

# FINAL REPORT

## November 2021

# U.S. Route 5 Corridor Study

## East Windsor, CT



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## I Executive Summary

The Capitol Region Council of Governments (CRCOG) and the Town of East Windsor, in cooperation with the Connecticut Department of Transportation, have initiated the U.S. Route 5 Corridor Study (the Study) to evaluate traffic and development issues along Route 5 in the Town of East Windsor. The purpose of the Study is to develop a comprehensive transportation plan for Route 5 that will: (1) address safety, congestion, and mobility of the transit system, pedestrians, and bicyclists; and (2) assess travel demand growth and its impacts on area roadways including traffic associated with development within the Study Area.

This report is a compilation of the results of the Study, including an analysis of the existing conditions and an assessment of the improvements necessary to accommodate future development.

### I.1 Existing Conditions

The existing conditions assessment focused on safety and mobility along Route 5. **Key findings** were:

- A lack of bicycle and pedestrian accommodations along and across Route 5,
- Minimal transit service,
- Inconsistent road cross-section and adjacent land use throughout the corridor,
- Elevated crash rates at the high-volume intersections with the I-91 Exit 44 ramps and Route 140, and
- Poor traffic operations due to high volumes and malfunctioning traffic signal equipment.

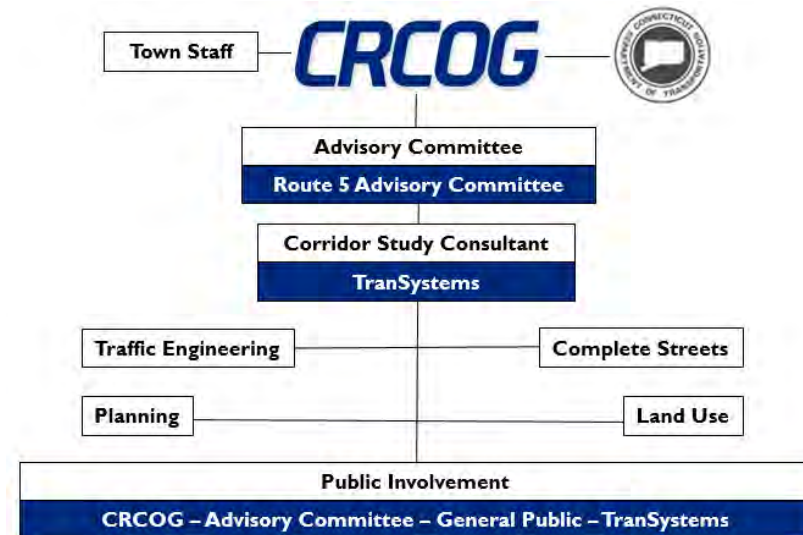


Figure 1: Study Team and Public Involvement Process

### I.2 Future Conditions

In order to assess future conditions along Route 5, it was necessary to produce two growth scenarios:

**Base scenario** – Background growth to 2040, including nearby developments considered likely to be built before 2040. These developments are shown in [Figure 2](#) and [Table 1](#).

**Build scenario** – All growth and developments included in the Base scenario, plus seven additional developments along the corridor. These developments are shown in [Figure 3](#) and [Table 2](#).

These scenarios are not a blueprint for future development of the corridor, but rather a means to determine the traffic impacts of likely and potential land use changes.



Figure 2: Base Scenario Development Sites

Table 1: Base Scenario Developments

| Development Site              | Use                    | Notes   |
|-------------------------------|------------------------|---|
| Sardilli Distribution Center* | Commercial             | 200,000 sq. ft. distribution center                           |
| Crossroads Cathedral          | Church / Hotel         | Church and 90 unit hotel with conference center               |
| MMCT Casino                   | Recreational / Gaming  | Planned casino with over 2,000 gaming positions               |
| Calamar Housing               | Residential            | 122 units of over-55 housing                                  |
| Montgomery Mill               | Residential            | 160 apartment units   |
| Relocated Train Station       | Transportation         | Windsor Locks train station serving CTrail and Amtrak service |
| Metro Park North              | Warehouse / Industrial | 800,000 sq. ft. distribution center                           |

\* Sardilli announced in September 2019 that they would not be developing this site as originally planned.



Figure 3: Build Scenario Development Sites

Table 2: Build Scenario Developments

| Development Site  | Use                              | Notes  |
|---|----------------------------------|--|
| 1 - 151 Prospect Hill Road                              | Hotel with supporting commercial | 115-room hotel with restaurant and retail. Total 54,250 sf   |
| 2 - 49 Prosepect Hill Road                              | Restaurant                       | Small-scale restaurant, likely fast or fast-casual. 4,500 sf   |
| 3 - Route 5 at Main Street and Route 5 at Thompson Road | Mixed-use commerical             | Introduction of neighborhood commercial such as banks and retail with infill at Propsect Hill Plaza. 27,900 sf |
| 4 - 44 South Main Street                                | Mixed-use commerical             | Expansion of commercial development at Riverview Plaza. 9,500 sf   |
| 5 - 67 South Main Street                                | Industrial / business park       | New industrial, business park or distribution center. 380,000 sf   |
| 6 - 111 South Main Street & 49 Phelps Road              | Industrial / business park       | New industrial, business park or distribution center. 380,000 sf   |
| 7 - 248 & 250 South Main Street                         | Commercial                       | Agricultural distribution facility with retail component. 40,000 sf  |

**Key findings** of the future conditions assessment were:

- Under the Base scenario, peak hour traffic volumes on Route 5 are projected to increase by 52% to 125% between the I-91 Exit 44 ramps and Route 140;
- Under the Build scenario, this growth is expected to increase to 73% to 154%;
- The increased traffic volumes are projected to result in increased congestion at these intersections under both scenarios;
- Projected traffic growth is lower south of the I-91 Exit 44 ramps (20% to 35% under the Base scenario, 43% to 56% under the Build scenario); and
- Under the Build scenario, several intersections south of I-91 Exit 44 will reach capacity and operate poorly.

### 1.3 Recommendations

Recommendations for future improvements are divided into three categories, as described in [Figure 4](#). They range from corridor-wide changes such as installing turn lanes and sidewalks to targeted improvements at individual intersections. These improvements would serve to improve safety and mobility along Route 5, as well as preparing for new development throughout the corridor.

The Near Term improvements, mainly focusing on pedestrian and safety enhancements, are estimated at \$6.2 million (2020 dollars). The Mid Term improvements are estimated at \$14.2 million (2030 dollars) and would maintain acceptable traffic operations under the Base scenario. The Long Term improvements are estimated at \$24.3

million (2040 dollars) and would accommodate the traffic growth from the Build scenario.

**Near Term:** Improvements that address existing needs, are relatively low cost and low impact (environmental, ROW) and could / should be pursued immediately.

**Mid Term:** Improvements that address existing future Base scenario needs, are higher cost and could have potential environmental and ROW impacts. These alternatives would either require environmental review (if initiated immediately) or could have outside actions, such as development, that would trigger the need to implement them.

**Long Term:** Improvements that address future Build scenario needs, are high cost and likely require environmental and ROW impacts. These alternatives have outside actions, such as development, that would trigger the need to implement them.

*Figure 4: Improvement Categories*

There are numerous funding sources available for the recommended improvements. These range from Federal, State, and Town funding to public-private partnerships and developer-borne improvements for major traffic generators. In particular, this report may be used as a roadmap for improvements undertaken as new development is attracted to the corridor.

## 2 Introduction

The Capitol Region Council of Governments (CRCOG) and the Town of East Windsor, in cooperation with the Connecticut Department of Transportation (CTDOT), initiated the U.S. Route 5 Corridor Study (the Study) to evaluate traffic and development issues along Route 5 in the Town of East Windsor. The purpose of the Study is to develop a comprehensive transportation plan for Route 5 that will: (1) address safety, congestion, and mobility of the transit system, pedestrians, and bicyclists; and (2) assess travel demand growth and its impacts on area roadways including traffic associated with development within the Study Area.

### 2.1 Study Area

The Study Area contains Route 5 throughout East Windsor from the Enfield town line to the South Windsor town line, a distance of approximately five miles. From the southern limits of the corridor northerly to its intersection with Main Street, Route 5 is known as South Main Street. From Main Street northerly to the Enfield town line, Route 5 is known as Prospect Hill Road. The Study Area limits and street names are shown in **Figure 5**. The study includes an assessment of intersecting side street approaches, as well as access and egress for adjacent land uses. The corridor includes highway exit and entrance ramps for Interstate 91 (I-91), residential streets, and several businesses. There are also many local destinations on or adjacent to Route 5 such as schools, restaurants, farms, retail, and grocery stores.

Figure 5: Route 5 Corridor Study Project Limits and Street Names



## 2.2 Study Process

The Route 5 Corridor Study was conducted in a collaborative manner with stakeholder and community involvement, an advisory committee, and technical reviews. The Study was coordinated with other ongoing studies and projects in and around the corridor, including the Windsor Locks rail station, Warehouse Point Planning Study and future development plans along Route 5. A summary of the Study Team and the public involvement process is presented in Figure 6.

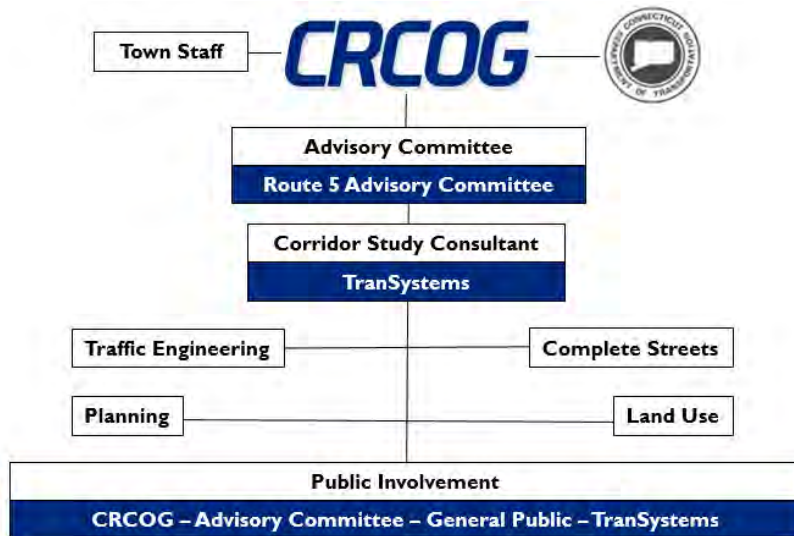


Figure 6: Study Team and Public Involvement Process

There are a number of ways that the Route 5 Corridor Study Team collected and distributed information about the Study including:

- Interested parties lists
- Newsletters
- Webpage (<http://crcog.org/2018/05/route-5-east-windsor-corridor-study/>)
- E-Blasts
- Survey
- Town Council meetings
- Technical review meetings
- CRCOG Committee meetings
- Stakeholder interviews

Public involvement is discussed in Appendix 5.

### 3 Existing Conditions Assessment

This chapter provides an assessment of the Route 5 Study Area relative to the existing roadway and traffic; land use and development; pedestrian, bicyclist, and vulnerable user; and transit/commuter systems. Stakeholder input was a key component of the data collection process to help complete the existing conditions assessment. The purpose of the existing conditions assessment is to identify deficiencies in order to establish a baseline against which future conditions and improvement recommendations can be evaluated.

#### 3.1 Roadway and Traffic

This section identifies and evaluates the issues, deficiencies, and opportunities of the existing roadway system within the Study Area. It is important to note that the roadway system is part of the overall Route 5 transportation system, other elements of which are assessed in the following sections.

##### 3.1.1 Roadway Characteristics

Route 5 is *classified as a principal arterial* for its approximately five-mile length in East Windsor. Through the majority of the Study Area, Route 5 is two lanes wide with turn lanes provided at intersections. Between Thompson Road and the Walmart driveway, north of the I-91 on- and off-ramps, Route 5 has two lanes in each direction with turn lanes. A raised median is provided in this section. Within 600 feet of the Southern Auto Auction main driveway, Route 5 widens to two lanes in each direction without a median. The number of travel lanes and turn lanes on Route 5 within the corridor, as well as the presence of a median, is presented in [Figure 7](#).

South of East Windsor, Route 5 has two lanes in each direction with a 25-foot-wide median and occasional turn lanes. The roadway continues southerly in this configuration to downtown East Hartford, a distance of approximately seven miles. Traveling north from South

Windsor into East Windsor, Route 5 narrows to an undivided roadway with one through lane in each direction, as shown in [Figure 8](#).

Other than a short southbound left turn lane at Harken's Market, Route 5 remains one lane in each direction throughout the southernmost 1.3 miles of the Study Area. This high-speed rural segment includes signalized intersections at Abbe Road and Stoughton Road as well as dozens of unsignalized driveways. For more information on these driveways, see Section 3.1.4 - Access Management, page 30.

Route 5 widens to two through lanes in each direction approximately 600 feet south of the traffic signal at Southern Auto Auction's main driveway, as shown in [Figure 9](#). This four-lane section continues another 600 feet past the signal. There is no median in this area.

**Roadway Functional Classification :** The Federal Highway Administration (FHWA) classifies roadways by their functionality. Roadways serve two primary travel needs, local site access and long-range travel.

There are four major roadway functional classifications:

- Interstates
- Arterials
- Collectors
- Local roads

In both rural and urban areas, principal arterials carry the highest traffic volumes and support longer distance travel. Routes on the principal arterial system are divided into Interstates and other principal arterials; these include freeways, multilane highways, and other important roadways that supplement the Interstate System. They connect urbanized areas, cities, and industrial centers. Land access is limited. Posted speed limits on arterials usually range between 45 and 70 mph. (FHWA)

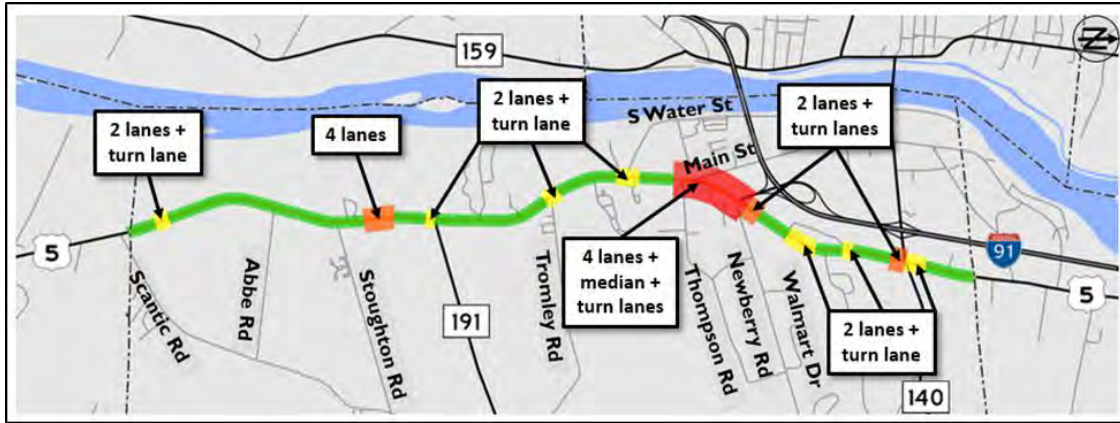


Figure 7: Total Number of Lanes in the Study Area

The next signalized intersection to the north is Phelps Road (Route 191). This three-leg intersection has an exclusive right turn lane on Route 5 northbound.



Figure 8: Route 5 NB at South Windsor Town Line (Google Street View)



Figure 9: Route 5 NB at Southern Auto Auction (Google Street View)

Route 5 continues to the north with one through lane in each direction. On the 0.7-mile segment between Phelps Road (Route 191) and Tromley Road, there are multiple unsignalized intersections at driveways and side streets. One notable intersection is at Winton Road, a residential street serving as the sole access point for dozens of houses and condominiums. No turn lanes are provided. This intersection is shown in Figure 10.

The character of Route 5 gradually changes north of Phelps Road (Route 191), serving



Figure 10: Route 5 NB at Winton Road (Google Street View)



Figure 11: Route 5 NB at Tromley Road and East Windsor High School (Google Street View)

fewer commercial or industrial parcels and more residential buildings. The next signalized intersection to the north is at Tromley Road and East Windsor High School, shown in Figure 11. This is the only



Figure 12: Route 5 NB South of Thompson Road (Google Street View)

traffic signal in the Study Area to have a marked crosswalk. Exclusive left turn lanes are provided in both directions on Route 5. North of Tromley Road are two significant unsignalized intersections: Regina Drive and Riverview Drive. The intersection



Figure 13: Route 5 NB Between Thompson Road and Main Street (Google Street View)

with Regina Drive is on the interior of a horizontal curve, limiting sight distance for exiting vehicles. The intersection with Riverview Drive is within 200 feet of the adjacent South Water Street signal. Northbound queues from this traffic signal may extend through the Riverview Drive intersection during peak hours.

The signalized intersection at South Water Street includes northbound and southbound exclusive left turn lanes. North of this signal, the road's character becomes more commercial. A quarter mile to the north, the road cross-section rapidly changes. There are several closely spaced gas station driveways south of Thompson Road as Route 5 widens from a two-lane road to a much wider four-lane road with turn lanes and a raised median, shown in Figure 12. The complexity of this area has led to an increased crash rate relative to the surrounding segments. This increase in crashes is discussed in more detail in Section 3.1.3 - **Crash History**, page 25. The signalized intersection with Thompson Road has two through lanes northbound and southbound, plus a southbound exclusive left turn lane. Between the signals at Thompson Road and Main Street, separated by 400 feet, is an unsignalized intersection with Wagner Lane which is only

accessible from Route 5 southbound. Northbound traffic must perform a U-turn to get to Wagner Lane. This area is shown in [Figure 13](#). The traffic signal at Main Street (unsigned Route 510) runs off the same controller as the signal at Thompson Road due to their proximity. Route 5 has three lanes in each direction here – two through lanes and an exclusive left turn lane. North of this traffic signal, there is an unsignalized intersection with Greenwoods Lane. Access to and from Route 5 northbound is right-in, right-out, and access from Route 5 southbound is right-in only, serving mainly traffic going from Route 5 southbound to Main Street northbound.



*Figure 14: Route 5 NB Approaching the I-91 Exit 44 Ramps (Google Street View)*

Continuing north, Route 5 gains more lanes as it approaches the I-91 Exit 44 ramps. This is shown in [Figure 14](#). Route 5 northbound has two through lanes and two exclusive left turn lanes. Route 5 southbound has two through lanes

and exclusive left and right turn lanes. There is no raised median north of the intersection, only occasional painted islands. Crash rates at this intersection are significantly higher than other intersections in the Study Area.

