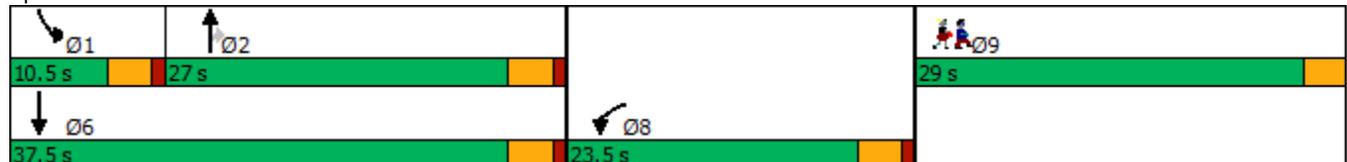


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.55		0.78	0.39	0.20	0.90	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	85.8
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	36.0
Intersection LOS:	D
Intersection Capacity Utilization	47.6%
ICU Level of Service	A
Analysis Period (min)	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	88.9
50th %ile Actuated Cycle:	86.2
30th %ile Actuated Cycle:	83.6
10th %ile Actuated Cycle:	80.1
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕	↗		↕		↖	↗		↖	↗	
Traffic Vol, veh/h	39	0	47	11	0	21	29	615	4	3	726	33
Future Vol, veh/h	39	0	47	11	0	21	29	615	4	3	726	33
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	46	0	56	39	0	75	33	699	5	3	748	34

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1576	1541	765	1567	1556	702	782	0	0	704	0	0
Stage 1	771	771	-	768	768	-	-	-	-	-	-	-
Stage 2	805	770	-	799	788	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	90	116	406	91	114	442	845	-	-	903	-	-
Stage 1	396	413	-	397	414	-	-	-	-	-	-	-
Stage 2	379	413	-	382	405	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	72	111	406	76	109	442	845	-	-	903	-	-
Mov Cap-2 Maneuver	72	111	-	76	109	-	-	-	-	-	-	-
Stage 1	381	412	-	382	398	-	-	-	-	-	-	-
Stage 2	302	397	-	328	404	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	62.6	64.4	0.4	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	845	-	-	72	406	166	903	-	-
HCM Lane V/C Ratio	0.039	-	-	0.645	0.138	0.688	0.003	-	-
HCM Control Delay (s)	9.4	-	-	119.6	15.3	64.4	9	-	-
HCM Lane LOS	A	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	0.5	4.1	0	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	0 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022 1084
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022 1084
Mov Cap-2 Maneuver	-	-	-	-	1022 -
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	86	61	1	0	0
Future Vol, veh/h	0	86	61	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	66	1	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	67	0	-	0	160
Stage 1	-	-	-	-	67
Stage 2	-	-	-	-	93
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1535	-	-	-	831
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	931
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1535	-	-	-	831
Mov Cap-2 Maneuver	-	-	-	-	831
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	931

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	0	8	53	0	16
Future Vol, veh/h	70	0	8	53	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	0	9	58	0	17

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	76	0	152
Stage 1	-	-	-	-	76
Stage 2	-	-	-	-	76
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1523	-	840
Stage 1	-	-	-	-	947
Stage 2	-	-	-	-	947
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1523	-	835
Mov Cap-2 Maneuver	-	-	-	-	812
Stage 1	-	-	-	-	947
Stage 2	-	-	-	-	941

Approach	EB	WB	NB
HCM Control Delay, s	0	1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1523	-
HCM Lane V/C Ratio	0.018	-	-	0.006	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	65	52	1	5	0
Future Vol, veh/h	0	65	52	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	71	57	1	5	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	58	0	-	0	129 58
Stage 1	-	-	-	-	58 -
Stage 2	-	-	-	-	71 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1546	-	-	-	865 1008
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	952 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1546	-	-	-	865 1008
Mov Cap-2 Maneuver	-	-	-	-	832 -
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	952 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1546	-	-	-	832
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	57	0	2	50	0	8
Future Vol, veh/h	57	0	2	50	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	0	2	54	0	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	62	0	120
Stage 1	-	-	-	-	62
Stage 2	-	-	-	-	58
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1541	-	876
Stage 1	-	-	-	-	961
Stage 2	-	-	-	-	965
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1541	-	875
Mov Cap-2 Maneuver	-	-	-	-	875
Stage 1	-	-	-	-	961
Stage 2	-	-	-	-	964

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1003	-	-	1541	-
HCM Lane V/C Ratio	0.009	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions SAT
10/09/2025

							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Lane Configurations							
Traffic Volume (vph)	217	24	459	322	18	520	
Future Volume (vph)	217	24	459	322	18	520	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.986			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1761	0	1900	1615	1805	1881	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1761	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	6			309			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	297	33	540	379	20	565	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	330	0	540	379	20	565	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	
Protected Phases	8		2		1	6	9

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build Conditions SAT
10/09/2025



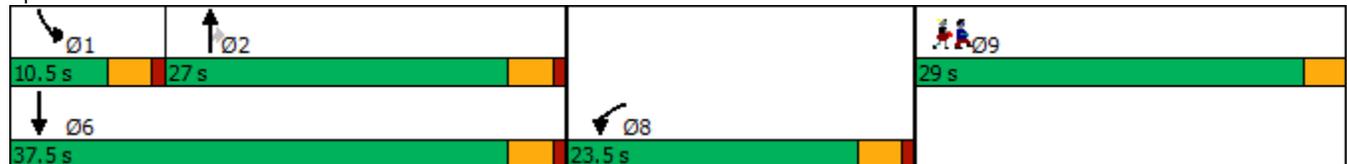
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	1.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	29.0
Total Split (s)	23.5		27.0	27.0	10.5	37.5	29.0
Total Split (%)	26.1%		30.0%	30.0%	11.7%	41.7%	32%
Maximum Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	None	Max	Ped
Walk Time (s)							7.0
Flash Dont Walk (s)							19.0
Pedestrian Calls (#/hr)							2
Act Effct Green (s)	18.7		29.4	29.4	6.1	33.5	
Actuated g/C Ratio	0.21		0.33	0.33	0.07	0.38	
v/c Ratio	0.88		0.86	0.51	0.16	0.80	
Control Delay	60.0		46.7	8.9	42.5	35.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0	
Total Delay	60.0		46.7	8.9	42.5	35.4	
LOS	E		D	A	D	D	
Approach Delay	60.0		31.1			35.6	
Approach LOS	E		C			D	
90th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
90th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
70th %ile Green (s)	19.5		23.0	23.0	6.5	33.5	26.0
70th %ile Term Code	Max		MaxR	MaxR	Max	MaxR	Ped
50th %ile Green (s)	19.5		33.5	33.5	0.0	33.5	26.0
50th %ile Term Code	Max		Hold	Hold	Skip	MaxR	Ped
30th %ile Green (s)	19.5		33.5	33.5	0.0	33.5	26.0
30th %ile Term Code	Max		Hold	Hold	Skip	MaxR	Ped
10th %ile Green (s)	15.4		33.5	33.5	0.0	33.5	26.0
10th %ile Term Code	Gap		Hold	Hold	Skip	MaxR	Ped
Stops (vph)	210		342	68	19	442	
Fuel Used(gal)	5		8	2	0	8	
CO Emissions (g/hr)	368		546	143	23	579	
NOx Emissions (g/hr)	72		106	28	5	113	
VOC Emissions (g/hr)	85		126	33	5	134	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	178		265	26	11	284	
Queue Length 95th (ft)	213		#505	95	33	#455	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	390		625	738	131	707	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø9
Starvation Cap Reductn	0		0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.85		0.86	0.51	0.15	0.80	