Approximately 500 feet north of the I-91 ramp intersection is another traffic signal serving Walmart on the east side of Route 5 and two restaurants and a bank on the west side. This is another area of transition – Route 5 narrows from two through lanes in each



*Figure 15: Route 5 NB at Walmart (Google Street View)*

direction to one. At the traffic signal, Route 5 northbound has two through lanes and exclusive left and right turn lanes; the two through lanes merge just north of the intersection. Southbound, Route 5 has one through lane and one exclusive left turn lane. This merge is shown in [Figure 15](#).

North of this signal, the character of Route 5 changes. Traffic signals are more regularly spaced, travel lanes are narrower, the road climbs a hill, and trees line both sides of the road. Adjacent land uses are mixed and there are fewer curb driveways.

The next signal to the north primarily serves Big Y and Ethos Energy. Route 5 has one through lane in each direction plus a northbound exclusive left turn lane and a southbound exclusive right turn lane.



Figure 16: Route 5 NB Approaching Prospect Hill Drive (Google Street View)

750 feet north of this signal is an unsignalized intersection with Prospect Hill Drive, a residential street serving over 100 houses. This intersection is shown in Figure 16. No exclusive turn lanes are provided on Route 5.

The next signal is an alternative access point to Big Y, and formerly served the Showcase Cinemas. Route 5 has one through lane in each direction plus a northbound exclusive left turn lane. North of this signal, Route 5 begins to head downhill, and the surrounding land uses become predominantly commercial.

The final signalized intersection in the Study Area is at Bridge Street / North Road (Route 140), shown in Figure 17. Route 5 widens near this intersection to one through lane in each direction, exclusive left turn lanes in each direction, and a northbound exclusive right turn lane. The intersection itself is skewed with steep grades on its approaches, and it is a complex area due to the surrounding development and numerous driveways. Crash rates here are higher than at most other intersections in the Study Area.



Figure 17: Route 5 NB at Bridge Street / North Road (Google Street View)

Between this signal and the Enfield town line, Route 5 has one through lane in each direction and serves a mix of uses. One notable business is Comfort Inn, 500 feet north of Route 140.

Route 5 has a northbound exclusive left turn lane for the Comfort Inn driveway. The road continues into Enfield as a two-lane road.

In terms of geometry, the horizontal alignment of Route 5 exhibits gentle curvature within the Study Area. The vertical geometry of Route 5 is generally level south of the I-91 Exit 44 intersection. North of this intersection, Route 5 rises at approximately 5% for one quarter mile, then has a gentler uphill slope of approximately 2% before going downhill at approximately 2% as it approaches Route 140.

3.1.1.1 Roadway Standards

This section presents the design standards for Route 5. According to the CTDOT Highway Design Manual 2003 Edition (HDM), the following conditions apply:

- Principal arterial roadway functional classification
- Intermediate environment

The posted speed limit in the Study Area is 45 mph, which indicates a 50 mph design speed should be assumed. The design standards for Route 5 are shown in Table 3. The values shown indicate either the appropriate range or minimum value. Principal urban arterial roadways balance access to adjacent commercial and residential uses with mobility of travelers connecting to statewide and interstate access points.

Table 3: Design Standards

| Design Element          | Design Standard |
|-------------------------|-----------------|
| Lane Width              | 11'-12'         |
| Shoulder Width          | 4'-8'           |
| Sidewalk Width          | 5'              |
| Bicycle Lane Width      | 5'              |
| Minimum Radius          | 665' (e=4%)     |
| Stopping Sight Distance | 360' (45mph)    |

3.1.1.2 Geometric Conditions Review

Using a combination of field observations, field measurements, and aerial photographs, this section provides an assessment of the geometric characteristics of Route 5 to determine where the existing roadways do not meet the current CTDOT design standards. Table 4, summarizes the results of this review.

There is one location, at the intersection of Showcase Cinema and Route 5, where the travel lanes in each direction measure ten feet. This lane width is noted as a deficiency.

Roadway shoulders within the Study Area range from nonexistent to over six feet. Shoulders are used as bypass lanes for through traffic to get around vehicles waiting to turn left or right; where shoulders are narrow or absent, this is not possible. Figure 18 highlights locations with deficient shoulder widths.



Figure 18: Locations of Deficient Shoulder Widths

Horizontal curvature of a road affects a driver’s ability to see far enough to be able to stop safely to avoid a collision. Curves can also contribute to a loss of control of a vehicle if speed limits are not adhered to. The CTDOT Design Manual suggests that a stopping sight distance of 360 feet is required for level surfaces with a posted speed limit of 45 mph. Some side streets may have deficient intersection sight distance due to landscaping or terrain obstructing sight lines.

Steep grades can present safety and operational challenges by restricting sight lines and increasing the distance a vehicle needs to safely stop. During inclement weather, steep grades can also contribute to the loss of traction between a vehicle’s tires and the pavement surface. The CTDOT Highway Design Manual suggests that a 7% grade should be considered the maximum for an arterial. Route 5 is located near the Connecticut River and has stretches that are within wetlands and are relatively flat. North of the I-91 Exit 44 intersection, Route 5 has rolling terrain, yet the slope does not exceed 7%.

Route 5 generally has a rural character and has minimal pedestrian amenities such as sidewalks. There are no sidewalks along Route 5 anywhere in the Study Area. There is only one crosswalk, at Tromley Road, connecting a sidewalk at East Windsor High School with a concrete landing on the east side of Route 5. Neither the sidewalk

nor the landing is ADA-compliant. At the Walmart driveway, there is a 5' wide sidewalk approaching Route 5 from the east, as well as a concrete landing and curb ramp on the opposite side. There is no marked crosswalk in this location.

Table 4: Summary of Existing Geometric Deficiencies

| Existing Feature/Location  | Existing Value (Approx.) | Design Standard Value | Comments   |
|--|--------------------------|-----------------------|--|
| <b>Lane Width</b>  |                          |                       |  |
| Between Prospect Hill Drive and Bridge Street (Route 140)                            | 10'-11' varies           | 11'-12'               | Less than 11' is deficient   |
| <b>Shoulder Width</b>  |                          |                       |  |
| Between Stoughton Road and Phelps Road (Route 191) / access to Southern Auto Auction | 2'-6' varies             | 4'-8'                 | Deficient at the approaches to the intersection  |
| At Tromley Road Intersection (50'-100'radius)  | 2'-4' varies             | 4'-8'                 | Deficient at the approaches to the intersection  |
| Between Pasco Drive and Regina Drive   | 2'-5' varies             | 4'-8'                 | Deficient at the approaches to the intersection  |
| Between Thompson Road and Newberry Road  | 0'-5' varies             | 4'-8'                 | Deficient at the approaches to the intersection  |
| Between Thompson Road and Main Street in Northbound direction                        | 0'                       | 4'-8'                 | Deficient, no shoulder present.  |
| Between Walmart access and Showcase Cinema access in Northbound direction            | 0'-4' varies             | 4'-8'                 | Deficient at the approaches to the intersection  |
| <b>Sidewalk Width</b>  |                          |                       |  |
| Study Area   | N/A                      | 5' min.               | There are no sidewalks along Route 5, only on cross streets. Curb ramps at Tromley Road are not ADA-compliant. |

### 3.1.2 Traffic Conditions

The existing traffic conditions assessment includes measures of traffic volumes, travel speeds, and traffic operations. These measures are used to quantify and evaluate trends and identify deficiencies.

#### 3.1.2.1 Daily Volumes

On State roadways, CTDOT measures the average daily traffic (ADT) volumes approximately every three years. This data is collected with an automatic traffic recorder (ATR). The most recent counts on Route 5 were in 2013. CTDOT also maintains a continuous count station just north of the Walmart driveway. The historical ADT volumes are presented in **Table 5**, below, and **Figure 19**, page 14. Historically, the ADT has generally been highest south of the I-91 Exit 44 ramps, with volumes ranging from 14,300 to 19,400. Between the I-91 Exit 44 ramps and Bridge Street / North Road (Route 140), volumes have ranged from 7,900 to 11,800. Traffic volumes have been lowest north of Bridge Street / North Road (Route 140), ranging from 7,200 to 7,900. The location with the highest volume is historically between Main Street and the I-91 Exit 44 ramps. This trend continues with traffic data collected 2018. The high

volumes in this area demonstrate that Route 5 is a major connection for traffic between South Windsor and I-91 to the north. North of I-91 Exit 44, this north-south traffic uses I-91 instead, resulting in lower volumes on this section of Route 5.

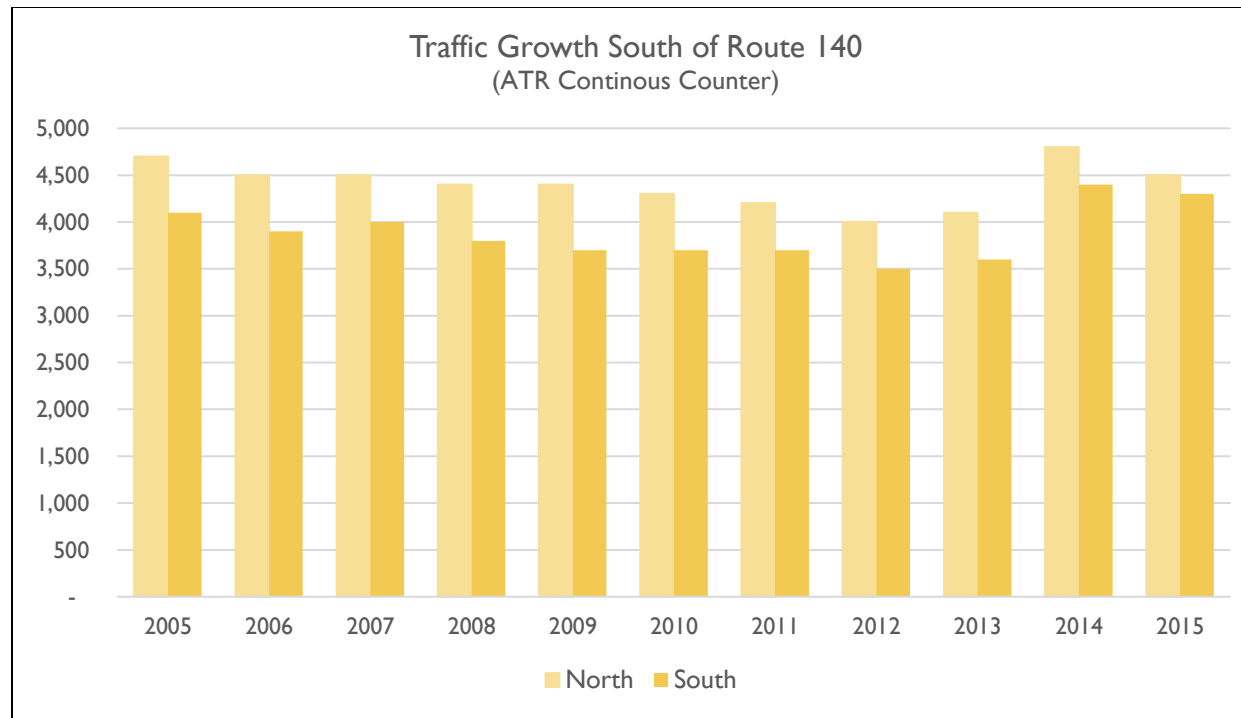
Traffic growth at the continuous count station has been variable, slowly decreasing between 2005 and 2013. The Walmart just south of the continuous count station was opened in late 2013, resulting in the significant increase in volumes from 2013 to 2014.

**What is Average Daily Traffic (ADT)?**

**ADT is the total two-way traffic volume passing through a defined segment of roadway in a 24-hour period. ADT is measured in vehicles per day (vpd).**

*Table 5: Historical ADT Volumes (2004-2013)*

| Location On Route 5      |   | CTDOT ADT (Vehicles per Day) |        |        |        |
|--------------------------|---|------------------------------|--------|--------|--------|
|                          |   | 2013                         | 2010   | 2007   | 2004   |
|                          | North of Bridge Street / North Road (Route 140) | 7,600                        | 7,700  | 7,900  | 7,200  |
| Within Study Area Limits | South of Bridge Street / North Road (Route 140) | 9,600                        | 10,700 | 11,400 | 10,100 |
|                          | South of Prospect Hill Drive                    | 7,900                        | 8,000  | 8,500  | 10,100 |
|                          | North of I-91 Exit 44 ramps                     | 10,700                       | 11,800 | 10,600 | 10,100 |
|                          | North of Main Street                            | 17,400                       | 19,400 | 18,100 | 17,100 |
|                          | North of S. Water Street                        | 17,300                       | 16,600 | 15,800 | 17,100 |
|                          | North of Phelps Road (Route 191)                | 14,800                       | 16,000 | 16,400 | 17,200 |
|                          | South of Phelps Road (Route 191)                | 16,100                       | 16,000 | 18,900 | 17,900 |
|                          | South of Stoughton Road                         | 15,900                       | 18,500 | 14,700 | 15,800 |
|                          | North of Scantic Road                           | 14,300                       | 17,800 | 15,500 | 15,800 |
|                          | North of Sullivan Avenue (Route 194)            | 15,300                       | 19,000 | 16,900 | 16,600 |



*Figure 19: CTDOT Continuous Count Station Volumes by Direction*

ATR counts collected in 2018 as part of the Study are shown in [Figure 20](#). The directional counts shown were adjusted for day-of-week and month-of-year based on volume trends obtained from the CTDOT continuous count station. North of the I-91 Exit 44 ramps, these 2018 volumes closely match the CTDOT 2013 ATR counts. South of the ramps, the 2018 ATR counts show a clear increase over the 2013 volumes. The fact that southbound volumes are higher than northbound volumes in this area, in conjunction with a closer analysis of hourly trends, field observations, and stakeholder interviews, indicates that southbound traffic uses Route 5 to bypass congestion on I-91 during peak periods.

2018 ATR counts were collected on Tuesday, April 17 through Thursday, April 19 in order to assess the day-to-day variation in traffic patterns throughout the corridor, especially those related to the Southern Auto Auction activity on Wednesdays. Traffic volumes averaged across the four southernmost ATRs are shown in [Figure 21](#). Travel patterns were similar during all three days. On Wednesday, the morning peak exhibited a moderate increase in traffic headed towards Southern Auto Auction, and there was also an increase in traffic leaving Southern Auto Auction throughout the middle of the day. Heavy vehicle counts also increased during these periods. The overall increase in traffic between 5 AM and 4 PM was 8%.

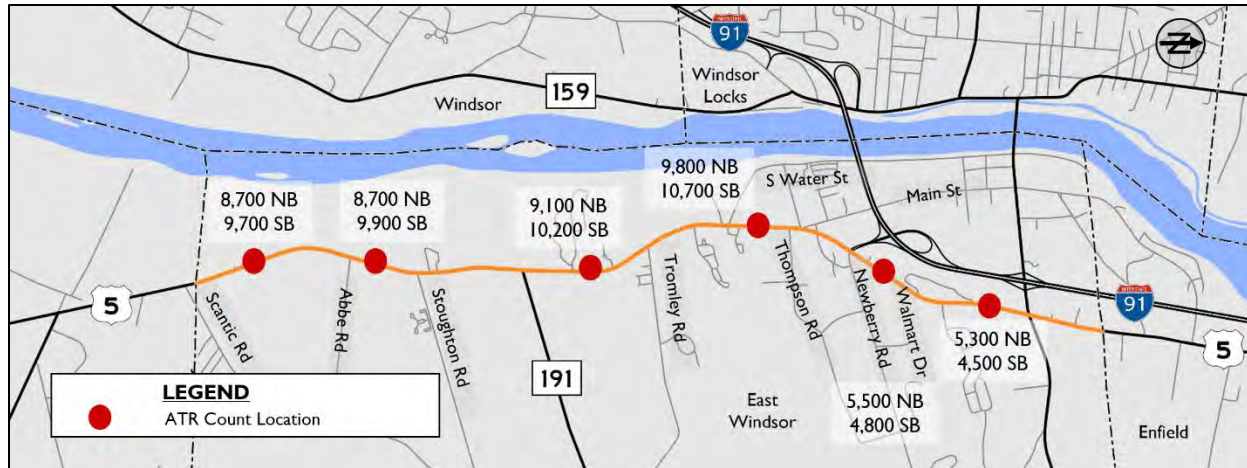


Figure 20: 2018 Directional Average Daily Traffic

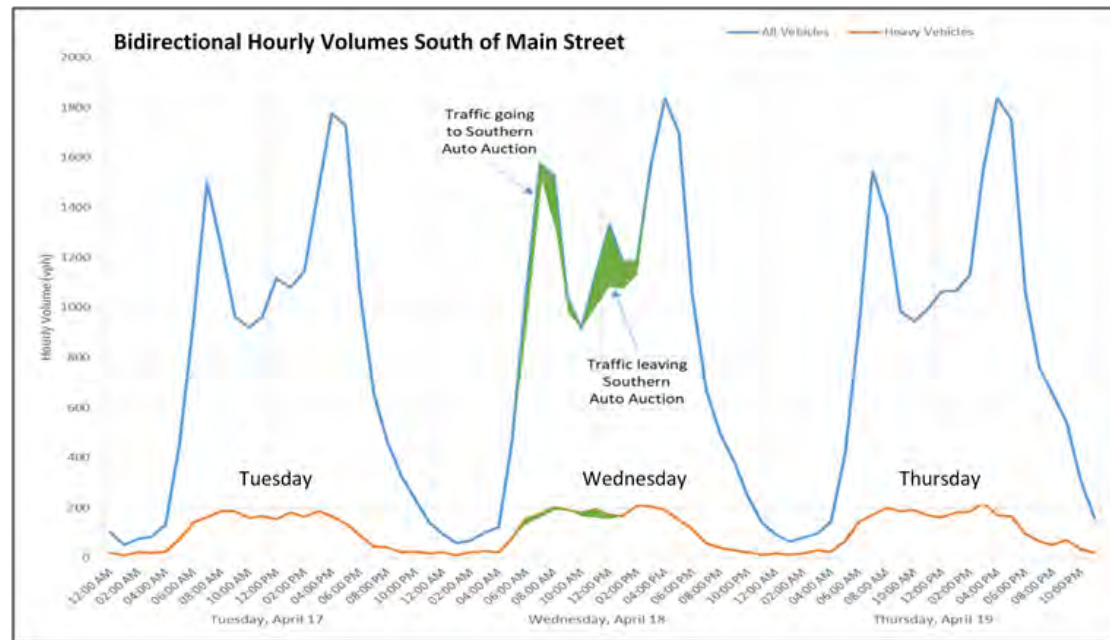


Figure 21: 2018 Day-of-Week Traffic Volume Trends

### 3.1.2.2 Travel Speeds

The travel speed data presented in this section is from the Federal Highway Administration (FHWA) National Performance Management Research Data Set (NPMRDS). FHWA has made this data set available to States and Metropolitan Planning Organizations (MPOs) as a tool for performance measurement. The NPMRDS data is validated and calibrated quarterly. The NPMRDS average travel speeds are shown in Figure 22. These average travel speeds include delays caused by traffic signals, turning vehicles, bus stops, and pedestrian crossings.



Figure 22: FHWA NPMRDS Average Travel Speeds along U.S. Route 5

Between Scantic Road and Stoughton Road, the average travel speeds are approximately 35 mph and are the highest observed within the study area. From Stoughton Road in northern direction, the average speeds degrade to between 35mph and 30mph until South Water Street; further north the speed decrease even further to under 30mph. Throughout the Study Area, the posted speed limit is 45 mph.

In addition to FHWA travel speed data, the study team collected average and 85th percentile weekday spot speeds at the 2018 ATR count locations. Figure 23 and Figure 24 illustrate the speeds during AM, PM and Off-Peak (OP) periods. These data points do not include delay from traffic signals, turning vehicles, bus stops, and pedestrian crossings as the data points were selected between major intersections, clear of such influence.

**What is 85th Percentile Speed?**

**The 85th Percentile Speed is the speed that 85 percent of vehicles do not exceed. Another way of looking at this is that only 15 percent of vehicles go faster than this speed, and 85 percent go at or below this speed.**

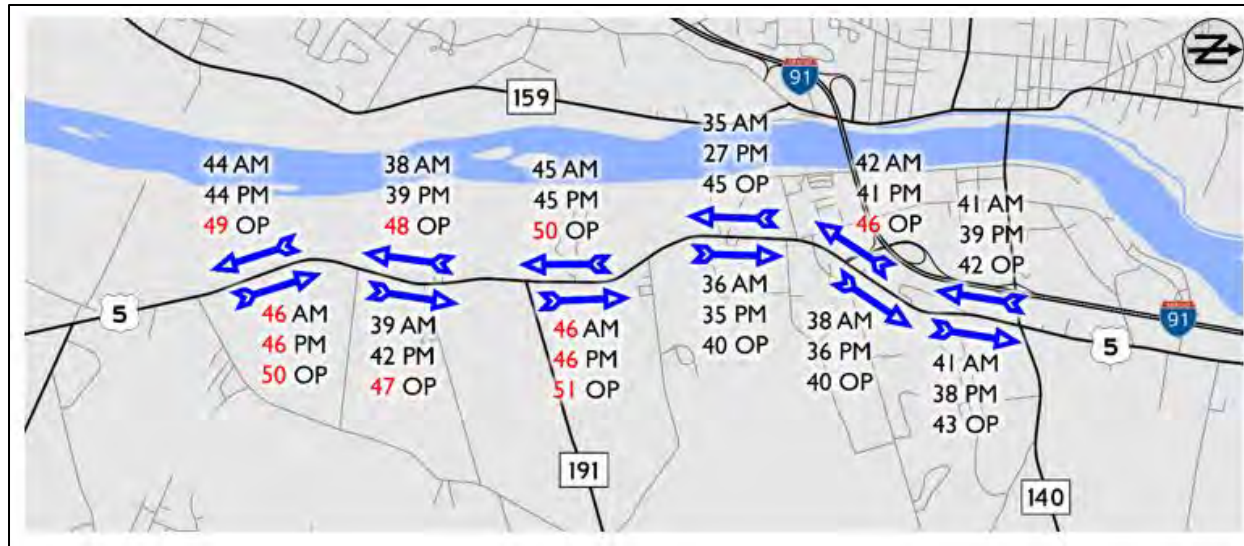


Figure 23: Average Weekday Segment Speeds (AM, PM, Off-Peak)

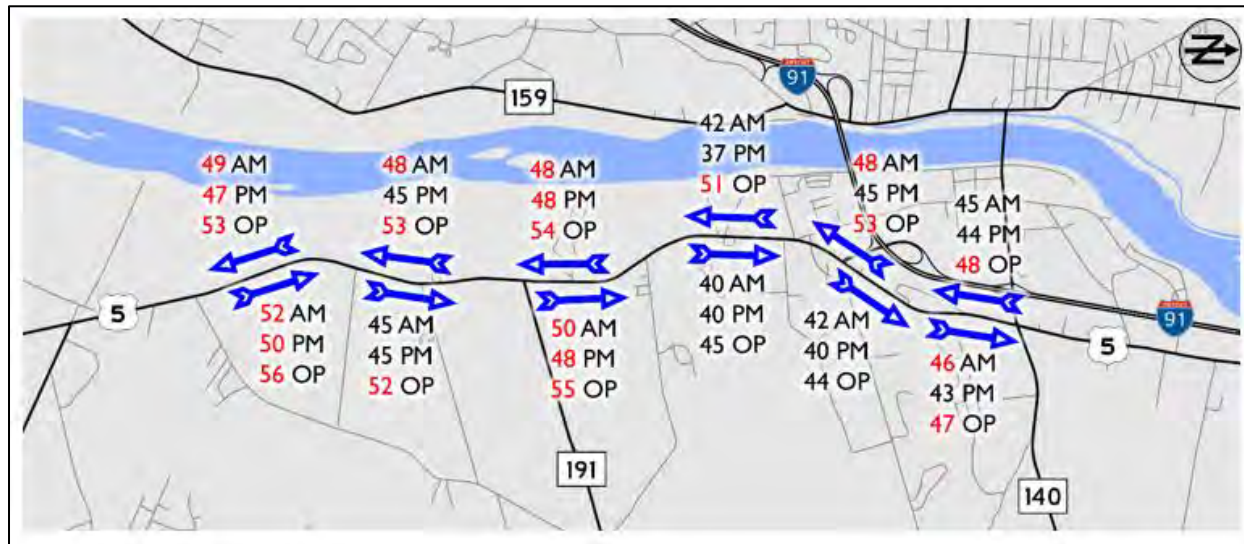


Figure 24: 85th Percentile Weekday Segment Speeds (AM, PM, Off-Peak)

The spot speed data between larger segments of roadway without traffic signals shows vehicles traveling at or above the speed limit during off peak, highlighted in red. Similar to the FHWA data, speeds are lower north of Tromley Road throughout the day and in both directions. This delay may be caused by several factors, including high volumes, queues at traffic signals, vehicles turning at unsignalized intersections, heavy vehicles, and bus stops without pullouts.

### 3.1.2.3 Peak Hour Volumes

The Study Team collected turning movement counts (TMCs) at signalized intersections along Route 5 in order to assess traffic operations in the peak periods. The TMC data was collected in April 2018 for the weekday counts. The weekday morning peak hour TMCs are presented in [Figure 25](#), page 19. The weekday afternoon peak hour turning movement counts are presented in [Figure 26](#), page 19.

In the northbound direction, traffic volumes are high throughout the southern portion of the Study Area, typically 800 to 900 vph in both peaks. At the I-91 Exit 44 ramps, the majority of northbound traffic turns left to access the freeway – 73% in the AM peak and 59% in the PM peak. The highest southbound volume on Route 5 was observed between South Water Street and Tromley Road, with southbound volumes of approximately 1,100 vehicles per hour (vph) and 1,200 vph during the AM peak and PM peak, respectively.

North of the I-91 Exit 44 ramps, traffic volumes are significantly lower in both directions. Northbound volumes are generally 200 to 300 vph in the AM peak and 500 to 600 in the PM peak. Southbound volumes vary less, with 250 to 300 vph in the AM peak and 350 to 400 vph in the PM peak.

Some intersections exhibit very different travel patterns in the AM and PM peaks. At commercial driveways (Walmart, Big Y), turning volumes are much higher in the PM peak. This is also apparent at the I-91 Exit 44 intersection, where the PM peak sees more cars turning left off the ramps, many of whom then turn right into Walmart or left into the restaurants. Scantic Road, Tromley Road, and Bridge Street / North Road (Route 140) are heavily directional, with most traffic heading west in the AM peak and east in the PM peak. Southern Auto Auction has high turning volumes only in the AM peak.

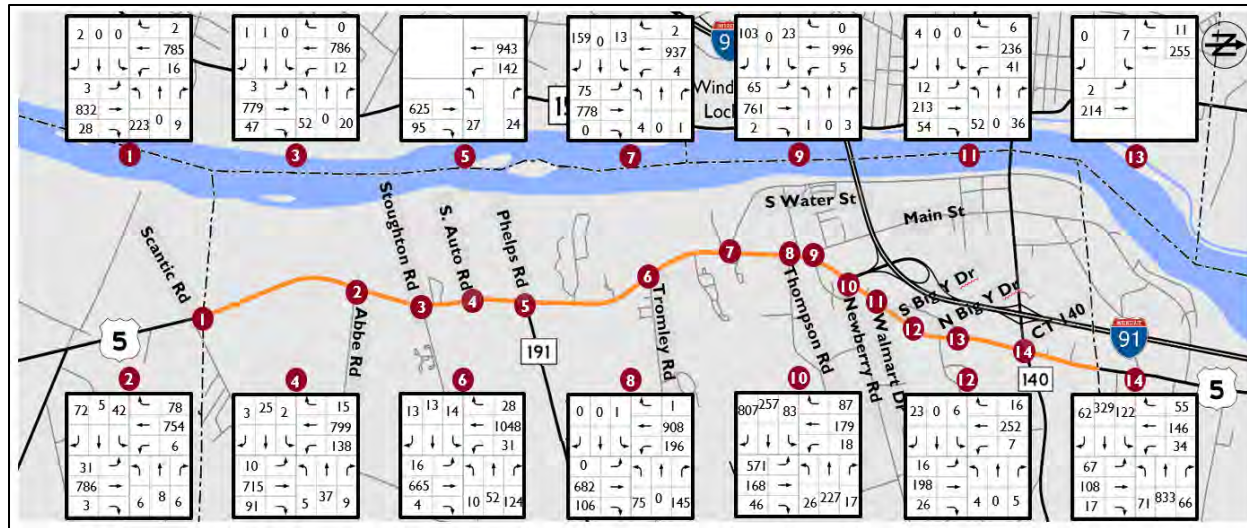


Figure 25: Weekday AM Peak Hour (7:15-8:15) Turning Movement Counts

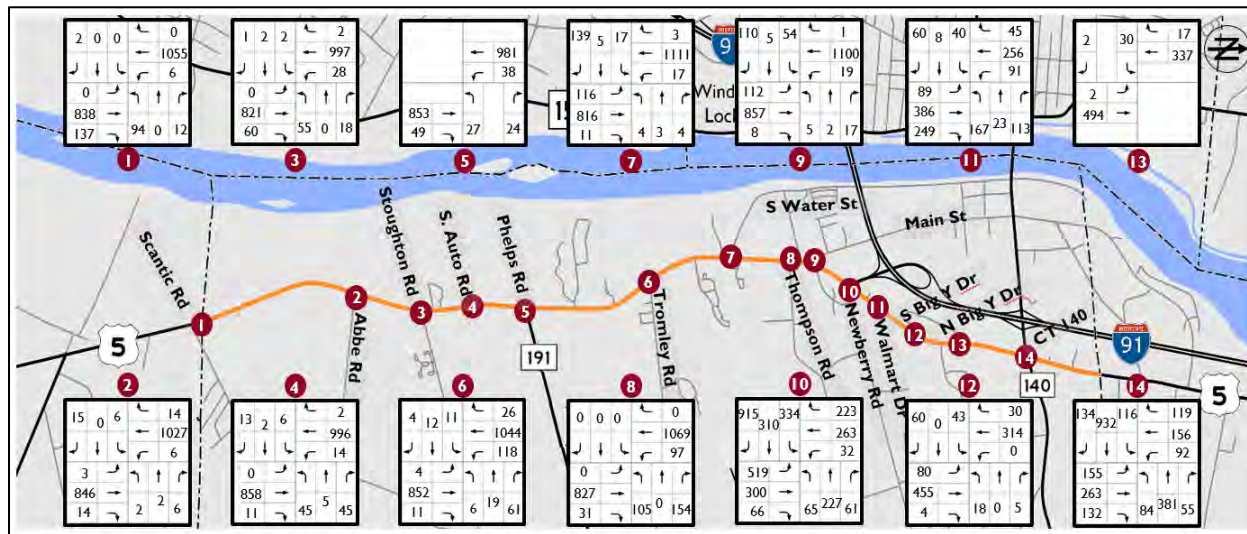


Figure 26: Weekday PM Peak Hour (4:30-5:30) Turning Movement Counts

3.1.2.4 Heavy Vehicle Volumes

ATR data collected by the study team in 2018 shows that heavy vehicles, including trucks and buses, comprise 5% to 16% of the daily traffic volumes on Route 5, as illustrated in Figure 27. The highest heavy vehicle percentages are south of the I-91 Exit 44 ramps, where 9% to 16% of vehicles are trucks or buses. This is largely due to the major commercial and industrial uses on this stretch of Route 5 and the adjacent section in South Windsor.



Figure 27: Heavy Vehicle Traffic Percent by Direction

### 3.1.2.5 Traffic Operations

The existing conditions assessment included an evaluation of congestion and delay at the fourteen signalized intersections during the weekday AM peak hour and the weekday PM peak hour. The level of service (LOS) was determined for each intersection based on the average delay (in seconds per vehicle, sec/veh) that motorists experience traveling through an intersection. LOS can be determined for both signalized and non-signalized intersections. A capacity analysis was developed using the Synchro traffic analysis software, the peak hour turning movement volumes, and the traffic signal timing plans obtained as part of this existing conditions analysis.

The intersections in the Study Area operate at a LOS E or better during the studied peak periods. For the Route 5, LOS D or better represents an acceptable degree of congestion; LOS E and F are generally considered to be an unacceptable degree of congestion. A summary of the LOS results is presented in [Table 6](#), page 23, as well as illustrated in [Figure 28](#) and [Figure 29](#), page 24.

In addition to LOS, the queue lengths were analyzed for all approaches to the study intersections using Synchro/SimTraffic and observed in the field. As a measure of the efficiency of the signal system, it is important to determine if vehicles queue into adjacent intersections, hindering their operation. Long southbound queues were observed during both peak periods, and northbound queues were also substantial in the PM peak. Queues at Phelps Road (Route 191), South Water Street, Thompson Road, and Main Street were observed to reach adjacent intersections.

#### **What is Level of Service (LOS)?**

**LOS for an intersection is a qualitative measure of traffic operations that reflects the delay experienced by vehicles at the intersection. LOS values range from A to F. LOS A represents the best operational conditions with little delay. LOS F represents generally congested conditions with long delays and traffic queues.**

#### **What is Closed-Loop System?**

**A closed-loop system consists of traffic signals that are interconnected thru a master controller thus providing coordinated signal timings.**

Synchronizing the traffic signal cycles of adjacent signals, also known as coordination, can be used to reduce delays and queueing on an arterial roadway. The traffic signals throughout the Study Area are connected to a closed-loop system controlled by the CTDOT Highway Operations Center in Newington. The majority of these signals are coordinated during peak hours using timing plans that are updated every few years to account for changes in traffic.

Overall the sources of delay during AM and PM peaks are:

- **Irregular signal spacing** – it is recommended that intersection spacing along an arterial roadway should be regular, with constant distances between traffic signals. For rural areas, a minimum spacing of one-half mile is recommended to regulate traffic flow and preserve capacity along arterial routes, with one-mile spacing considered desirable. When the spacing between signals falls below one-quarter mile (1,320 feet), the traffic flow along the route may be disrupted. The ability of the route to carry through traffic will decrease, travel speeds may decrease, and delays and queues may develop at intersections. It is very difficult to maintain signal coordination when intersection spacing is irregular, as is the case on Route 5.
- **School buses** – Multiple school bus routes use Route 5 within the Study Area. Some of these buses force traffic in both directions to stop completely and yield to students crossing the road to board the bus. In addition to the school bus routes along Route 5, East Windsor High School has school buses dropping off students during the morning peak. As a result of this, the traffic signal at Tromley Road and East Windsor High School is not coordinated during part of the morning peak, resulting in additional delay for through traffic.
- **Heavy vehicles** – Route 5 carries a high percentage of trucks and buses, especially south of the I-91 Exit 44 ramps. This is compounded by car carriers going to and from Southern Auto Auction on Wednesdays. These vehicles contribute to congestion because of their size and their acceleration characteristics. Drivers tend to leave larger front and rear gaps around trucks, thus decreasing the roadway capacity and increasing queue length. Slow acceleration at intersections is a challenge for signal coordination and increases the speed differential, breaking up the groups of vehicles that benefit from coordination.
- **Turning vehicles** – Along the Route 5 corridor, vehicles waiting to turn at intersections generally block the through lane. Depending on the shoulder width available, through vehicles may be able to bypass turning vehicles, but they generally slow down when doing so. At some intersections, a left turn lane is provided in lieu of shoulders. This significantly improves through capacity when there are many left turns, though without a shoulder, slowing or stopped right-turning vehicles inhibit the traffic flow. There are many unsignalized intersections along the Study Area, including numerous driveways, contributing to delay.
- **Broken detectors** – Vehicle detectors are a critical component of traffic signal design. Detectors activate and extend signal phases, allowing the signal to adapt its timings to meet traffic demand. When a detector malfunctions, the signal operates on an irregular or pre-set cycle and does not correctly respond to traffic demand, causing delays. Broken detectors are a common complaint among stakeholders, and field observations confirm that some phases are being called without vehicles present.

Table 6: Level of Service (LOS) Summary for Study Intersections

| Silver Lane Study Intersection         | Weekday AM |                 | Weekday PM |                 |
|--|------------|-----------------|------------|-----------------|
|  | LOS        | Delay (sec/veh) | LOS        | Delay (sec/veh) |
| Scantic Road                           | B          | 10.4            | A          | 6.7             |
| Abbe Road                              | A          | 9.1             | A          | 6.2             |
| Stoughton Road                         | A          | 6.0             | B          | 12.3            |
| Southern Auto Auction                  | A          | 6.8             | A          | 7.2             |
| Phelps Road (Route 191)                | B          | 11.6            | D          | 39.3            |
| Tromley Road                           | E          | 58.5            | B          | 19.8            |
| South Water Street                     | B          | 16.5            | C          | 24.8            |
| Thompson Road                          | B          | 15.4            | B          | 11.3            |
| Main Street                            | B          | 10.7            | B          | 13.6            |
| I-91 Exit 44 ramps                     | E          | 56.4            | E          | 73.9            |
| Walmart Driveway                       | B          | 10.5            | B          | 16.8            |
| Big Y / Ethos Energy Driveway          | A          | 3.5             | A          | 6.9             |
| Showcase Cinemas Driveway              | A          | 2.3             | A          | 3.9             |
| Bridge Street / North Road (Route 140) | D          | 39.5            | D          | 37.1            |



Figure 28: AM Peak Level of Service (LOS) for Study Intersections



Figure 29: PM Peak Level of Service (LOS) for Study Intersections

### 3.1.3 Crash History

Crash data for Route 5 and its intersecting roadways was obtained from the University of Connecticut (UConn) Connecticut Crash Data Repository (CTCDR) for the three-year period from January 1, 2015 through December 31, 2017. A total of 205 crashes were recorded in the corridor, 37% of which resulted in injuries. Crash rates were calculated for each intersection and segment.