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	89.2
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	37.8
Intersection LOS:	D
Intersection Capacity Utilization	47.5%
ICU Level of Service	A
Analysis Period (min)	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	90
50th %ile Actuated Cycle:	90
30th %ile Actuated Cycle:	90
10th %ile Actuated Cycle:	85.9
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection												
Int Delay, s/veh	57.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔		↔	↔		↔	↔	
Traffic Vol, veh/h	146	1	116	0	0	0	45	608	2	4	732	52
Future Vol, veh/h	146	1	116	0	0	0	45	608	2	4	732	52
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									
Storage Length	-	-	130	-	-	-	90	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	28	28	28	88	88	88	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	1	0
Mvmt Flow	174	1	138	0	0	0	51	691	2	4	755	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1584	1585	782	1654	1611	692	809	0	0	693	0	0
Stage 1	790	790	-	794	794	-	-	-	-	-	-	-
Stage 2	794	795	-	860	817	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 89	109	397	79	105	447	825	-	-	912	-	-
Stage 1	386	404	-	384	403	-	-	-	-	-	-	-
Stage 2	384	402	-	353	393	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 85	102	397	49	98	447	825	-	-	912	-	-
Mov Cap-2 Maneuver	~ 85	102	-	49	98	-	-	-	-	-	-	-
Stage 1	362	402	-	360	378	-	-	-	-	-	-	-
Stage 2	360	377	-	229	391	-	-	-	-	-	-	-

Approach	EB	WB	NE	SW
HCM Control Delay, s	341.1	0	0.7	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NEL	NET	NER	EBLn1	EBLn2	WBLn1	SWL	SWT	SWR
Capacity (veh/h)	825	-	-	85	397	-	912	-	-
HCM Lane V/C Ratio	0.062	-	-	2.059	0.348	-	0.005	-	-
HCM Control Delay (s)	9.7	-	-	595.4	18.8	0	9	-	-
HCM Lane LOS	A	-	-	F	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	15.5	1.5	-	0	-	-

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	0 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022 1084
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022 1084
Mov Cap-2 Maneuver	-	-	-	-	1022 -
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1 1
Stage 1	-	-	-	-	1 -
Stage 2	-	-	-	-	0 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022 1084
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1022 1084
Mov Cap-2 Maneuver	-	-	-	-	1022 -
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	- -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1	0	2
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1622	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1622	-	1021
Mov Cap-2 Maneuver	-	-	-	-	1021
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	1022

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	262	97	0	0	0
Future Vol, veh/h	0	262	97	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	285	105	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	105	0	-	0	390 105
Stage 1	-	-	-	-	105 -
Stage 2	-	-	-	-	285 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1486	-	-	-	614 949
Stage 1	-	-	-	-	919 -
Stage 2	-	-	-	-	763 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1486	-	-	-	614 949
Mov Cap-2 Maneuver	-	-	-	-	614 -
Stage 1	-	-	-	-	919 -
Stage 2	-	-	-	-	763 -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1486	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	112	0	65	32	0	150
Future Vol, veh/h	112	0	65	32	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	0	71	35	0	163

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	122	0	299
Stage 1	-	-	-	-	122
Stage 2	-	-	-	-	177
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1465	-	692
Stage 1	-	-	-	-	903
Stage 2	-	-	-	-	854
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1465	-	658
Mov Cap-2 Maneuver	-	-	-	-	687
Stage 1	-	-	-	-	903
Stage 2	-	-	-	-	812

Approach	EB	WB	NB
HCM Control Delay, s	0	5.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	929	-	-	1465	-
HCM Lane V/C Ratio	0.176	-	-	0.048	-
HCM Control Delay (s)	9.7	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	102	27	5	10	0
Future Vol, veh/h	0	102	27	5	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	111	29	5	11	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	34	0	-	0	143 32
Stage 1	-	-	-	-	32 -
Stage 2	-	-	-	-	111 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1578	-	-	-	850 1042
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	914 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1578	-	-	-	850 1042
Mov Cap-2 Maneuver	-	-	-	-	816 -
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	914 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1578	-	-	-	816
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	6.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	0	11	16	0	88
Future Vol, veh/h	14	0	11	16	0	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	12	17	0	96

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	15	0	56
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	41
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1603	-	952
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	981
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1603	-	944
Mov Cap-2 Maneuver	-	-	-	-	944
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	973

Approach	EB	WB	NB
HCM Control Delay, s	0	3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1065	-	-	1603	-
HCM Lane V/C Ratio	0.09	-	-	0.007	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

2032 Build w Mitigation Conditions AM

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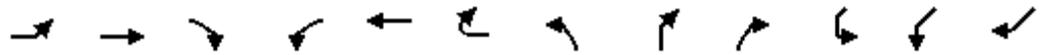
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations												
Traffic Volume (vph)	34	0	27	2	0	3	35	825	8	14	534	43
Future Volume (vph)	34	0	27	2	0	3	35	825	8	14	534	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		130	0		0	90	0			100	0
Storage Lanes	0		1	0		0	1	1			1	0
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.921			0.850				0.989
Flt Protected		0.950			0.980		0.950			0.950	0.956	
Satd. Flow (prot)	0	1543	1369	0	1715	0	1805	1539	0	1805	1700	0
Flt Permitted		0.750			0.922		0.950			0.141	0.956	
Satd. Flow (perm)	0	1218	1369	0	1613	0	1805	1539	0	268	1700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			94		94			94				23
Link Speed (mph)		30			30		30					30
Link Distance (ft)		735			153		621					434
Travel Time (s)		16.7			3.5		14.1					9.9
Peak Hour Factor	0.77	0.77	0.77	0.42	0.42	0.42	0.96	0.96	0.96	0.83	0.83	0.83
Heavy Vehicles (%)	17%	0%	18%	0%	0%	0%	0%	5%	0%	0%	3%	39%
Adj. Flow (vph)	44	0	35	5	0	7	36	859	8	17	643	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	35	0	12	0	36	867	0	17	695	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		0			0		12				24	
Link Offset(ft)		0			0		0				0	
Crosswalk Width(ft)		16			16		16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	9	15	15	9
Number of Detectors	1	2	1	1	2		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Right		Left	Left	
Leading Detector (ft)	20	100	20	20	100		20	20		20	20	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	20		20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA	Perm	Perm	NA		Prot	Perm		Perm	Prot	
Protected Phases		4			8		2!				6!	