The following conclusions were drawn from the crash data:

- Crash rates are highest in the north end of the Study Area, but severity is highest in the south, likely due to the higher speed differential.
- There were multiple rear-end crashes between intersections caused by congestion.
- There were many angle crashes at driveways, especially in the vicinity of Thompson Road and Bridge Street / North Road (Route 140).
- Three accident cluster locations were identified with detail graphics:
  - **Figure 30**, page 26: Segment south of Thompson Road
  - **Figure 31**, page 26: I-91 Exit 44 and Walmart intersections
  - **Figure 32**, page 27: Bridge Street / North Road (Route 140) intersection and adjacent driveways

[Continued on page 26]

**Intersection Crash Rate:**

**Crash rate at intersection is calculated as follows:**

$$\text{Rate} = \frac{1,000,000 * \text{No. Crashes}}{365 * \text{Years of Data} * \text{Daily Traffic Volume}}$$

**Road Segment Crash Rate:**

**Crash rate for road segments is calculated as follows:**

$$\text{Rate} = \frac{1,000,000,000 * \text{No. Crashes}}{365 * \text{Years of Data} * \text{Daily Traffic Volume} * \text{Length of Segment}}$$

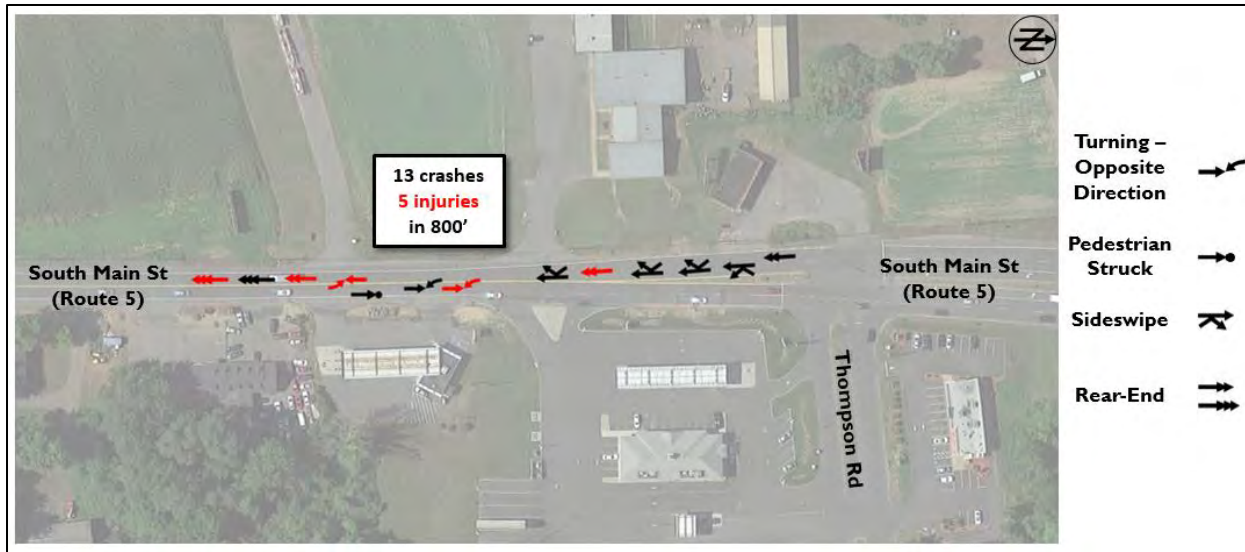


Figure 30: High Crash Location 1: Segment South of Thompson Road

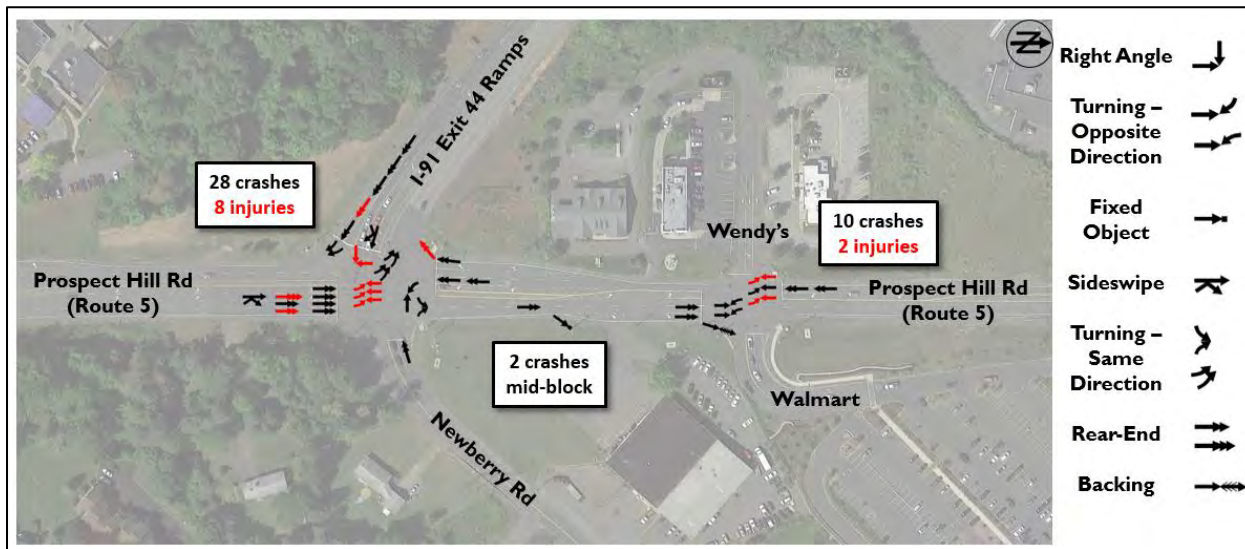


Figure 31: High Crash Location 2: I-91 Exit 44 and Walmart Intersections

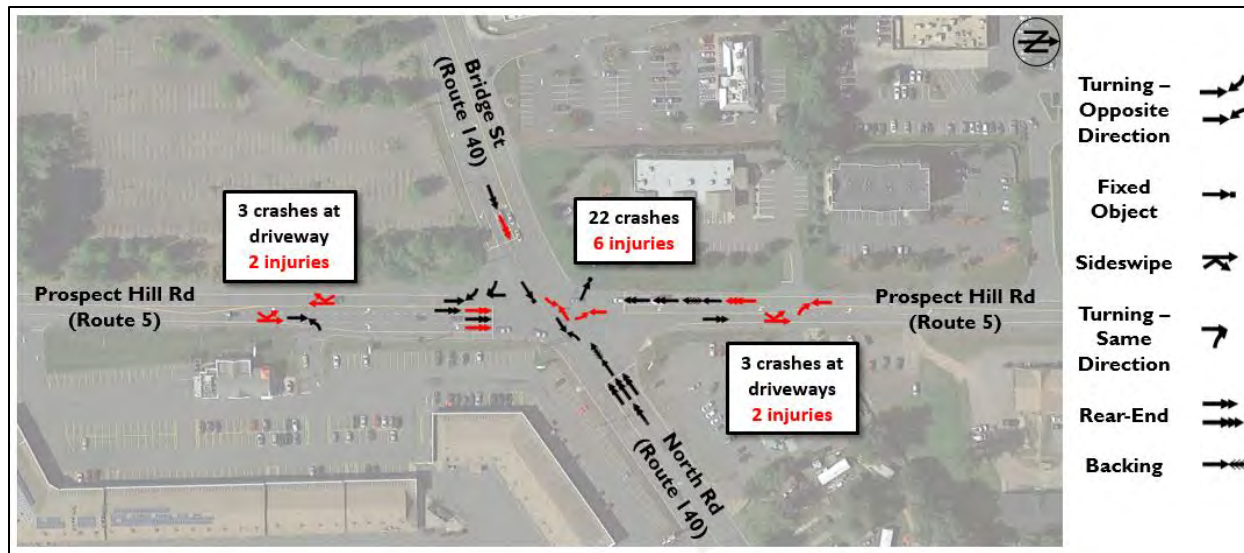


Figure 32: High Crash Location 3: Bridge Street / North Road (Route 140) intersection and adjacent driveways

- Nearly half of crashes were rear-ends, a common collision type attributed to vehicles following too closely.
- Approximately 10% of crashes involved sideswipes, attributed to improper passing maneuvers or improper lane change, and generally clustered around merges.
- Approximately 12% of crashes involved angle crashes, attributed to turning vehicles failing to yield the right-of-way, and generally resulting in more severe injuries.
- At the I-91 Exit 44 ramps, left turns are protected-only; however, there were still several angle crashes between left-turning and through vehicles, indicating a potential red-light-running problem.
- The overall injury rate and severity exceed the statewide average for similar facilities, especially in the southern part of the Study Area.
- There were no fatalities on Route 5 within this three-year period.

Table 7, page 28, presents a summary of the crash data for intersections in the Study Area. In the three-year data period, there were 114 crashes at intersections. Half of the study intersections had rear-end collisions as one of the most prevalent collision types. 33% of crashes at intersections resulted in an injury. The amount of traffic using the intersection is represented in million entering vehicles (MEV) per year, and the crash rate is represented in crashes per MEV.

Table 8, page 29, presents a summary of the crash data on segments within the Study Area; that is, crashes that were not related to intersections. In the three-year data period, there were 91 crashes between intersections. 42% of crashes between intersections resulted in an injury. The amount of traffic using a segment is represented in hundred million vehicle miles traveled (HMVMT) per year, and the crash rate is represented in

crashes per HMVMT. The crash rate corrects for the exposure of the segment (traffic volumes, number of years of data, and length of roadway segment) in order to enable comparison between roadway segments. The crash rate does not account for any other differentiating factors such as geometrics or cross section.

*Table 7: Crash History at Intersections (2015-2017)*

| <b>Intersection Location</b>           | <b>Total Crashes in Data Period</b> | <b>Percent Injury</b> | <b>MEV / year</b> | <b>Crash Rate (Crashes per MEV)</b> |
|--|-------------------------------------|-----------------------|-------------------|-------------------------------------|
| Scantic Road                           | 7                                   | 29%                   | 7.11              | 0.33                                |
| Abbe Road                              | 5                                   | 60%                   | 7.02              | 0.24                                |
| Stoughton Road                         | 6                                   | 67%                   | 7.07              | 0.28                                |
| Southern Auto Auction                  | 4                                   | 50%                   | 7.47              | 0.18                                |
| Phelps Road (Route 191)                | 7                                   | 29%                   | 7.12              | 0.33                                |
| Tromley Road                           | 7                                   | 43%                   | 7.67              | 0.30                                |
| South Water Street                     | 2                                   | 0%                    | 7.8               | 0.09                                |
| Thompson Road                          | 5                                   | 40%                   | 8.35              | 0.20                                |
| Main Street                            | 8                                   | 38%                   | 8.16              | 0.33                                |
| I-91 Exit 44 ramps                     | 28                                  | 29%                   | 10.96             | 0.85                                |
| Walmart Driveway                       | 10                                  | 20%                   | 4.96              | 0.67                                |
| Big Y / Ethos Energy Driveway          | 1                                   | 100%                  | 3.99              | 0.08                                |
| Showcase Cinemas Driveway              | 2                                   | 0%                    | 3.62              | 0.18                                |
| Bridge Street / North Road (Route 140) | 22                                  | 27%                   | 9.71              | 0.76                                |
| <b>Subtotal</b>                        | <b>114</b>                          |                       |                   |                                     |

Table 8: Crash History on Segments (2015-2017)

| Segment Location  | Total Crashes in Data Period | Percent Injury | HMVMT / year | Crash Rate (Crashes per HMVMT) | Most Prevalent Collision Type |
|---|------------------------------|----------------|--------------|--------------------------------|-------------------------------|
| Scantic Road to Abbe Road                                   | 10                           | 30%            | 0.066        | 58                             | Front to Front / Sideswipe    |
| Abbe Road to Stoughton Road                                 | 4                            | 50%            | 0.068        | 58                             | Front to Rear                 |
| Stoughton Road to Southern Auto Auction                     | 8                            | 38%            | 0.068        | 190                            | Front to Rear                 |
| Southern Auto Auction to Phelps Road (Route 191)            | 7                            | 71%            | 0.068        | 116                            | Front to Rear                 |
| Phelps Road (Route 191) to Tromley Road                     | 8                            | 75%            | 0.070        | 58                             | Front to Rear                 |
| Tromley Road to South Water Street                          | 7                            | 43%            | 0.070        | 79                             | Front to Rear                 |
| South Water Street to Thompson Road                         | 19                           | 42%            | 0.075        | 288                            | Front to Rear / Sideswipe     |
| Thompson Road to Main Street                                | 3                            | 33%            | 0.075        | 239                            | Angle                         |
| Main Street to I-91 Exit 44 ramps                           | 6                            | 0%             | 0.075        | 109                            | Front to Rear                 |
| I-91 Exit 44 ramps to Walmart                               | 2                            | 0%             | 0.038        | 241                            | Front to Rear                 |
| Walmart to Big Y / Ethos Energy                             | 2                            | 50%            | 0.038        | 63                             | Other                         |
| Big Y / Ethos Energy to Showcase Cinemas                    | 4                            | 25%            | 0.035        | 141                            | Front to Front / Angle        |
| Showcase Cinemas to Bridge Street / North Road (Route 140)  | 4                            | 50%            | 0.035        | 135                            | Front to Rear                 |
| Bridge Street / North Road (Route 140) to Enfield town line | 7                            | 43%            | 0.028        | 219                            | Front to Front                |
| <b>Subtotal</b>   | <b>91</b>                    |                |              |                                |                               |

### 3.1.4 Access Management

Access Management strategies are used to control access to roadways in order to improve traffic operations, reduce the number of vehicle conflicts, and reduce the number of crashes. These strategies generally include increased spacing between access points, dedicated turn lanes or roundabouts, where appropriate, median treatments, and right-of-way management. Some examples of these strategies are shared drives, one-way drives, two-way left-turn lanes (TWLTL), left-turn prohibitions, and maintenance of sight lines.

In the Study Area, there are a number of commercial and residential driveways along the corridor. As new development and redevelopment is planned along the corridor, it is important to consider the management of access points as part of the site plan approval process. This section contains a review of the existing driveways and access management deficiencies. These deficiencies were identified by field visit, stakeholder interviews, a review of crash data, and aerial photos.

There are approximately 200 driveways along Route 5 in East Windsor, equaling around 40 driveways per mile. These range from narrow residential driveways to heavily used business access points. In some locations, there are very wide curb cuts with poorly defined boundaries. These dense and poorly delineated driveways are located primarily south of the I-91 Exit 44 ramps, but are frequent throughout the Study Area and present challenges to motorized and non-motorized travel. Route 5 serves a variety of users, including a significant number of heavy vehicles. While access management practices recommend compact driveways, it is clear that certain locations should be designed to accommodate the unique types of vehicles that are primarily expected to access the property, including trucks and large trailers.



*Large Curb Cut & Undefined Driveway*

**What is Access Management?**

**Access Management is the proactive management of vehicular access points to land parcels adjacent to all manner of roadways. Good access management promotes safe and efficient use of the transportation network. AM encompasses a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways.**

**(FHWA)**



*Adjacent Commercial Driveways and Wide Curb Cut (239 / 248 US-5)*

#### 3.1.4.1 Scantic Road to Abbe Road

This segment of Route 5 begins at the southern edge of the Study Area and continues to the intersection of Abbe Road. The majority of this segment is a two-lane roadway with one lane in each direction. A southbound exclusive left turn lane is provided for Harken's Market. Other driveways

do not have protected turn lanes along this segment. The access management deficiencies in this segment relate to driveways adjacent to intersections, wide curb cuts, and the proximity of adjacent commercial driveways.

Generally, driveways should be greater than 150 feet from an intersection. Access points in close proximity of the intersection add to the complexity of an environment for all users, including bicyclists and pedestrians navigating the crossing. This is the case just north of Abbe Road, with a commercial driveway approximately 100 feet from the signal.

### 3.1.4.2 Abbe Road to Stoughton Road

The 0.4-mile segment of Route 5 from Abbe Road to Stoughton Road is one lane wide in each direction. There are no turning lanes, however wide shoulders are provided that can be used to bypass turning vehicles. This area serves a variety of development, from residential farm houses to businesses with wide driveways and extensive parking facilities abutting the corridor.

### 3.1.4.3 Stoughton Road to Phelps Road (Route 191)

North of Stoughton Road, Route 5 widens to two lanes in each direction to provide additional capacity through the signal at Southern Auto Auction. The Southern Auto Auction facilities extend beyond one access point, with multiple parking facilities on both sides of the corridor and additional access via intersecting streets. The employee parking lot is accessed via Phelps Road (Route 191). Within the 0.5-mile segment, on the west side of the corridor, a mobile home park at Fairway Drive provides single unit housing. The access to Fairway Drive is provided via two wide driveways. Across from Fairway Drive are wide curb cuts, including multiple access points to the same commercial establishments. Similarly, St. Philip Church has two access points for parishioner parking with pullouts for optional drop-offs. Next to St. Philip Church, there are two residential houses with driveways 15 feet apart. Next, Nonna’s Pizza shares wide access point with A-I Auto Wholesalers, Windsor Auto Group, and Rick’s II Auto Repair establishments. Their driveway is a wide curb cut with two islands to channelize traffic. Route 5 at Phelps Road (Route 191) is signalized and signed as a T-intersection; however, there is a residential driveway present as well, operating independently of the signal. Route 5 has a northbound right turn lane.

The access management deficiencies in this segment pertain to the proximity of adjacent commercial driveways, closely



*Close Driveway to Signalized Intersection (Abbe Road)*



*Mix of Residential and Commercial Space*



*Mix of Residential and Commercial Space / Adjacent Commercial Driveway (154 - 183 S. Main St.)*



*Adjacent / Shared Commercial Driveways and Wide Curb Cut (140 - 142 S. Main St.)*



*Residential Driveway across from signalized intersection (134 S. Main St.)*

spaced driveways, including at signalized intersections, and redundant driveways. Businesses should not have more driveways than are required to maintain site access and operations. Redundant two-way driveways should be closed or converted to one-way to minimize conflict points.

**3.1.4.4 Phelps Road (Route 191) to Tromley Road**

This segment of Route 5 is 0.7 miles long with left turn lanes at the Tromley Road intersection. Shoulder widths vary from zero to ten feet wide. From an access management perspective, there are limited issues on this segment, aside from redundant two-way driveways.

**3.1.4.5 Tromley Road to Thompson Road**

The 0.8-mile segment of Route 5 from has left turn lanes at the intersections with South Water Street and Thompson Road. There are redundant two-way drives and adjacent closely spaced commercial driveways.

**3.1.4.6 Thompson Road to I-91 Exit 44 ramps**

The access point to Wagner Lane is approximately 100 feet away from the intersection of Route 5 and Main St (unsigned Route 510). Having adjacent intersections so close together leads to uncertainty for turning vehicles and inhibits signal coordination.

**3.1.4.7 North of I-91 Exit 44 ramps**

Access management principles are more closely followed in this area, with greater spacing between access points and fewer redundant driveways. However, there is a greater number of driveways around the intersection of Route 5 and Bridge Street / North Road (Route 140), with driveways less than 250 feet from the traffic signal on all approaches. Residential driveways are closely spaced as well.



*Redundant Driveway  
(107B S. Main St)*



*Redundant Driveway  
(82 S. Main St)*



*Close spacing between access to Wagner Ln  
and Main St*

## 3.2 Land Use and Environmental Assets

An assessment of the existing land use conditions in the corridor and the development potential sets the framework for evaluating potential future conditions. Future development trends will be informed by the market conditions as well. This is considered in the following section of the existing conditions report, which, along with the future land use scenario, can build corridor-wide themes and identify regional strategies that will help create a more dynamic economic environment supportive of progress towards the land use vision for the community.

Development in the study corridor is diverse. There is a mix of uses and densities throughout which is sometimes quite disparate, yet an overall pattern can be discerned of well-formed centers, clusters of activity, and then dispersed variable land uses sprawled in between. The following observations about land use issues and opportunities can be made:

### 3.2.1 Land Use

Land use and the transportation system each influence one another in a dynamic way. Where there is sound, safe, and convenient access, development has a greater opportunity to flourish. Where the pattern of land use follows Smart Growth principles, road congestion can be better managed and use of alternate means of travel such as walking, bicycling, and taking transit can be supported and optimized. Along the Study Corridor there are four predominant land use types: agricultural, auto/industrial, commercial, and residential. [Figure 33](#) illustrates the land type characteristics. In general, the Route 5 corridor transitions from a more rural setting at its southern end to a mix of suburban-scale commercial at its northern end. Automotive uses dominate the section of the Route 5 between Phelps Road and Abbe Road.

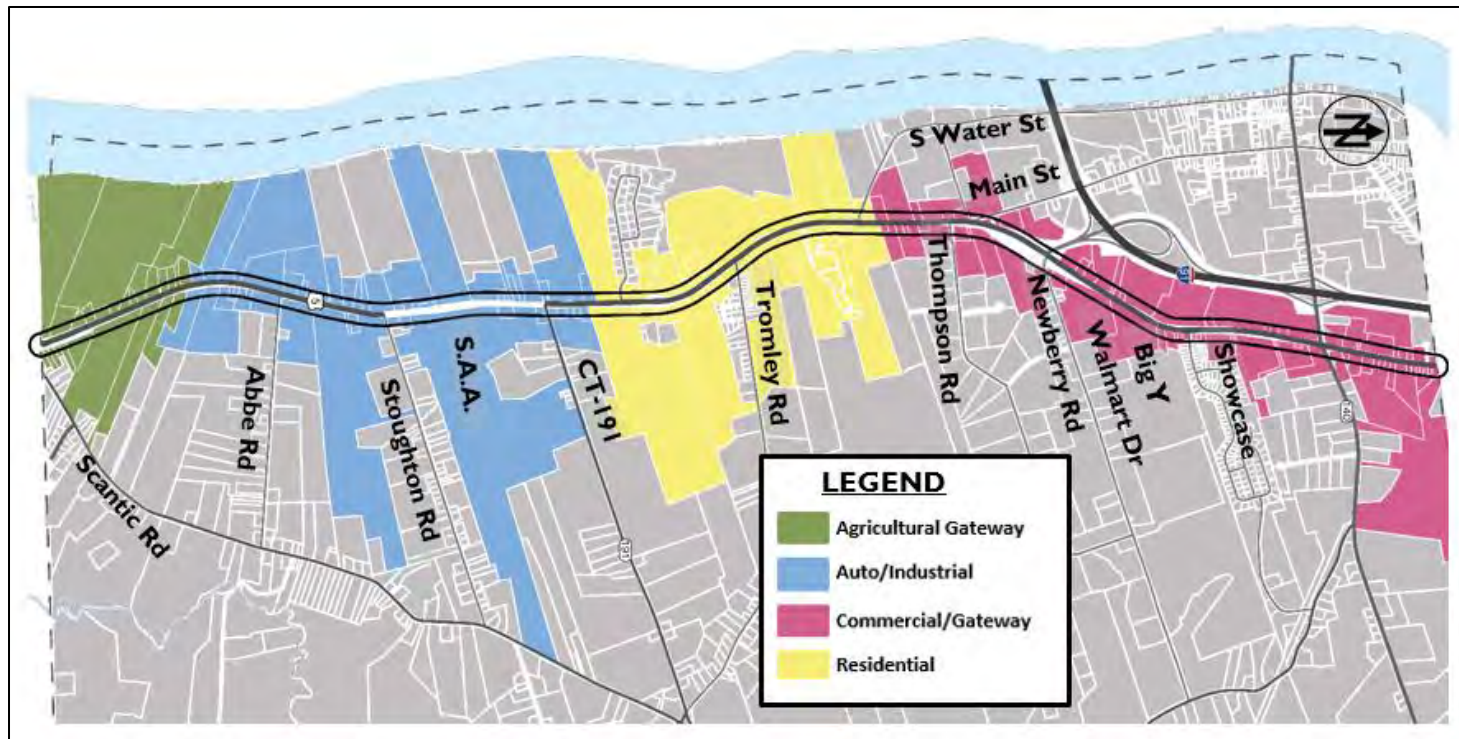


Figure 33: Land Use Characteristics

A more granular look at land use categories is shown in Figure 34, where vacant commercial land is a standalone category to highlight the potential development opportunities. Agricultural land on the south edge of U.S. Route 5 is also refined into several categories, including residential to the west and vacant commercial to the east of the corridor. Commercial Gateway land use category to the north is intended to encourage business development while managing environmental, traffic, aesthetic, and community character impacts.

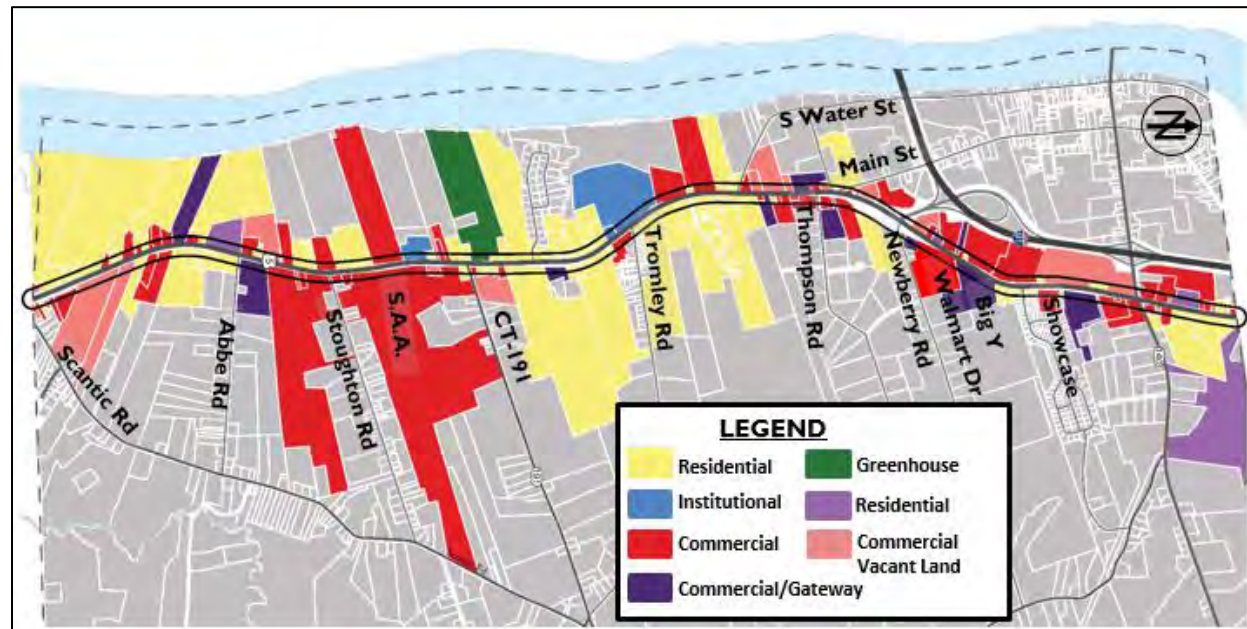


Figure 34: Detailed Land Use

### 3.2.2 Zoning

East Windsor has a distinct set of zoning districts laid out to meet local long-term development objectives. Zoning by primary intended land uses in the Study Area was generalized and is shown in Figure 35. The latest update to the zoning regulations was in the year 2016, when the Multi Family Development District (MFDD) was amended.

The notable features of each existing East Windsor zoning district in the study area are as follows:

***M-1, Manufacturing Zone*** – intended to provide areas for manufacturing, warehousing, wholesale, and other forms of commercial and industrial activities. The character of the zone is intended to be commercial in nature while still maintaining the small town community character.

**B-1, Business Zone 1** – intended to establish areas of light commercial activities including neighborhood retail, services, and professional offices. The character of the zone is intended to be small scale commercial activities that serve the surrounding areas and integrate well with the neighboring residential development.

**B-2, Business Zone 2** – intended to provide areas of commercial activity including community retail, business, service, professional offices, and other automotive dependent uses. The character of this zone is intended to be small to large scale commercial developments primarily served by automobile.

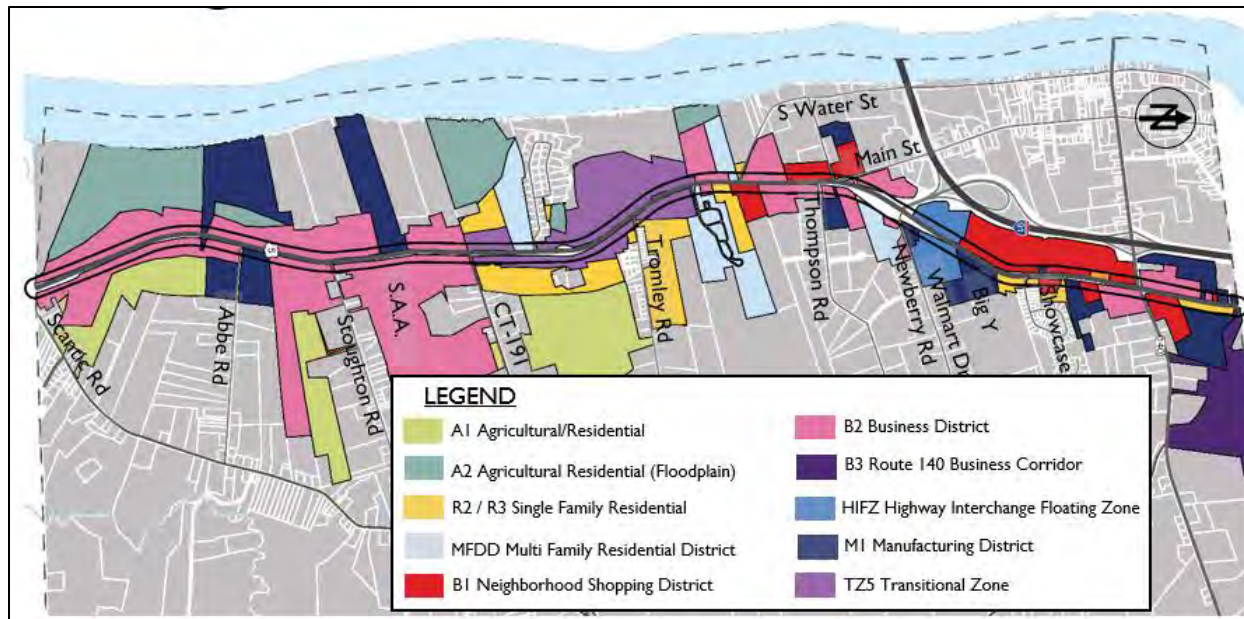


Figure 35: Corridor Zoning

**B-3, Business Zone 3, Route 140 Corridor** – intended to provide for business development in order to increase the tax base, provide services and amenities to residents of the town and larger region, and provide jobs. The character of the zone is intended to provide a variety of uses and building types while managing environmental, traffic, and aesthetic/community character impacts. Planned developments with a village character and multiple uses on a parcel are desirable in this district.

**HIFZ, Highway Interchange Floating Zone** – establish a legal framework for land use alternatives that will provide the applicant with a wide variety of development opportunities; to encourage the economic development and fiscal improvement of the community by providing flexible development

opportunities and responsiveness to market trends for land having high visibility and access to the major intersections of Route 5 with I-91 at Exit 44, and with Route 140; to empower the Town with a measure of control over the type and quality of development while encouraging mixed Industrial, Commercial, and Business Uses; and to insure that such development is accomplished in an orderly manner with minimal negative impact to neighboring areas and critical natural resources.

*TZ5, Transitional Zone 5* – to allow existing residential areas to transition in an orderly means to a commercial area. The development of this zone should provide minimal impacts on existing residential development within the area.

*Residential - R-2, R-3, A-1, and A2* – where these residential zoning districts are established to provide a harmony with natural features of the land and the needs of East Windsor residents, both present and future. The agricultural zones are also considered residential zones, however, the intent is to promote present and future agricultural uses.

*MFDD, Multi Family Development District* – intended to regulate the development and construction of multi-family housing, including but not limited to apartments, condominiums and cooperatives, whether new or existing structures, and to permit planned residential developments (PRD) for single-family housing with open space conservation in accordance with Section 801.

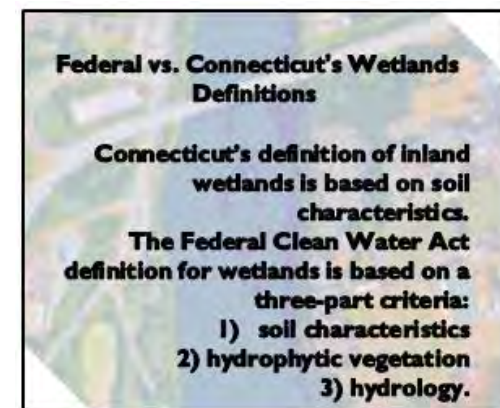
The parking zoning provisions in the East Windsor zoning regulations include a traditional table with the number of parking spaces required by use. In addition, a commission can waive the minimal required parking spaces based on a parking reduction application.

### 3.2.3 Environmental Conditions

Environmental conditions are a significant consideration for the Route 5 Corridor due to its proximity to the Connecticut River, floodplains, floodways, and wetlands. The Connecticut River itself flows southward through the State and ultimately empties into Long Island Sound. Within the Study Area, there are several small tributary rivers, brooks, and streams that join the Connecticut River:

- Scantic River – south edge of the study area
- Quarry Brook – north of Stoughton Road
- Stoughton Brook – south of Tromley Road
- Namerick Brook – north of Tromley Road
- Blue Ditch – under the Dexter D. Coffin Bridge
- Boweys Brook – south of the Enfield town line

Figure 36 illustrates the approximate boundaries of 100-Year Flood Zone, 500-Year Flood Zone, and wetlands. The 100-Year Flood Zone is the area that has a one percent chance of flooding in any given year. In the southern end of the Study Area, much of the land adjacent to Route 5 is within the 100-Year Flood Zone.



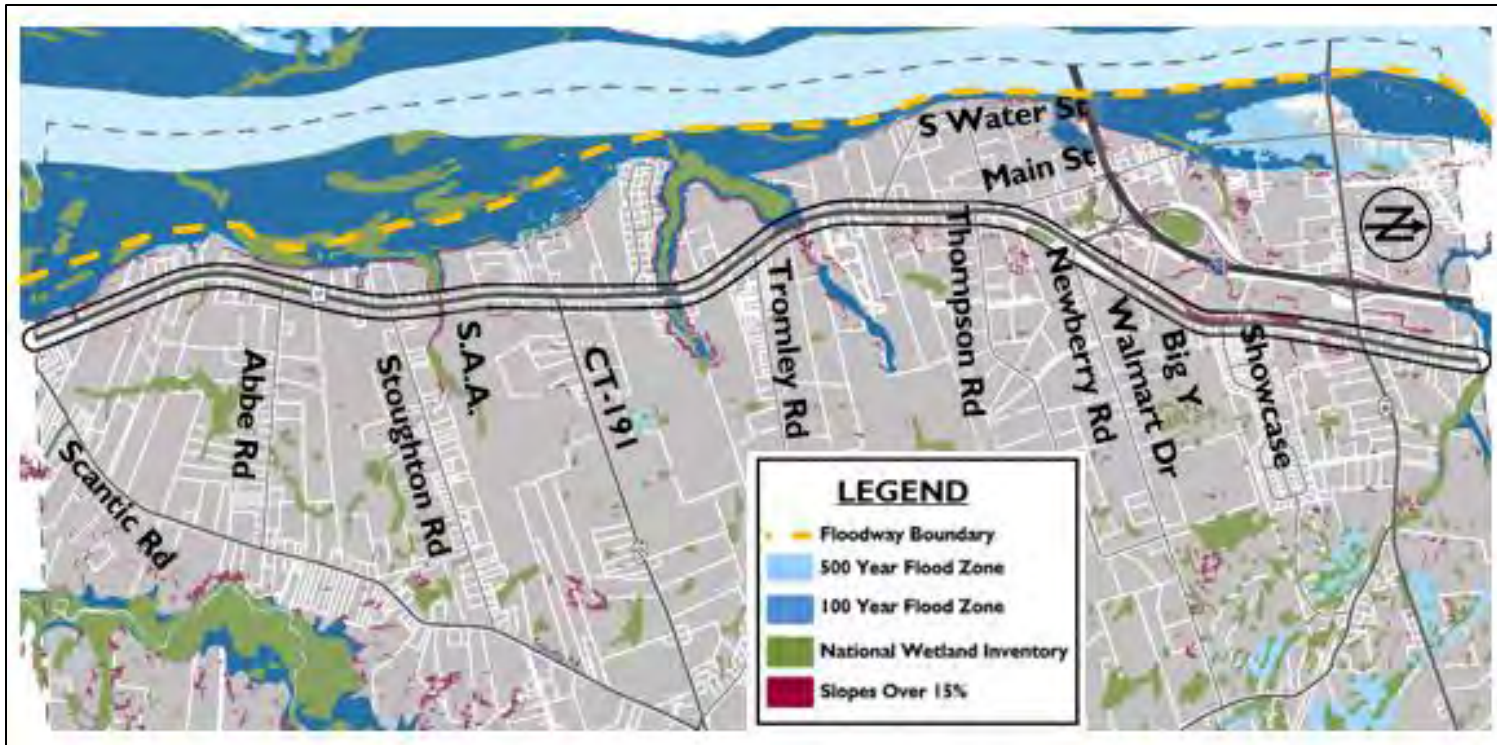


Figure 36: Environmental Constraints

Figure 37 shows Natural Diversity Areas, slopes, and wetlands (Federal and State) within the Study Area. These constraints are present throughout the Study Area, and Route 5 itself runs through both wetlands and Natural Diversity Areas.