Lane Group	Ø1
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	1

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

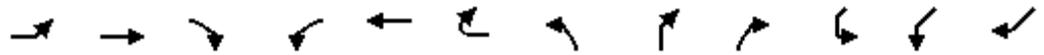
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Permitted Phases	4		4	8				2		6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		38.0	38.0		47.5	47.5	
Total Split (%)	32.1%	32.1%	32.1%	32.1%	32.1%		54.3%	54.3%		67.9%	67.9%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		33.5	33.5		43.0	43.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		14.1	14.1		14.1		45.0	45.0		46.9	46.9	
Actuated g/C Ratio		0.20	0.20		0.20		0.64	0.64		0.67	0.67	
v/c Ratio		0.18	0.10		0.03		0.03	0.85		0.09	0.61	
Control Delay		23.3	0.6		0.2		7.0	21.9		5.7	9.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.2	
Total Delay		23.3	0.6		0.2		7.0	21.9		5.7	9.2	
LOS		C	A		A		A	C		A	A	
Approach Delay		13.2			0.2		21.3				9.2	
Approach LOS		B			A		C				A	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		33.5	33.5		43.0	43.0	
90th %ile Term Code	Hold	Hold	Hold	Max	Max		Coord	Coord		Coord	Coord	
70th %ile Green (s)	16.9	16.9	16.9	16.9	16.9		44.1	44.1		44.1	44.1	
70th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
50th %ile Green (s)	14.6	14.6	14.6	14.6	14.6		46.4	46.4		46.4	46.4	
50th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
30th %ile Green (s)	12.3	12.3	12.3	12.3	12.3		48.7	48.7		48.7	48.7	
30th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
10th %ile Green (s)	8.9	8.9	8.9	8.9	8.9		52.1	52.1		52.1	52.1	
10th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
Stops (vph)		28	0		0		16	481		7	350	
Fuel Used(gal)		1	0		0		0	10		0	5	
CO Emissions (g/hr)		36	11		0		22	727		7	346	
NOx Emissions (g/hr)		7	2		0		4	141		1	67	
VOC Emissions (g/hr)		8	3		0		5	168		2	80	
Dilemma Vehicles (#)		0	0		0		0	0		0	0	
Queue Length 50th (ft)		16	0		0		5	208		2	135	
Queue Length 95th (ft)		33	0		0		22	#627		m6	166	
Internal Link Dist (ft)		655			73		541				354	
Turn Bay Length (ft)			130				90			100	100	
Base Capacity (vph)		313	421		484		1159	1022		179	1145	

Lane Group	Ø1
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	9.5
Total Split (%)	14%
Maximum Green (s)	5.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	5.0
90th %ile Term Code	Max
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

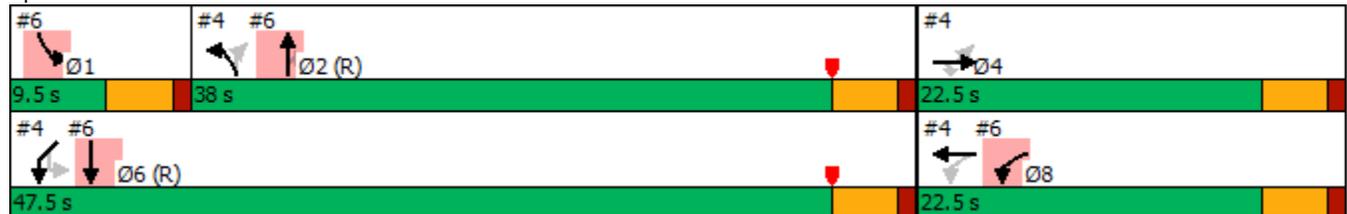


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Starvation Cap Reductn		0	0		0		0	0		0	70	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.14	0.08		0.02		0.03	0.85		0.09	0.65	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	15.7
Intersection LOS:	B
Intersection Capacity Utilization	63.2%
ICU Level of Service	B
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.
!	Phase conflict between lane groups.

Splits and Phases: 4: Forth Hill St & Bare Cove Park Dr & Fort Hill St



Lane Group	Ø1
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

6: Fort Hill St/West St & South St
Lanes, Volumes, Timings

2032 Build w Mitigation Conditions AM

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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Lane Configurations							
Traffic Volume (vph)	152	18	530	330	18	446	
Future Volume (vph)	152	18	530	330	18	446	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.986			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1691	0	1810	1538	1805	1845	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1691	0	1810	1538	1805	1845	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	8			340			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.72	0.72	0.97	0.97	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	85%	
Heavy Vehicles (%)	6%	6%	5%	5%	0%	3%	
Adj. Flow (vph)	211	25	546	340	21	446	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	236	0	546	340	21	446	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Protected Phases	8		2		1	6	4
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.5		38.0	38.0	9.5	47.5	22.5
Total Split (%)	32.1%		54.3%	54.3%	13.6%	67.9%	32%
Maximum Green (s)	18.0		33.5	33.5	5.0	43.0	18.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max	None
Walk Time (s)	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0	0		0	0
Act Effct Green (s)	14.1		45.0	45.0	5.7	46.9	
Actuated g/C Ratio	0.20		0.64	0.64	0.08	0.67	
v/c Ratio	0.68		0.47	0.31	0.14	0.36	
Control Delay	34.6		6.8	1.6	32.5	6.7	
Queue Delay	0.0		0.3	0.0	0.0	0.0	
Total Delay	34.6		7.0	1.6	32.5	6.7	
LOS	C		A	A	C	A	
Approach Delay	34.6		5.0			7.9	
Approach LOS	C		A			A	
90th %ile Green (s)	18.0		33.5	33.5	5.0	43.0	18.0
90th %ile Term Code	Max		Coord	Coord	Max	Coord	Hold
70th %ile Green (s)	16.9		44.1	44.1	0.0	44.1	16.9
70th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
50th %ile Green (s)	14.6		46.4	46.4	0.0	46.4	14.6
50th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
30th %ile Green (s)	12.3		48.7	48.7	0.0	48.7	12.3
30th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
10th %ile Green (s)	8.9		52.1	52.1	0.0	52.1	8.9
10th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
Stops (vph)	147		140	32	21	158	
Fuel Used(gal)	3		3	1	0	3	
CO Emissions (g/hr)	198		230	98	22	204	
NOx Emissions (g/hr)	38		45	19	4	40	
VOC Emissions (g/hr)	46		53	23	5	47	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	90		52	0	9	72	
Queue Length 95th (ft)	113		m115	m15	27	127	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Base Capacity (vph)	440		1162	1109	146	1235	
Starvation Cap Reductn	0		180	0	0	0	
Spillback Cap Reductn	0		0	0	0	57	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.54		0.56	0.31	0.14	0.38	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 10.2

Intersection LOS: B

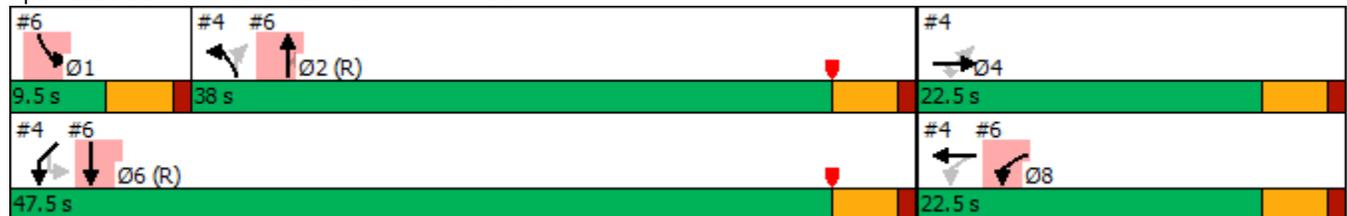
Intersection Capacity Utilization 44.9%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↔			↔
Traffic Vol, veh/h	0	0	10	25	0	13
Future Vol, veh/h	0	0	10	25	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	11	27	0	14

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

Approach	WB	SB
HCM Control Delay, s	0	8.5
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1051
HCM Lane V/C Ratio	-	-	0.013
HCM Control Delay (s)	-	-	8.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	60	75	3	1	0
Future Vol, veh/h	0	60	75	3	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	82	3	1	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	85	0	-	0	149 84
Stage 1	-	-	-	-	84 -
Stage 2	-	-	-	-	65 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1512	-	-	-	843 975
Stage 1	-	-	-	-	939 -
Stage 2	-	-	-	-	958 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1512	-	-	-	843 975
Mov Cap-2 Maneuver	-	-	-	-	843 -
Stage 1	-	-	-	-	939 -
Stage 2	-	-	-	-	958 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	843
HCM Lane V/C Ratio	-	-	-	-	0.001
HCM Control Delay (s)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	35	0	25	50	0	25
Future Vol, veh/h	35	0	25	50	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	0	27	54	0	27

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	38	0	146 38
Stage 1	-	-	-	-	38 -
Stage 2	-	-	-	-	108 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1572	-	846 1034
Stage 1	-	-	-	-	984 -
Stage 2	-	-	-	-	916 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1572	-	831 1034
Mov Cap-2 Maneuver	-	-	-	-	831 -
Stage 1	-	-	-	-	984 -
Stage 2	-	-	-	-	900 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1034	-	-	1572	-
HCM Lane V/C Ratio	0.026	-	-	0.017	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	29	40	10	6	0
Future Vol, veh/h	0	29	40	10	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	43	11	7	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	54	0	-	0	81 49
Stage 1	-	-	-	-	49 -
Stage 2	-	-	-	-	32 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1551	-	-	-	921 1020
Stage 1	-	-	-	-	973 -
Stage 2	-	-	-	-	991 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1551	-	-	-	921 1020
Mov Cap-2 Maneuver	-	-	-	-	921 -
Stage 1	-	-	-	-	973 -
Stage 2	-	-	-	-	991 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1551	-	-	-	921
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	0	5	35	0	11
Future Vol, veh/h	18	0	5	35	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	5	38	0	12

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	20	0	68
Stage 1	-	-	-	-	20
Stage 2	-	-	-	-	48
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1596	-	937
Stage 1	-	-	-	-	1003
Stage 2	-	-	-	-	974
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1596	-	934
Mov Cap-2 Maneuver	-	-	-	-	934
Stage 1	-	-	-	-	1003
Stage 2	-	-	-	-	971

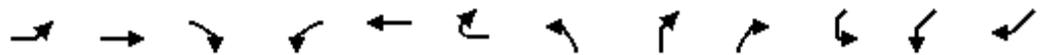
Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1058	-	-	1596	-
HCM Lane V/C Ratio	0.011	-	-	0.003	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

2032 Build w Mitigation Conditions PM

10/09/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations												
Traffic Volume (vph)	39	0	47	11	0	21	29	615	4	3	726	33
Future Volume (vph)	39	0	47	11	0	21	29	615	4	3	726	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		130	0		0	90	0			100	0
Storage Lanes	0		1	0		0	1	1			1	0
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.911			0.850			0.993	
Flt Protected		0.950			0.983		0.950			0.950	0.954	
Satd. Flow (prot)	0	1805	1615	0	1701	0	1805	1615	0	1805	1783	0
Flt Permitted		0.705			0.888		0.950			0.223	0.954	
Satd. Flow (perm)	0	1340	1615	0	1537	0	1805	1615	0	424	1783	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86		86			86			23	
Link Speed (mph)		30			30		30				30	
Link Distance (ft)		735			153		621				434	
Travel Time (s)		16.7			3.5		14.1				9.9	
Peak Hour Factor	0.84	0.84	0.84	0.28	0.28	0.28	0.88	0.88	0.88	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Adj. Flow (vph)	46	0	56	39	0	75	33	699	5	3	748	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	56	0	114	0	33	704	0	3	782	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		0			0		12				24	
Link Offset(ft)		0			0		0				0	
Crosswalk Width(ft)		16			16		16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	9	15	15	9
Number of Detectors	1	2	1	1	2		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Right		Left	Left	
Leading Detector (ft)	20	100	20	20	100		20	20		20	20	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	20		20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA	Perm	Perm	NA		Prot	Perm		Perm	Prot	
Protected Phases		4			8		2!				6!	

Lane Group	Ø1
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	1

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

2032 Build w Mitigation Conditions PM

10/09/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Permitted Phases	4		4	8				2		6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6	22.6	22.6	22.6		37.8	37.8		47.4	47.4	
Total Split (%)	32.3%	32.3%	32.3%	32.3%	32.3%		54.0%	54.0%		67.7%	67.7%	
Maximum Green (s)	18.1	18.1	18.1	18.1	18.1		33.3	33.3		42.9	42.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		13.5	13.5		13.5		43.3	43.3		47.5	47.5	
Actuated g/C Ratio		0.19	0.19		0.19		0.62	0.62		0.68	0.68	
v/c Ratio		0.18	0.15		0.31		0.03	0.68		0.01	0.64	
Control Delay		23.5	3.4		10.6		8.4	15.4		4.0	7.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.1	
Total Delay		23.5	3.4		10.6		8.4	15.4		4.0	7.5	
LOS		C	A		B		A	B		A	A	
Approach Delay		12.5			10.6		15.1				7.5	
Approach LOS		B			B		B				A	
90th %ile Green (s)	18.1	18.1	18.1	18.1	18.1		33.3	33.3		42.9	42.9	
90th %ile Term Code	Hold	Hold	Hold	Max	Max		Coord	Coord		Coord	Coord	
70th %ile Green (s)	15.9	15.9	15.9	15.9	15.9		33.9	33.9		45.1	45.1	
70th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
50th %ile Green (s)	13.7	13.7	13.7	13.7	13.7		47.3	47.3		47.3	47.3	
50th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
30th %ile Green (s)	11.6	11.6	11.6	11.6	11.6		49.4	49.4		49.4	49.4	
30th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
10th %ile Green (s)	8.4	8.4	8.4	8.4	8.4		52.6	52.6		52.6	52.6	
10th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
Stops (vph)		31	5		10		15	351		2	406	
Fuel Used(gal)		1	0		0		0	7		0	6	
CO Emissions (g/hr)		41	23		11		19	481		2	417	
NOx Emissions (g/hr)		8	4		2		4	94		0	81	
VOC Emissions (g/hr)		9	5		3		4	112		0	97	
Dilemma Vehicles (#)		0	0		0		0	0		0	0	
Queue Length 50th (ft)		17	0		10		4	121		0	124	
Queue Length 95th (ft)		37	11		0		20	#428		m1	162	
Internal Link Dist (ft)		655			73		541				354	
Turn Bay Length (ft)			130				90			100	100	
Base Capacity (vph)		346	481		461		1116	1031		287	1216	