More specific environmental evaluations and documentation will be completed in accordance with CEPA and NEPA requirements under subsequent initiatives as study recommendations are advanced to design and implementation.

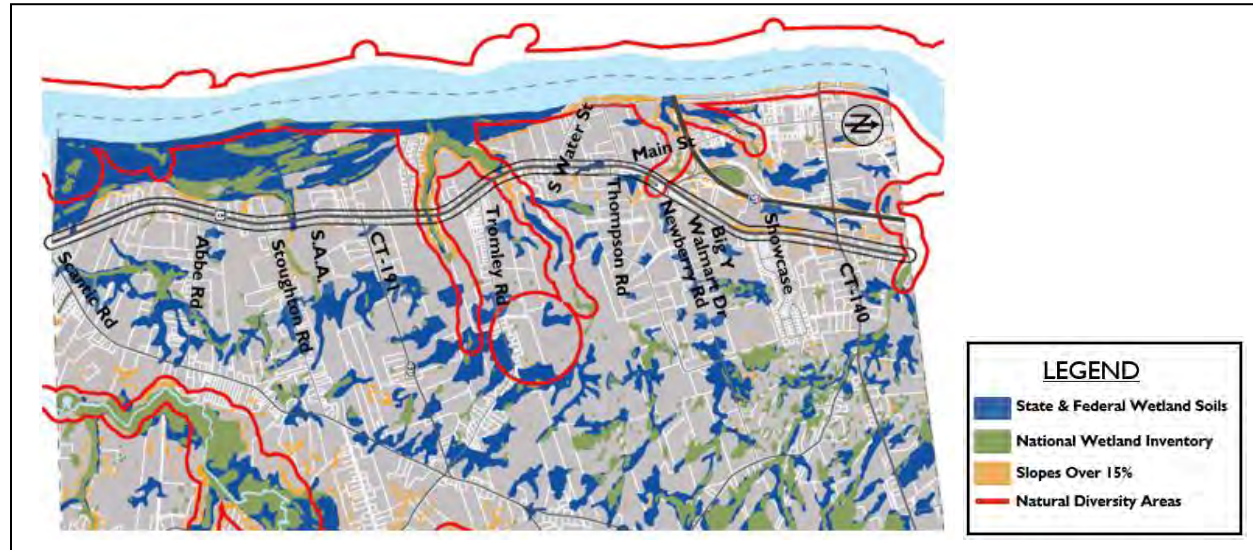


Figure 37: Natural Diversity Areas, Slopes, and Wetlands

interconnections between local streets, commercial driveways, and Route 5 that would serve to improve access, circulation, and walkability within the study corridor would require the assemblage of ROW across numerous parcels. As such, it is anticipated that the improvements could be implemented or accommodated in conjunction with future redevelopment plans for the parcels on which these new network connections would be provided.

Overhead and underground utilities – such as electric, cable, telephone, water, and sewer lines – are located throughout the Study Area. Because relocation of utilities can be cost-prohibitive to potential improvement projects in the corridor, potential impacts to these utilities are generally minimized or avoided where possible. Additionally, existing public utility infrastructure, particularly water, storm water and sewer capacity, could constrain the intensity of future development that is possible without upgrades.

### 3.2.4 Physical Features / Constraints

Physical features identified in the study area include Rights-of-Way (ROW) and Utilities.

Based on approximate ROW lines shown in traffic control signal plans, the ROW lines along Route 5 are generally located several feet beyond the edge of road. However, there are some locations where the road is at the edge of the State ROW, for example at the Big Y driveway. Adding lanes or sidewalks along Route 5 seems to be possible within the existing ROW within much of the Study Area. Opportunities for new

### 3.3 Multimodal Accommodations

Much of Route 5 in the study area has been designed to prioritize the automobile and the emphasis on a single mode of transportation has largely contributed to the issues regarding safety, congestion, and accessibility along the corridor today. This auto-oriented approach has created an environment along the corridor that generally lacks sufficient facilities for alternative modes of transportation, such as taking a bus, biking, or walking.

While these conditions make Route 5 intimidating and discouraging to bicyclists and pedestrians today, a significant amount of potential does exist. There has been a growing recognition not only across the state, but across the nation that the key to designing efficient, sustainable, and safe transportation systems is to incorporate multiple modes that are accessible and convenient for all users.

This section of the report includes an assessment of the existing conditions of bicycle, pedestrian, transit, and multi-use facilities within and adjacent to the Study Area.

#### 3.3.1 Pedestrian Facilities

Being rural in nature, the study corridor generally has no sidewalks. Other pedestrian facilities are limited to four pedestrian actuated intersection crossings and a single painted crosswalk across Route 5. The locations of these facilities are noted in [Figure 38](#). The crosswalk is located at Tromley Road and East Windsor High School. There are a number of pedestrian push buttons along Route 5 in the northern portion of the Study Area. Many of these push buttons are not accessible to people in wheelchairs. Only the push button at Tromley Road actuates an exclusive pedestrian phase; the remainder are concurrent.



*Adjacent Sidewalk (Walmart)*



*Figure 38: Pedestrian Facilities*

Figure 39 shows the number of pedestrians counted at signalized intersections corridor during the AM and PM peak periods. There are signs of pedestrian presence in the corridor such as goat paths on the side of the road. Pedestrians may walk in the shoulder where there is vegetation, a slope, or other barriers along the edge of the road. In general, roadway shoulders of varying width are provided on both sides of the corridor. However, these shoulders are also used by bicyclists and vehicles, and in some locations they are absent altogether.

**What is Desire Lane / Goat Path?**  
**Desired Lane is informal route that is formed in space by people making their own paths and shortcuts; it is an unofficial and usually the shortest route. Another name for is Goat Path from the consequent erosion.**



Pedestrian Walking in Shoulder Lane (44 South Main Street) Push-to-Walk Button at Newberry Rd Interchange



Figure 39: Pedestrian Counts at Intersections AM, (PM)

### 3.3.1.1 ADA measures

The Americans with Disabilities Act (ADA) requires access to the public right-of-way be provided for people with disabilities and visual impairments. This includes providing accessible sidewalks, street crossings, and pedestrian push buttons at signals. ADA accessibility is a requirement for any project that receives federal funding. Specific ADA accessibility guidelines include:

- Minimum continuous sidewalk widths of 4 feet, with 5 feet of space provided at 200-foot intervals for passing.
- Minimum sidewalk widths maintained without obstruction.
- Curb ramps to transition from sidewalk elevation to street level at crossing locations.
- Detectable warning surfaces on all curb ramps.
- Accessible pedestrian signals that provide non-visual (audible and vibrotactile) queues.
- Accessible pedestrian push buttons.

The single marked crosswalk at Tromley Road does have push buttons, but there are no other amenities typical of a pedestrian corridor, e.g., tactile warning strips, continuous sidewalk on the east side of the corridor, audible or vibrotactile pedestrian signals, and properly designed ramps with curb and gutter considerations. The crossings at these locations may be difficult to navigate for vulnerable users.



*Goat Path & No Shoulders*



*Tromley Road sidewalk condition and ADA non-compliance*

### 3.3.1.2 Journey to work

According to the US Census Bureau Longitudinal Employer-Household Dynamics data, there were 8,583 jobs within the Study Area in 2015 (most recent available data); 279 of these jobs were held by people living within the Study Area and 8,304 jobs were held by people outside of the Study Area. Of residents living within the Study Area, 2,575 residents commute to work outside of the Study Area. These patterns are shown in Figure 40.

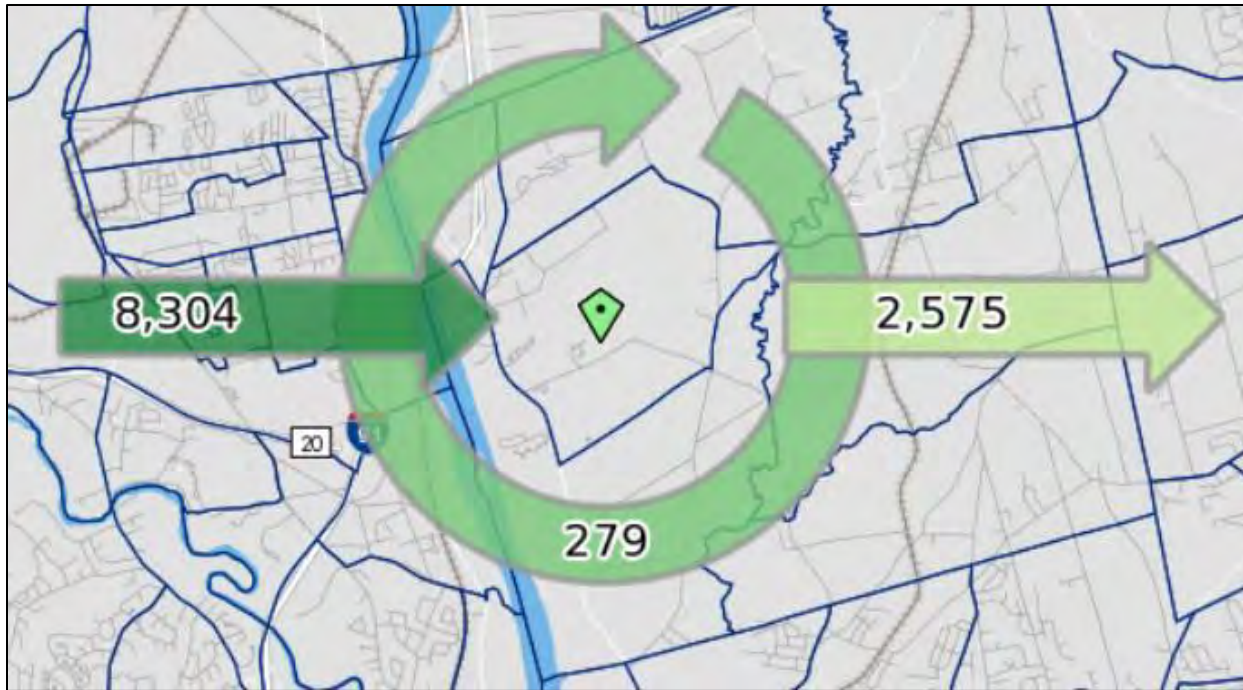


Figure 40: Study Area Commuting Patterns for Employment in East Windsor

Figure 41 illustrates the general direction of employment and distance travelled. 43% of people travel less than 10 miles to work, followed by 38% traveling between 10-25 miles, and remaining 19% traveling more than 25 miles.

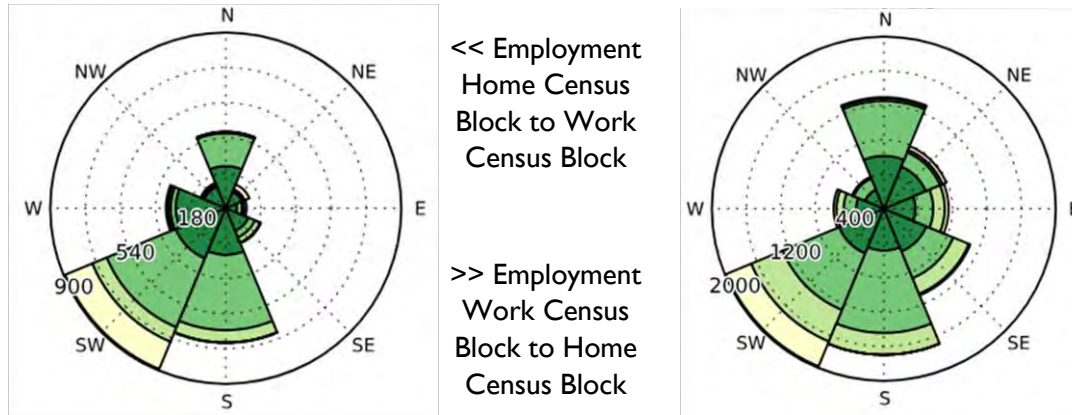


Figure 41: Study Area Direction of Commuting Patterns to/from Employment /Home

### 3.3.2 Bicycle Facilities

While there are currently no dedicated bike routes, signage, or facilities for bicyclists along Route 5, this mode of transportation has the potential to be well utilized in the study area. Currently, the bicycle environment is less than ideal and characterized by inconsistent shoulders, numerous intersecting roadways and driveways, constant streams of traffic that sometimes travel at high speeds, and a lack of “share the road” signage or other devices that would alert drivers of the potential to encounter a bicyclist.

Although there is a multi-use trail in proximity to the Study Area, bicycle infrastructure, such as bicycle lanes and bicycle racks, is noticeably lacking on Route 5. Despite this, based on STRAVA bicycle activity data, Figure 42, there is low to medium usage between South Water St and Phelps Road (Route 191) as well as along Scantic Road.



Cyclist (252 South Main St)

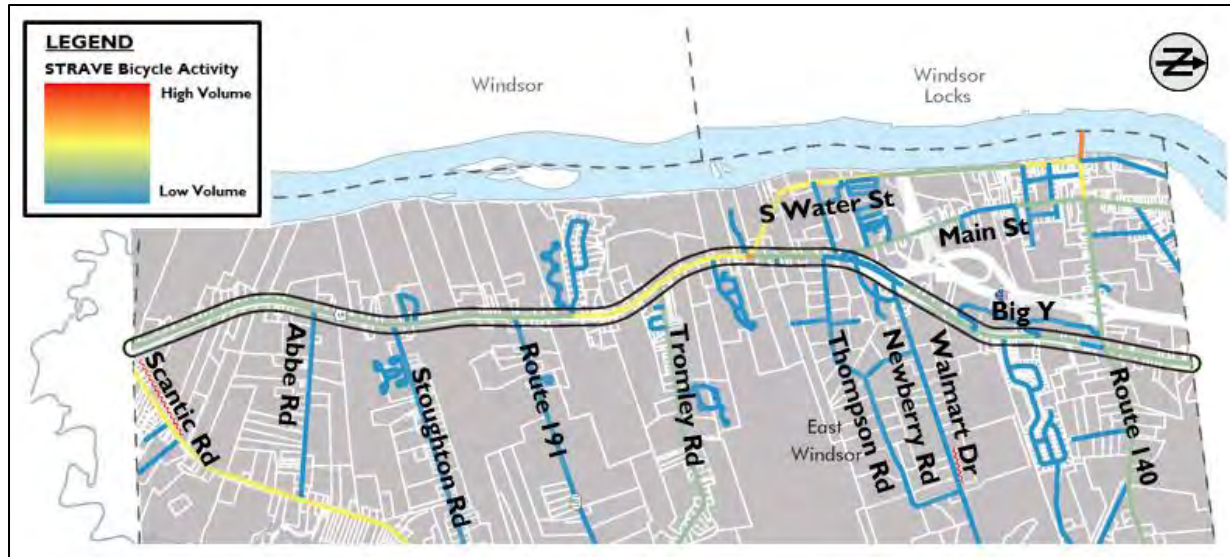


Figure 42: Strava Bike Usage

Data collection efforts confirm that there are a few minimal bicycle riders on the corridor during peak periods. Bicycle counts at signalized intersections are shown on Figure 43. Though the number of bicyclists is low, they travel through multiple intersections, showing that there is demand for medium- and long-distance bicycle travel along Route 5.



Figure 43: AM and PM Bicycle Counts

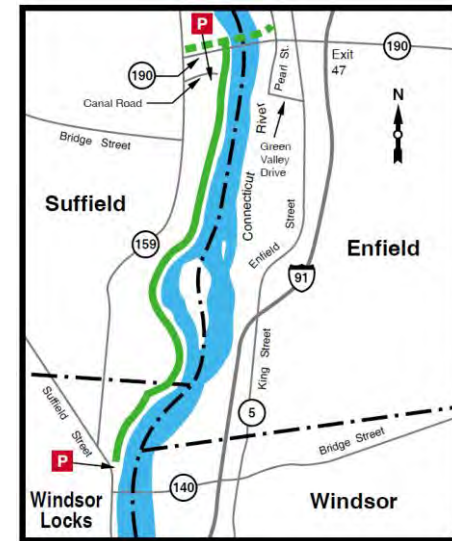
### 3.3.3 Multi-Use Trails

The Windsor Locks Canal State Park Trail runs through Windsor Locks and Suffield to the west of the Study Area. The trail begins at Bridge Street (Route 140) in Windsor Locks and proceeds northward along the Connecticut River until its terminus at Canal Road. This trail is approximately 4.5 miles long and its footprint follows the historic towpath of an over-170-years-old waterway. The Connecticut Department of Energy and Environmental Protection (DEEP) had been leasing the land from the Windsor Locks Canal Company for the public use as a state park trail. As of June 2018, the Windsor Locks Canal State Park Trail is temporarily closed in connection with the redevelopment of the Montgomery Mills building. The DEEP and the Windsor Locks Canal Company are finalizing various arrangements, including trail access.

### 3.3.4 Bus Transit Commuter Systems

#### 3.3.4.1 Transit Routes

Connecticut Transit (*CTtransit*), a CTDOT-owned bus service, provides bus service to downtown Hartford on weekdays from Enfield and South Windsor. Within the Study Area, only route 905E traverses the corridor, and it does so in the off peak direction. In the AM, the peak travel direction is to Hartford; however, the 905E traverses Route 5 in the northbound direction towards Enfield, allowing only disembarkments. In the evening, the reverse is true, and the bus only accepts embarkments as it heads down Route 5 towards Hartford. These are the only two *CTtransit* buses on Route 5 on weekdays, and there is no bus service on weekends. [Figure 44](#), page 47, outlines route 905 and designated stops. On Route 5, bus stops are marked with an official bus stop sign; [Figure 45](#) on page 47 provides examples.



**Windsor Locks Canal State Park  
Trail Map**



Figure 44: 905 Bus Route in Study Area



Figure 45: Examples of Bus Stops

Route 905 ridership averages approximately 3,000 trips per day on its peak direction route, but only seven to ten riders on its off-peak service down Route 5. While majority of the trips in the off-peak direction are through trips, 2-3 riders embark or disembark at Phelps Street (Route 191) and / or Stoughton Road.