Lane Group	Ø1
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	9.6
Total Split (%)	14%
Maximum Green (s)	5.6
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	5.6
90th %ile Term Code	Max
70th %ile Green (s)	7.2
70th %ile Term Code	Gap
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

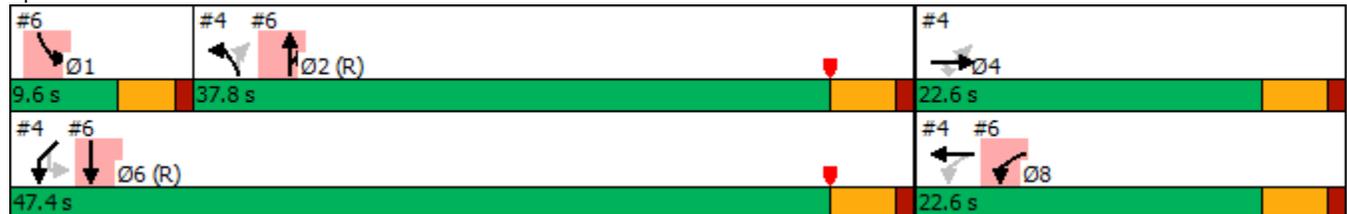


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Starvation Cap Reductn		0	0		0		0	0		0	22	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.13	0.12		0.25		0.03	0.68		0.01	0.65	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	33.3 (48%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	11.2
Intersection LOS:	B
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.
!	Phase conflict between lane groups.

Splits and Phases: 4: Forth Hill St & Bare Cove Park Dr & Fort Hill St



Lane Group	Ø1
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Lane Configurations							
Traffic Volume (vph)	148	13	435	236	26	606	
Future Volume (vph)	148	13	435	236	26	606	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.989			0.850			
Flt Protected	0.956				0.950		
Satd. Flow (prot)	1764	0	1900	1615	1805	1881	
Flt Permitted	0.956				0.950		
Satd. Flow (perm)	1764	0	1900	1615	1805	1881	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	6			278			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.73	0.73	0.85	0.85	0.92	0.92	
Heavy Vehicles (%)	2%	0%	0%	0%	0%	1%	
Adj. Flow (vph)	203	18	512	278	28	659	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	221	0	512	278	28	659	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Prot	Prot	NA	
Protected Phases	8		2	2	1	6	4



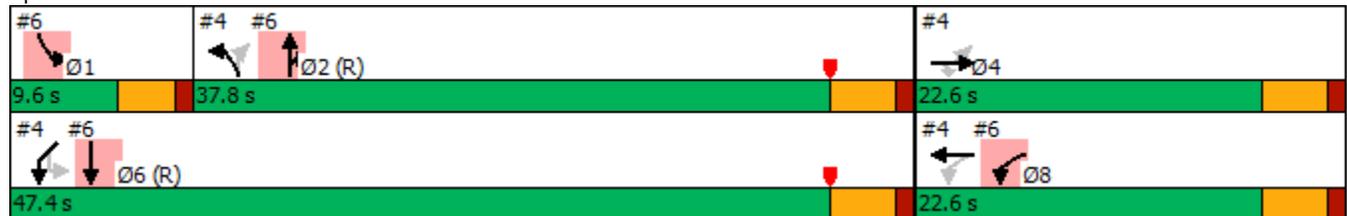
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Permitted Phases							
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.6		37.8	37.8	9.6	47.4	22.6
Total Split (%)	32.3%		54.0%	54.0%	13.7%	67.7%	32%
Maximum Green (s)	18.1		33.3	33.3	5.6	42.9	18.1
Yellow Time (s)	3.5		3.5	3.5	3.0	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.0	4.5	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max	None
Walk Time (s)	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0	0		0	0
Act Effct Green (s)	13.5		43.3	43.3	6.1	47.5	
Actuated g/C Ratio	0.19		0.62	0.62	0.09	0.68	
v/c Ratio	0.64		0.44	0.25	0.18	0.52	
Control Delay	33.3		8.6	2.3	32.5	8.1	
Queue Delay	0.0		0.3	0.0	0.0	0.0	
Total Delay	33.3		8.9	2.3	32.5	8.2	
LOS	C		A	A	C	A	
Approach Delay	33.3		6.6			9.2	
Approach LOS	C		A			A	
90th %ile Green (s)	18.1		33.3	33.3	5.6	42.9	18.1
90th %ile Term Code	Max		Coord	Coord	Max	Coord	Hold
70th %ile Green (s)	15.9		33.9	33.9	7.2	45.1	15.9
70th %ile Term Code	Gap		Coord	Coord	Gap	Coord	Hold
50th %ile Green (s)	13.7		47.3	47.3	0.0	47.3	13.7
50th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
30th %ile Green (s)	11.6		49.4	49.4	0.0	49.4	11.6
30th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
10th %ile Green (s)	8.4		52.6	52.6	0.0	52.6	8.4
10th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
Stops (vph)	138		134	31	26	292	
Fuel Used(gal)	3		3	1	0	5	
CO Emissions (g/hr)	184		208	76	29	354	
NOx Emissions (g/hr)	36		40	15	6	69	
VOC Emissions (g/hr)	43		48	18	7	82	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	86		57	0	11	118	
Queue Length 95th (ft)	108		132	16	34	236	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		
Base Capacity (vph)	460		1175	1105	157	1275	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Starvation Cap Reductn	0		201	0	0	0	
Spillback Cap Reductn	0		0	0	0	24	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.48		0.53	0.25	0.18	0.53	

Intersection Summary	
Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	33.3 (48%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization	48.4%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↔			↔
Traffic Vol, veh/h	0	0	15	35	0	40
Future Vol, veh/h	0	0	15	35	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	16	38	0	43

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0 - 35
Stage 1	-	- -
Stage 2	-	- -
Critical Hdwy	-	- - 6.22
Critical Hdwy Stg 1	-	- -
Critical Hdwy Stg 2	-	- -
Follow-up Hdwy	-	- - 3.318
Pot Cap-1 Maneuver	-	- 0 1038
Stage 1	-	- 0 -
Stage 2	-	- 0 -
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	- - 1038
Mov Cap-2 Maneuver	-	- -
Stage 1	-	- -
Stage 2	-	- -

Approach	WB	SB
HCM Control Delay, s	0	8.6
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1038
HCM Lane V/C Ratio	-	-	0.042
HCM Control Delay (s)	-	-	8.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	86	61	1	0	0
Future Vol, veh/h	0	86	61	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	66	1	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	67	0	-	0	160
Stage 1	-	-	-	-	67
Stage 2	-	-	-	-	93
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1535	-	-	-	831
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	931
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1535	-	-	-	831
Mov Cap-2 Maneuver	-	-	-	-	831
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	931

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	0	8	53	0	16
Future Vol, veh/h	70	0	8	53	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	0	9	58	0	17

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	76	0	152
Stage 1	-	-	-	-	76
Stage 2	-	-	-	-	76
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1523	-	840
Stage 1	-	-	-	-	947
Stage 2	-	-	-	-	947
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1523	-	835
Mov Cap-2 Maneuver	-	-	-	-	835
Stage 1	-	-	-	-	947
Stage 2	-	-	-	-	941

Approach	EB	WB	NB
HCM Control Delay, s	0	1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1523	-
HCM Lane V/C Ratio	0.018	-	-	0.006	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	65	52	1	5	0
Future Vol, veh/h	0	65	52	1	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	71	57	1	5	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	58	0	-	0	129 58
Stage 1	-	-	-	-	58 -
Stage 2	-	-	-	-	71 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1546	-	-	-	865 1008
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	952 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1546	-	-	-	865 1008
Mov Cap-2 Maneuver	-	-	-	-	865 -
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	952 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1546	-	-	-	865
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	57	0	2	50	0	8
Future Vol, veh/h	57	0	2	50	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	0	2	54	0	9

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	62	0	120
Stage 1	-	-	-	-	62
Stage 2	-	-	-	-	58
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1541	-	876
Stage 1	-	-	-	-	961
Stage 2	-	-	-	-	965
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1541	-	875
Mov Cap-2 Maneuver	-	-	-	-	875
Stage 1	-	-	-	-	961
Stage 2	-	-	-	-	964

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1003	-	-	1541	-
HCM Lane V/C Ratio	0.009	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

2032 Build w Mitigation Conditions SAT

10/09/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations		↕	↗		↕		↖	↘		↖	↗	
Traffic Volume (vph)	146	0	116	0	0	0	45	608	2	4	732	52
Future Volume (vph)	146	0	116	0	0	0	45	608	2	4	732	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		130	0		0	90	0			100	0
Storage Lanes	0		1	0		0	1	1			1	0
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850					0.850			0.990	
Flt Protected		0.950					0.950			0.950	0.955	
Satd. Flow (prot)	0	1543	1369	0	1900	0	1805	1538	0	1805	1704	0
Flt Permitted		0.757					0.950			0.238	0.955	
Satd. Flow (perm)	0	1229	1369	0	1900	0	1805	1538	0	452	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			151					94			23	
Link Speed (mph)		30			30		30				30	
Link Distance (ft)		735			153		621				434	
Travel Time (s)		16.7			3.5		14.1				9.9	
Peak Hour Factor	0.77	0.77	0.77	0.42	0.42	0.42	0.96	0.96	0.96	0.83	0.83	0.83
Heavy Vehicles (%)	17%	0%	18%	0%	0%	0%	0%	5%	0%	0%	3%	39%
Adj. Flow (vph)	190	0	151	0	0	0	47	633	2	5	882	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	151	0	0	0	47	635	0	5	945	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Right	Left	Left	Right
Median Width(ft)		0			0		12				24	
Link Offset(ft)		0			0		0				0	
Crosswalk Width(ft)		16			16		16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	9	15	15	9
Number of Detectors	1	2	1	1	2		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Right		Left	Left	
Leading Detector (ft)	20	100	20	20	100		20	20		20	20	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	20		20	20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA	Perm				Prot	Perm		Perm	Prot	
Protected Phases		4			8		2!				6!	

Lane Group	Ø1
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	1

4: Forth Hill St & Bare Cove Park Dr & Fort Hill St
Lanes, Volumes, Timings

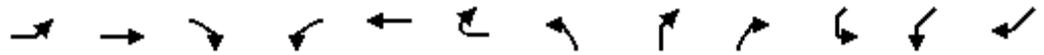
2032 Build w Mitigation Conditions SAT

10/09/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Permitted Phases	4		4	8				2		6		
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		38.0	38.0		47.5	47.5	
Total Split (%)	32.1%	32.1%	32.1%	32.1%	32.1%		54.3%	54.3%		67.9%	67.9%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		33.5	33.5		43.0	43.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag				
Lead-Lag Optimize?							Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		16.6	16.6				40.6	40.6		44.4	44.4	
Actuated g/C Ratio		0.24	0.24				0.58	0.58		0.63	0.63	
v/c Ratio		0.66	0.34				0.04	0.68		0.02	0.87	
Control Delay		35.4	6.5				8.8	15.7		4.2	21.0	
Queue Delay		0.0	0.0				0.0	0.0		0.0	0.0	
Total Delay		35.4	6.5				8.8	15.7		4.2	21.0	
LOS		D	A				A	B		A	C	
Approach Delay		22.6					15.2				20.9	
Approach LOS		C					B				C	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		33.5	33.5		43.0	43.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		33.5	33.5		43.0	43.0	
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	
50th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		43.0	43.0		43.0	43.0	
50th %ile Term Code	Hold	Hold	Hold	Max	Max		Coord	Coord		Coord	Coord	
30th %ile Green (s)	16.4	16.4	16.4	16.4	16.4		44.6	44.6		44.6	44.6	
30th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
10th %ile Green (s)	12.4	12.4	12.4	12.4	12.4		48.6	48.6		48.6	48.6	
10th %ile Term Code	Hold	Hold	Hold	Gap	Gap		Coord	Coord		Coord	Coord	
Stops (vph)		128	19				21	362		2	635	
Fuel Used(gal)		3	1				0	7		0	10	
CO Emissions (g/hr)		181	65				29	483		2	665	
NOx Emissions (g/hr)		35	13				6	94		0	129	
VOC Emissions (g/hr)		42	15				7	112		0	154	
Dilemma Vehicles (#)		0	0				0	0		0	0	
Queue Length 50th (ft)		72	0				7	128		1	378	
Queue Length 95th (ft)		112	26				26	#387		m2	#518	
Internal Link Dist (ft)		655			73		541				354	
Turn Bay Length (ft)			130				90			100	100	
Base Capacity (vph)		316	464				1047	932		286	1090	