South of the corridor study area, CTtransit Route 96 provides services between South Windsor, East Hartford, and Hartford. This Route's most northern point is at intersection of Route 5 and Route 194 in South Windsor, as shown in [Figure 46](#). CTtransit Route 94 also serves South Windsor along Route 5. Combining Routes 94 and 96, the average daily ridership in 2014 totaled 1,629 boardings and alightings.

All CTtransit buses are wheelchair accessible with wheelchair lifts or ramps for access by persons with disabilities. In addition, for compliance with the ADA, the Greater Hartford Transit District provides paratransit transportation services for individuals who, because of their disability, are unable to travel on the fixed route public transit service operated by CTtransit. The paratransit service is designed to provide those persons with disabilities equal access to public transportation; however, the service is limited to within  $\frac{3}{4}$  (.75) mile radius of the fixed route public transit service. The last stop on Route 96 is 0.7 miles from the East Windsor town line.

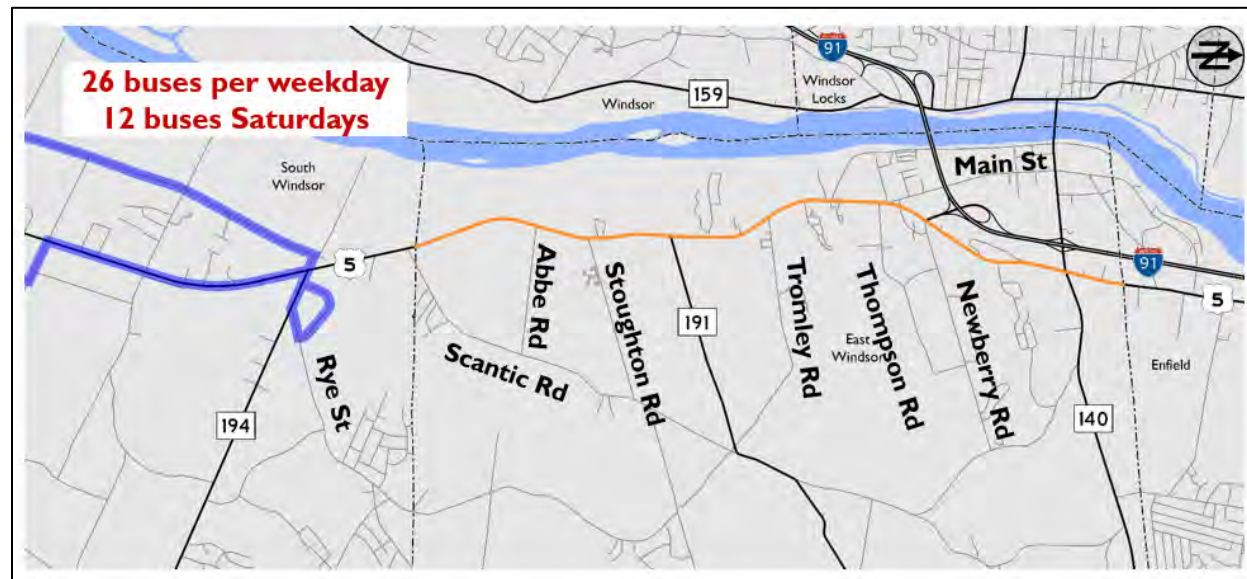


Figure 46: Bus Route 96 South of the Study Area

### 3.3.4.2 Bus Fares

Standard CTtransit fares for (Zone A / Zone I) are \$1.75 for adults, \$1.40 for youth, and \$0.85 for seniors and persons with disabilities. Ten rides can be purchased for \$15.75 and passes are available in the following denominations: 2 hours for \$1.75, 1 day for \$3.50, 3 day for \$8.75, 5 day for \$14.00, 7 day for \$19.25, and 1 month for \$63.00. Express routes (Zone 2) are \$3.20 for a one-way fare. Table 9, below, illustrates the fare structure for local bus services.

Table 9: Bus Fare Structure

| Local Bus Fare                           | Zone            | Fare    |
|--|-----------------|---------|
| Cash (Regular)                           | Zone A / Zone I | \$1.75  |
| Cash (Youth)                             | Zone A / Zone I | \$1.40  |
| Cash (Senior)                            | Zone A / Zone I | \$0.85  |
| 10-Ride Ticket (Regular)                 | Zone A / Zone I | \$15.75 |
| 10-Ride Ticket (Youth)                   | Zone A / Zone I | \$12.60 |
| 10-Ride Ticket (Senior)                  | Zone A / Zone I | \$7.65  |
| Children (Age 4 and Under, 3 Child Max.) | Zone A / Zone I | Free    |
| Transfers within Two Hours               | Zone A / Zone I | Free    |
| All-Day Pass                             | Zone A / Zone I | \$3.50  |
| 2-Hour Pass                              | Zone A / Zone I | \$1.75  |
| 3-Day Pass                               | Zone A / Zone I | \$8.75  |
| 5-Day Pass                               | Zone A / Zone I | \$14.00 |
| 7-Day Pass                               | Zone A / Zone I | \$19.25 |
| 31-Day Pass (Regular)                    | Zone A / Zone I | \$63.00 |
| 31-Day Pass (Senior)                     | Zone A / Zone I | \$30.60 |

Route 905E is an express route and incurs additional travel zone costs. The cost of a one-way fare within Zone A / Zone B / Zone C is \$3.20, a one-way fare between Zone A & B / Zone B & C is also \$3.20, and finally, the one-way fare between Zone A & C is \$4.10.

CTtransit tickets can be purchased at ticket vending machines, from the bus drivers, and online. A new method of payment was introduced in 2018 with Go CT Card; it provides same discounts as the multi-ride and / or monthly pass, but the card and funds on the card will never expire.

### 3.3.5 Train Services

On June 16<sup>th</sup>, 2018, a new CTrail Hartford Line service was launched between multiple towns in central Connecticut along the I-91

corridor connecting three major cities: New Haven, Hartford, and Springfield. Windsor Locks is one of the 9 operational stations, with additional four to come on line in the future. Currently, there are 16 weekday trips, including those existing Amtrak trains that honor Hartford Line fares and tickets. One-way fares are shown in Table 10.

Table 10: CTrail Fare Structure

| One-Way Fare    | New Haven<br>(both stations) | Wallingford | Meriden | Berlin | Hartford | Windsor | Windsor Locks |
|-----------------|------------------------------|-------------|---------|--------|----------|---------|---------------|
| Wallingford     | \$3.50                       |             |         |        |          |         |               |
| Meriden         | \$4.75                       | \$3.00      |         |        |          |         |               |
| Berlin          | \$6.00                       | \$3.50      | \$3.00  |        |          |         |               |
| Hartford        | \$8.00                       | \$5.50      | \$4.50  | \$3.25 |          |         |               |
| Windsor         | \$9.25                       | \$6.75      | \$5.75  | \$4.50 | \$3.00   |         |               |
| Windsor Locks   | \$10.00                      | \$7.50      | \$6.50  | \$5.25 | \$3.25   | \$3.00  |               |
| Springfield, MA | \$12.75                      | \$10.25     | \$9.25  | \$8.00 | \$6.00   | \$4.75  | \$4.00        |

During weekend launch of the service, almost 22,000 riders traveled using the CTrail line.

The Windsor Locks station is an Amtrak station and is located approximately one mile south of the historical station house and another 0.8 miles from Route 5 corridor. At the station, there are 30 free parking spaces for commuters until September 3<sup>rd</sup>, when a nominal fee will be charged. Windsor Locks is the only station without fare vending machines and thus the fare tickets can only be purchased onboard the CTrail train. The surcharge for on-board purchases will be waived, but the Amtrak trains will sell tickets at Amtrak prices. Currently, there are no ridership projections.

### 3.3.6 Park & Ride Facilities

The closest Park & Ride Facility is across the Connecticut River in South Windsor, near the I-91 Exit 42 ramps. The access point is via South Main Street (Route 159) immediately south of the I-91 southbound ramps. The parking lot has 342 parking spaces, a bus shelter to serve Route 905, is paved, and has on-street lighting.

## 4 Route 5 Future Conditions Assessment

The purpose of the future conditions assessment is to evaluate the potential for economic development within the study area and estimate potential impacts to the transportation system in the *future design year* (2040). The understanding of effects potential development would have on traffic growth, traffic operations and mobility in the Route 5 corridor allows local, regional and state officials to make informed decisions about land use proposals and transportation improvements within the corridor. This technical memorandum assesses the potential for future development, documents the expected traffic growth, presents the expected traffic operational results and identifies changes in transit demand. This document builds off the previously published Existing Conditions Technical Memorandum, which contains a more thorough introduction for the study. It can be found at the study website ([http://crocog.org/wp-content/uploads/2019/01/RT5-Existing-Conditions-Report\\_Final.pdf](http://crocog.org/wp-content/uploads/2019/01/RT5-Existing-Conditions-Report_Final.pdf)).

**Future Design Year:** Planning projects look at how development is expected to progress over a 20-year planning horizon. This ensures that transportation recommendations account for future growth.

### 4.3 Future Development Potential

Future economic development within the study corridor was assessed under two scenarios, base and build, as defined below:

**Base:** Considers ambient growth in traffic from development in and around the study corridor that will occur independently of actions taken as a result of this study.

**Build:** Considers additional development concepts that have been identified by the study team as part of the vision for the corridor.

#### 4.3.1 Base Scenario Development

In order to compile expected developments for the base scenario, the study team worked closely with the Connecticut Department of Transportation (CTDOT), the Route 5 Advisory Committee and local stakeholders to identify specific developments that have been approved or planned in and around the study corridor. The identified developments are documented in *Table 11*, below, and *Figure 47*, following. While development proposals do not always come to fruition as originally intended, the identified developments represent the current thinking of the Town of East Windsor for the development or redevelopment of these properties, and potential developers for these sites have already been identified. It is reasonable to conclude, that if any of the proposed developments were to fall through, the Town would work with developers to pursue similar developments at these sites.

Table 11: Base Scenario Developments

| Development Site              | Use                    | Notes   |
|-------------------------------|------------------------|---|
| Sardilli Distribution Center* | Commercial             | 200,000 sq. ft. distribution center                           |
| Crossroads Cathedral          | Church / Hotel         | Church and 90 unit hotel with conference center               |
| MMCT Casino                   | Recreational / Gaming  | Planned casino with over 2,000 gaming positions               |
| Calamar Housing               | Residential            | 122 units of over-55 housing                                  |
| Montgomery Mill               | Residential            | 160 apartment units   |
| Relocated Train Station       | Transportation         | Windsor Locks train station serving CTrail and Amtrak service |
| Metro Park North              | Warehouse / Industrial | 800,000 sq. ft. distribution center                           |

\* Sardilli announced in September 2019 that they would not be developing this site as originally planned.



Figure 47: Base Scenario Development Sites

As noted above, Sardilli has announced that they will be creating their new distribution center in Windsor, rather than the site planned for East Windsor. Through discussions with Town of East Windsor staff, the study team believes that the Town will continue to pursue development opportunities of this scale at this site. Therefore, the base scenario and ensuing traffic forecasts continue to include the previously planned development.

### 4.3.2 Build Scenario Development

The study team worked with the Route 5 Advisory Committee to identify additional development or redevelopment opportunities that would impact the traffic within the study corridor. Initially, a development scheme was proposed that closely adhered to the Town's adopted *Plan of Conservation and Development (PoCD)*. However, the advisory committee felt that the corridor should provide for more commercial development and less residential development than identified in the PoCD. This was based on the corridor's status as one of the only locations in town that provides sanitary sewer service along with access to the regional highway system (Interstate 91) and Bradley International Airport. Therefore, the study team developed new development concepts that focus on enhancing the amount of commercial development within the corridor. The potential developments are identified in *Table 12* and *Figure 48*, both following, and described in the following sections. Conceptual site plans for the build scenario developments are included as Appendix I – Build Development Sites.

**Plan of Conservation and Development (PoCD):** A PoCD is a tool for guiding future development of a community. By Connecticut state statute, municipalities are required to update their PoCD every ten years. East Windsor's PoCD was updated in 2016 and is available on the Town website: [https://www.eastwindsor-ct.gov/sites/eastwindsorct/files/uploads/2016\\_plan\\_of\\_conservation\\_development.pdf](https://www.eastwindsor-ct.gov/sites/eastwindsorct/files/uploads/2016_plan_of_conservation_development.pdf)

*Table 12: Build Scenario Developments*

| Development Site  | Use                              | Notes  |
|---|----------------------------------|--|
| 1 - 151 Prospect Hill Road                              | Hotel with supporting commercial | 115-room hotel with restaurant and retail. Total 54,250 sf   |
| 2 - 49 Prosepct Hill Road                               | Restaurant                       | Small-scale restaurant, likely fast or fast-casual. 4,500 sf   |
| 3 - Route 5 at Main Street and Route 5 at Thompson Road | Mixed-use commerical             | Introduction of neighborhood commercial such as banks and retail with infill at Propsect Hill Plaza. 27,900 sf |
| 4 - 44 South Main Street                                | Mixed-use commerical             | Expansion of commercial development at Riverview Plaza. 9,500 sf   |
| 5 - 67 South Main Street                                | Industrial / business park       | New industrial, business park or distribution center. 380,000 sf   |
| 6 - 111 South Main Street & 49 Phelps Road              | Industrial / business park       | New industrial, business park or distribution center. 380,000 sf   |
| 7 - 248 & 250 South Main Street                         | Commercial                       | Agricultural distribution facility with retail component. 40,000 sf  |



Figure 48: Build Scenario Development Sites

#### 4.3.2.1 Site 1 – Hotel with Supporting Commercial Uses

The proposed development of this site consists of a 115-room hotel, a general retail site and a restaurant. The site's location on Route 5, north of the intersection with Route 140, with easy access to Interstate 91 (I-91), provides an appropriate setting for these uses which would complement the existing nearby shopping plaza and restaurants. Furthermore, with the expected MMCT Casino, or other similar large-scale development set to take place in the near future, a hotel and restaurant could be well utilized by casino patrons.

#### 4.3.2.2 Site 2 – Restaurant

The proposed development of this site consists of a small-scale restaurant. Site 2 is an undeveloped parcel located north of Newberry Road and the I-91 Ramps. It is adjacent to an existing Wendy's and KFC. This segment of Route 5 is heavily commercialized with other businesses such as Walmart and United Bank. As such, it is feasible that another restaurant use would be an appropriate tenant for the site. To enhance traffic safety and operations on Route 5, it is recommended that this site share access with the adjacent restaurant site at the traffic signal opposite the Walmart driveway. This recommendation is accounted for in the traffic analysis.

#### 4.3.2.3 Site 3 – Mixed-use Commercial

The proposed development of this site consists of several general retail or commercial sites near the Route 5 intersections with Main Street and Thompson Road. Site 3 consists of parcels that are either currently vacant or for sale, in addition to the Prospect Hill Plaza which has ample parking. Mixed commercial uses could be added to this area as *infill development* that could serve the surrounding residential areas in addition to regional traffic. This area features high traffic volumes on Route 5 that would make the area attractive for additional commercial development. Given the operational characteristics, shared access and consolidation of access at existing signalized intersections is recommended as part of development in this area.

**Infill development** refers to the addition of development space within a vacant or under-utilized parcel. This can economize transportation by requiring fewer car trips and can enhance tax revenue for the Town.

#### 4.3.2.4 Site 4 – Mixed-use Commercial

The proposed development of this site consists of infill general retail and restaurants at the existing Riverview Plaza, across Route 5 from Regina Drive. Neighborhood retail uses in this location would support the surrounding residential areas to the north and east of the site.

#### 4.3.2.5 Site 5 – Industrial Park

The proposed development of this site consists of a large industrial park on several large agricultural parcels north of Tromley Road. Driveway access to the site could be provided via a new right-in / right-out driveway on Route 5 with two-way access to Tromley Road. This use would require a zone change as the site is currently zoned for agricultural uses.

#### 4.3.2.6 Site 6 – Industrial Park

The proposed development of this site consists of a large industrial park on several large agricultural parcels north of Phelps Road. Driveway access to the site could be provided via a new right-in / right-out driveway on Route 5 with two-way access to Phelps Road. This use would also require a zone change as the site is currently zoned for agricultural uses.

#### 4.3.2.7 Site 7 – Agricultural Distribution

The proposed development of this site consists of a large agricultural distribution facility in the southern part of the corridor, midway between the Route 5 intersections with Abbe Road and Scantic Road. This use is similar to the proposed Sardilli distribution center (see Section 4.3.1, **Base Scenario Development**, page 51) and would support the many remaining agricultural uses in the area.

## 4.4 Future Traffic Forecasts

Based on the developments previously discussed for the Base and Build scenarios, the study team prepared future year (2040) traffic forecasts for each. The CRCOG-maintained *travel demand model* was used to identify background (also known as ambient) growth. This growth is based on CTDOT's published socioeconomic projections for employment and population growth. The background growth was applied to the existing condition volumes to create a background future growth forecast which serves as the foundation for the Base and Build forecasts, which were defined on page 51.

### 4.4.1 Base Scenario Traffic Forecast

In order to create the Base scenario traffic forecast, the study team gathered traffic projection data from the proposed developments and added the respective traffic volumes to the background future growth forecast generated by the travel demand model. In all cases, recent traffic studies were referenced for use in assessing the *trip generation* for each of the development sites. These proposed volumes were reviewed by the Connecticut Department of Transportation (CTDOT) for use in the study. The 2040 Base Scenario peak hour traffic volumes are illustrated in *Figure 50* (weekday AM peak hour), following, and *Figure 51*, page 59, (weekday PM). An intersection by intersection volume comparison between the Base and Existing volumes is included in *Table 13* (AM), page 64, and *Table 14* (PM), page 65, and summarized on *Figure 49*, below.

**Travel Demand Model:** A travel demand model is a complex planning tool used to understand travel behavior and trips. It consists of a series of mathematical equations that represent travel choices within a transportation network. Trips are assigned to the network based on the shortest calculated travel times between trip origins and destinations. As traffic volumes increase and increasing travel times cause decreasing speeds on roadways in the network, the model reassigns trips to the network according to the shortest travel time for each trip. The number of trips on the network changes as demographic and land use factors (such as population, employment, and number of households) change over time with development in the region.

**Trip generation** is the process of predicting the number of trips originating in or destined for a particular site or area. Key variables include the use and size of the generator.