Lane Group	Ø1
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	9.5
Total Split (%)	14%
Maximum Green (s)	5.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	5.0
90th %ile Term Code	Max
70th %ile Green (s)	5.0
70th %ile Term Code	Max
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

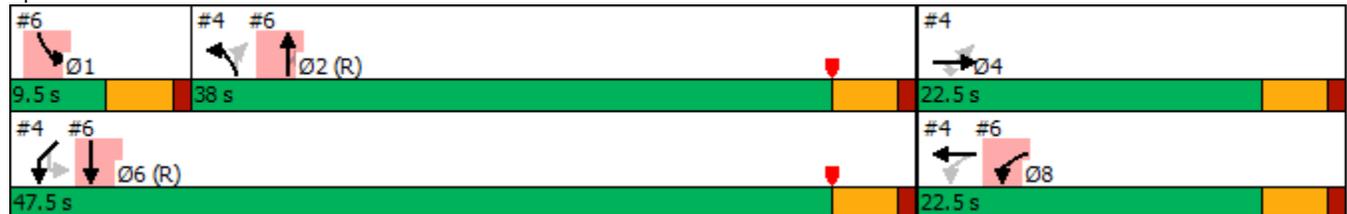


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Starvation Cap Reductn		0	0				0	0		0	0	
Spillback Cap Reductn		0	0				0	0		0	0	
Storage Cap Reductn		0	0				0	0		0	0	
Reduced v/c Ratio		0.60	0.33				0.04	0.68		0.02	0.87	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	19.2
Intersection LOS:	B
Intersection Capacity Utilization	67.2%
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.
!	Phase conflict between lane groups.

Splits and Phases: 4: Forth Hill St & Bare Cove Park Dr & Fort Hill St



Lane Group	Ø1
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Lane Configurations							
Traffic Volume (vph)	217	24	459	322	18	520	
Future Volume (vph)	217	24	459	322	18	520	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0		180	120		
Storage Lanes	1	0		1	1		
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.987			0.850			
Flt Protected	0.957				0.950		
Satd. Flow (prot)	1693	0	1810	1538	1805	1845	
Flt Permitted	0.957				0.950		
Satd. Flow (perm)	1693	0	1810	1538	1805	1845	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	8			332			
Link Speed (mph)	30		30			30	
Link Distance (ft)	615		434			518	
Travel Time (s)	14.0		9.9			11.8	
Peak Hour Factor	0.72	0.72	0.97	0.97	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	85%	
Heavy Vehicles (%)	6%	6%	5%	5%	0%	3%	
Adj. Flow (vph)	301	33	473	332	21	520	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	334	0	473	332	21	520	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		12			12	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		2	1	1	2	
Detector Template	Left		Thru	Right	Left	Thru	
Leading Detector (ft)	20		100	20	20	100	
Trailing Detector (ft)	0		0	0	0	0	
Detector 1 Position(ft)	0		0	0	0	0	
Detector 1 Size(ft)	20		6	20	20	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94	
Detector 2 Size(ft)			6			6	
Detector 2 Type			Cl+Ex			Cl+Ex	
Detector 2 Channel							
Detector 2 Extend (s)			0.0			0.0	
Turn Type	Prot		NA	Perm	Prot	NA	



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Protected Phases	8		2		1	6	4
Permitted Phases				2			
Detector Phase	8		2	2	1	6	
Switch Phase							
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.5		38.0	38.0	9.5	47.5	22.5
Total Split (%)	32.1%		54.3%	54.3%	13.6%	67.9%	32%
Maximum Green (s)	18.0		33.5	33.5	5.0	43.0	18.0
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5	
Lead/Lag			Lag	Lag	Lead		
Lead-Lag Optimize?			Yes	Yes	Yes		
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max	C-Max	None	C-Max	None
Walk Time (s)	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0	0		0	0
Act Effct Green (s)	16.6		40.6	40.6	5.2	44.4	
Actuated g/C Ratio	0.24		0.58	0.58	0.07	0.63	
v/c Ratio	0.82		0.45	0.32	0.16	0.44	
Control Delay	42.7		10.0	2.5	33.4	8.4	
Queue Delay	0.0		0.3	0.0	0.0	0.5	
Total Delay	42.7		10.2	2.5	33.4	8.9	
LOS	D		B	A	C	A	
Approach Delay	42.7		7.1			9.8	
Approach LOS	D		A			A	
90th %ile Green (s)	18.0		33.5	33.5	5.0	43.0	18.0
90th %ile Term Code	Max		Coord	Coord	Max	Coord	Max
70th %ile Green (s)	18.0		33.5	33.5	5.0	43.0	18.0
70th %ile Term Code	Max		Coord	Coord	Max	Coord	Max
50th %ile Green (s)	18.0		43.0	43.0	0.0	43.0	18.0
50th %ile Term Code	Max		Coord	Coord	Skip	Coord	Hold
30th %ile Green (s)	16.4		44.6	44.6	0.0	44.6	16.4
30th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
10th %ile Green (s)	12.4		48.6	48.6	0.0	48.6	12.4
10th %ile Term Code	Gap		Coord	Coord	Skip	Coord	Hold
Stops (vph)	206		199	44	21	213	
Fuel Used(gal)	4		4	1	0	4	
CO Emissions (g/hr)	306		251	105	22	260	
NOx Emissions (g/hr)	59		49	20	4	51	
VOC Emissions (g/hr)	71		58	24	5	60	
Dilemma Vehicles (#)	0		0	0	0	0	
Queue Length 50th (ft)	129		81	6	9	106	
Queue Length 95th (ft)	161		156	m32	27	154	
Internal Link Dist (ft)	535		354			438	
Turn Bay Length (ft)				180	120		



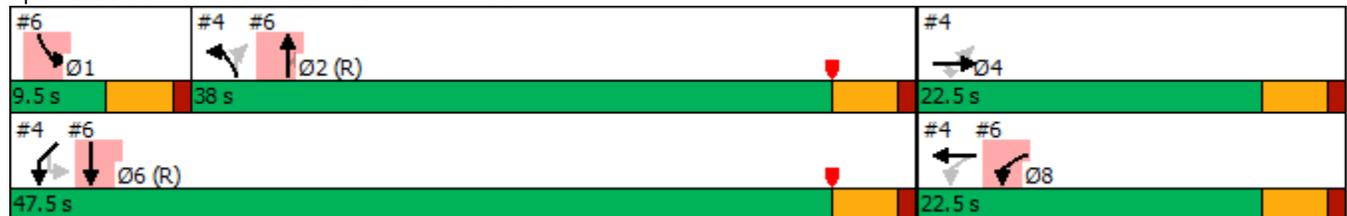
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø4
Base Capacity (vph)	441		1050	1032	134	1171	
Starvation Cap Reductn	0		159	0	0	0	
Spillback Cap Reductn	1		0	0	0	285	
Storage Cap Reductn	0		0	0	0	0	
Reduced v/c Ratio	0.76		0.53	0.32	0.16	0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SWL, Start of Yellow
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	15.0
Intersection LOS:	B
Intersection Capacity Utilization	45.1%
ICU Level of Service	A
Analysis Period (min)	15

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

Splits and Phases: 6: Fort Hill St/West St & South St



Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↶			↷
Traffic Vol, veh/h	0	0	5	11	0	10
Future Vol, veh/h	0	0	5	11	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	1	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	5	12	0	11

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

Approach	WB	SB
HCM Control Delay, s	0	8.4
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1070
HCM Lane V/C Ratio	-	-	0.01
HCM Control Delay (s)	-	-	8.4
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	0	262	97	0	0	0
Future Vol, veh/h	0	262	97	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	285	105	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	105	0	-	0	390 105
Stage 1	-	-	-	-	105 -
Stage 2	-	-	-	-	285 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1486	-	-	-	614 949
Stage 1	-	-	-	-	919 -
Stage 2	-	-	-	-	763 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1486	-	-	-	614 949
Mov Cap-2 Maneuver	-	-	-	-	614 -
Stage 1	-	-	-	-	919 -
Stage 2	-	-	-	-	763 -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1486	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	112	0	65	32	0	150
Future Vol, veh/h	112	0	65	32	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	0	71	35	0	163

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	122	0	299
Stage 1	-	-	-	-	122
Stage 2	-	-	-	-	177
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1465	-	692
Stage 1	-	-	-	-	903
Stage 2	-	-	-	-	854
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1465	-	658
Mov Cap-2 Maneuver	-	-	-	-	658
Stage 1	-	-	-	-	903
Stage 2	-	-	-	-	812

Approach	EB	WB	NB
HCM Control Delay, s	0	5.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	929	-	-	1465	-
HCM Lane V/C Ratio	0.176	-	-	0.048	-
HCM Control Delay (s)	9.7	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	102	27	5	10	0
Future Vol, veh/h	0	102	27	5	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	111	29	5	11	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	34	0	-	0	143 32
Stage 1	-	-	-	-	32 -
Stage 2	-	-	-	-	111 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1578	-	-	-	850 1042
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	914 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1578	-	-	-	850 1042
Mov Cap-2 Maneuver	-	-	-	-	850 -
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	914 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

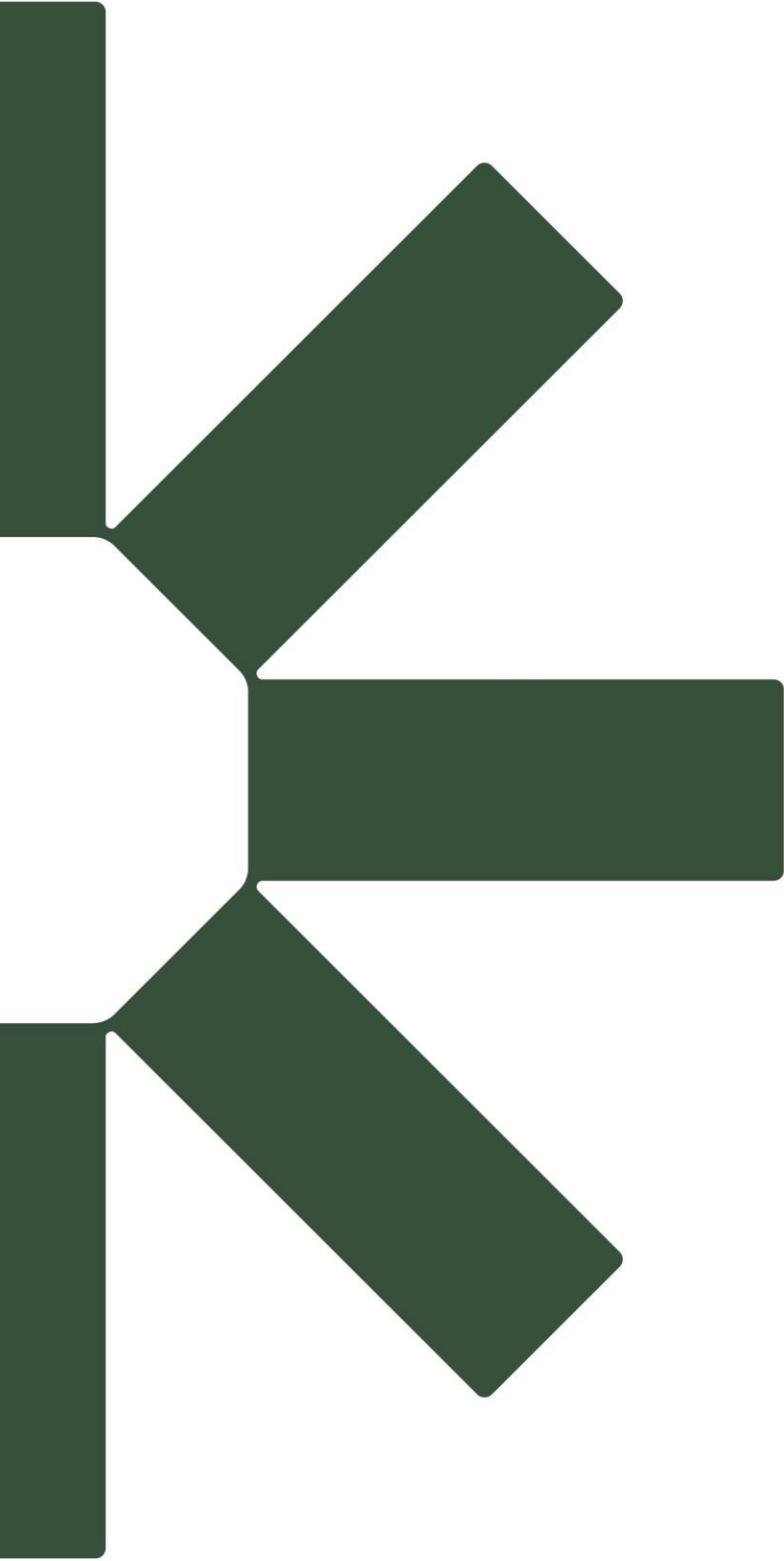
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1578	-	-	-	850
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	6.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	0	11	16	0	88
Future Vol, veh/h	14	0	11	16	0	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	12	17	0	96

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	15	0	56
Stage 1	-	-	-	-	15
Stage 2	-	-	-	-	41
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1603	-	952
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	981
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1603	-	944
Mov Cap-2 Maneuver	-	-	-	-	944
Stage 1	-	-	-	-	1008
Stage 2	-	-	-	-	973

Approach	EB	WB	NB
HCM Control Delay, s	0	3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1065	-	-	1603	-
HCM Lane V/C Ratio	0.09	-	-	0.007	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-



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