Figure 49: Base Scenario (2040) Intersection Traffic Volume Growth

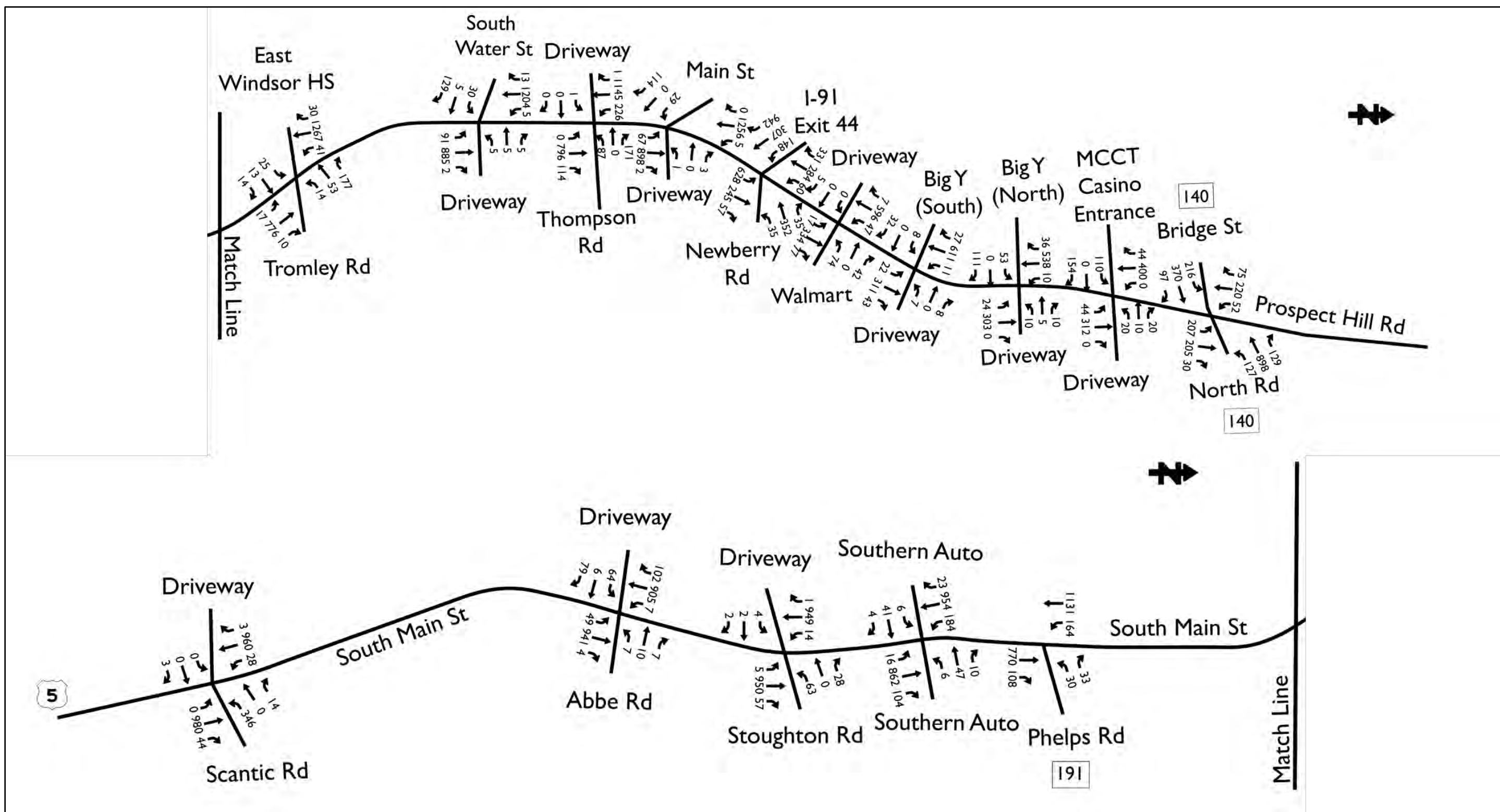


Figure 50: Weekday AM Peak Base Scenario (2040) Traffic Volumes

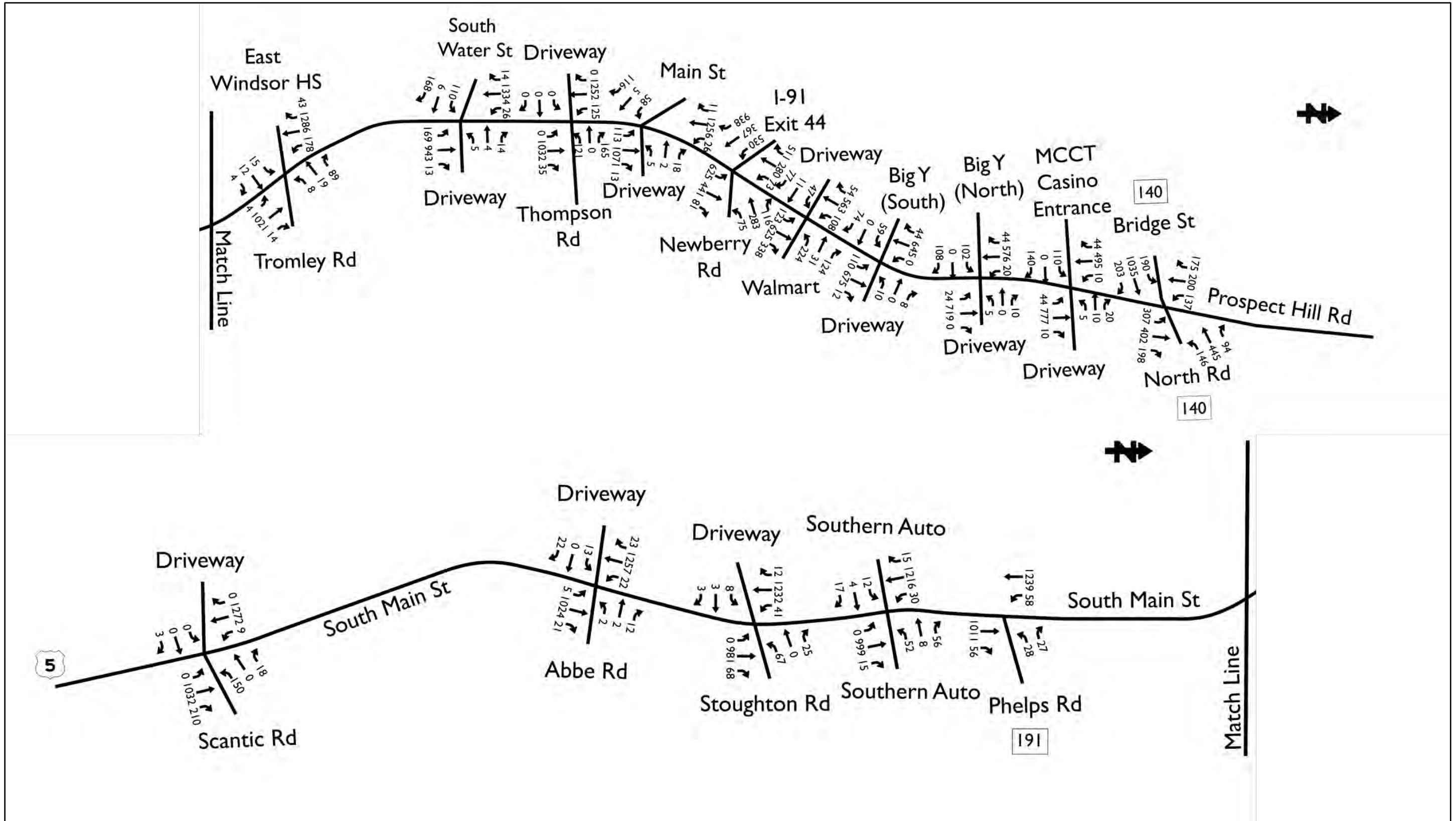


Figure 51: Weekday PM Peak Base Scenario (2040) Traffic Volume

Background (ambient) growth rates are forecast between 10% and 22% throughout the corridor. The background growth rates are lower at the higher-volume intersections (such as Route 140 and the I-91 Ramps / Newberry Road).

The highest growth, both in net change and by percentage, occurs north of the I-91 Ramps / Newberry Road intersection. Increases in this part of the corridor are forecasted at 500 to 600 vehicles per hour in the weekday AM peak (a near 100 percent increase) to 700 to 800 vehicles per hour in the weekday PM peak. The primary reason for these increases is the development of the MMCT Casino.

Growth is relatively consistent south of the I-91 Ramps / Newberry Road intersection, typically between 350 and 500 vehicles per hour in the weekday AM peak and between 400 and 550 vehicles per hour in the weekday PM peak.

#### 4.4.2 Build Scenario Traffic Forecast

In order to create the Build scenario traffic forecast, the study team projected traffic volume data from the proposed developments using industry-standard trip generation formulae. These calculations are included in Appendix 2 – Build Scenario Trip Generation.

These volumes were then added to the Base Scenario forecast. The 2040 Build Scenario peak hour traffic volumes are illustrated in *Figure 53* (weekday AM peak hour), following, and *Figure 54*, page 63, (weekday PM). An intersection by intersection volume comparison between the Build, Base and Existing volumes is included in *Table 13* (AM), page 64, and *Table 14* (PM), page 65, and summarized on *Figure 52*, below.



Figure 52: Build Scenario (2040) Intersection Traffic Volume Growth

The largest increases in traffic volumes between the Base and Build scenario occur between the I-91 Ramps / Newberry Road intersection and Phelps Road. The volumes at these intersections increase by 400 to 500 vehicles per hour during the weekday AM peak hour and by 600 to 800 vehicles per hour in the weekday PM peak. This is primarily caused by the concentration of new commercial development proposed in this area as part of the Build scenario, especially the two large industrial parks near Tromley Road and Phelps Road. When compared with the existing volumes, traffic growth rates are forecast to be fairly consistently through the southern part of the corridor between 43% and 52%.

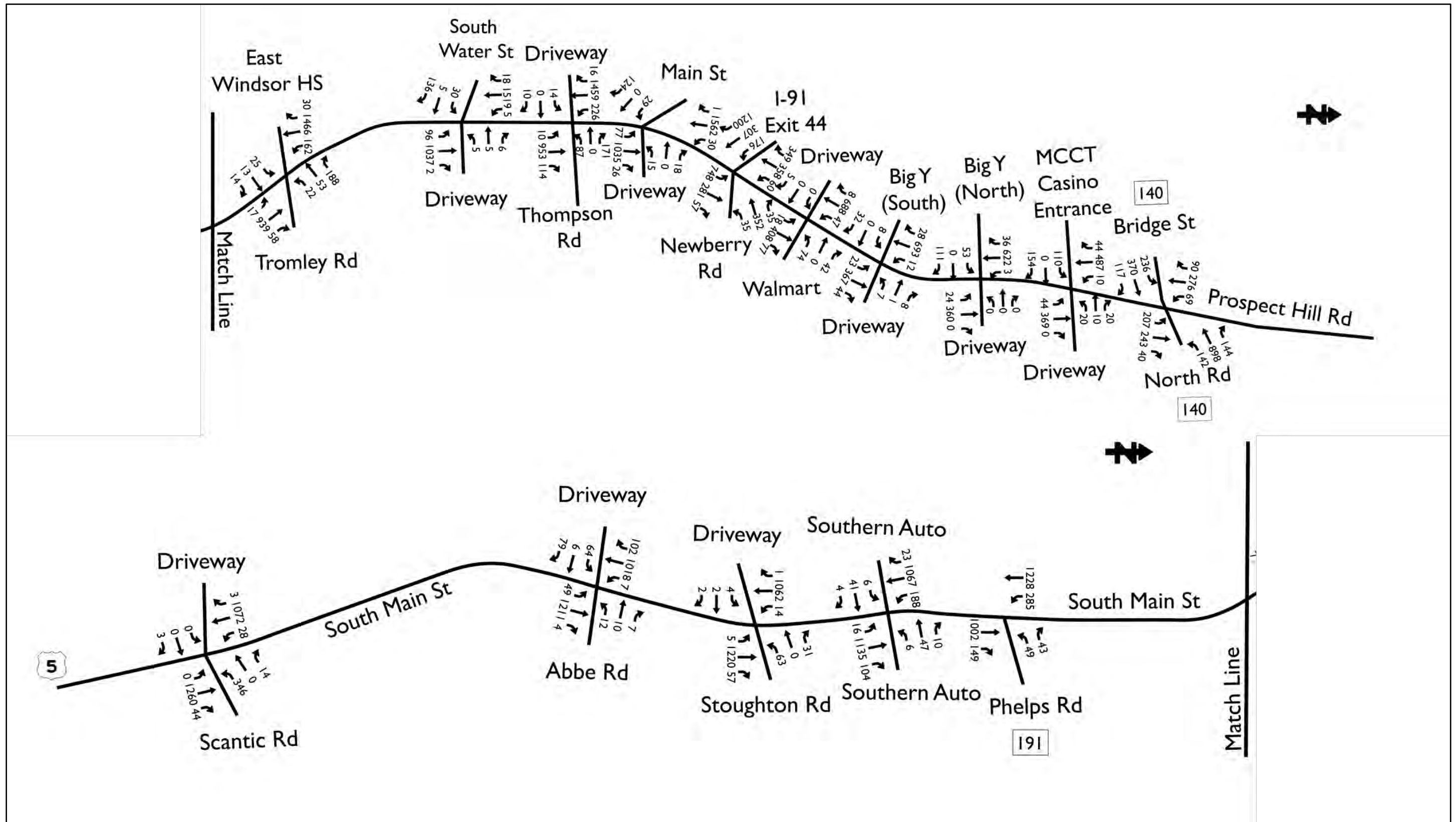


Figure 53: Weekday AM Peak Build Scenario (2040) Traffic Volumes

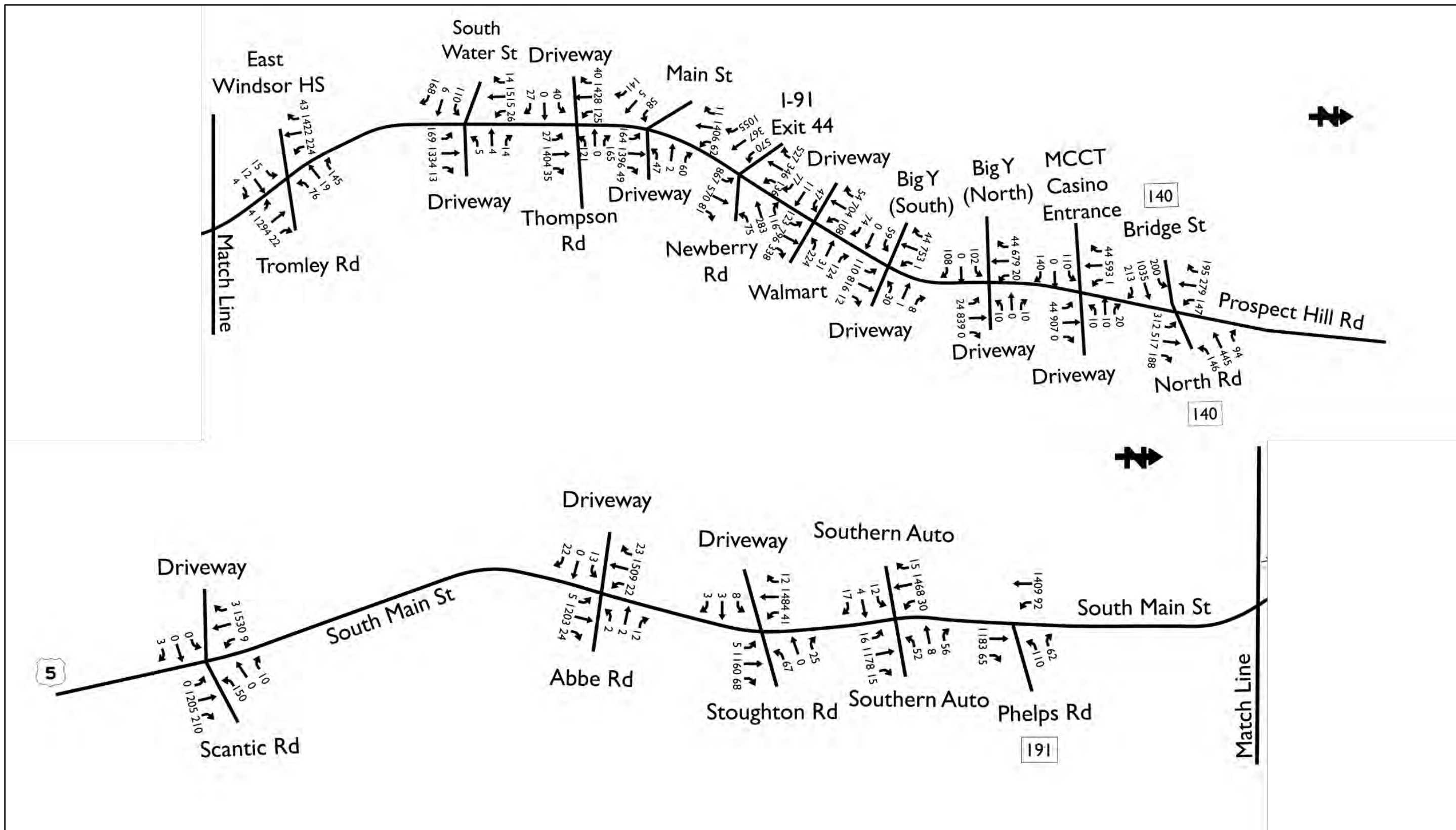


Figure 54: Weekday PM Peak Build Scenario (2040) Traffic Volumes

## Route 5 Corridor Study – Final Report

*Table 13: Weekday AM Base (2040) and Build (2040) Growth Summary*

| Intersection / Approach  | Weekday AM Peak         |                     |                               |                             |                      |                                |                            |                              |                          |
|--|-------------------------|---------------------|-------------------------------|-----------------------------|----------------------|--------------------------------|----------------------------|------------------------------|--------------------------|
|  | Existing (2017) Volumes | Base (2040) Volumes | Net Change (Existing to Base) | % Change (Existing to Base) | Build (2040) Volumes | Net Change (Existing to Build) | Net Change (Base to Build) | % Change (Existing to Build) | % Change (Base to Build) |
| <b>Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)</b>                                  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 186                     | 442                 | 256                           | 137.6%                      | 490                  | 304                            | 48                         | 163.4%                       | 10.9%                    |
| Route 5 (Prospect Hill Road) Southbound  | 235                     | 347                 | 112                           | 47.7%                       | 435                  | 200                            | 88                         | 85.1%                        | 25.4%                    |
| <b>Overall</b>   | <b>1,904</b>            | <b>2,497</b>        | <b>593</b>                    | <b>31.1%</b>                | <b>2,832</b>         | <b>928</b>                     | <b>335</b>                 | <b>48.7%</b>                 | <b>13.4%</b>             |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway</b>                              |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 221                     | 356                 | 135                           | 61.1%                       | 413                  | 192                            | 57                         | 86.9%                        | 16.0%                    |
| Route 5 (Prospect Hill Road) Southbound  | 279                     | 444                 | 165                           | 59.1%                       | 541                  | 262                            | 97                         | 93.9%                        | 21.8%                    |
| <b>Overall</b>   | <b>500</b>              | <b>1,114</b>        | <b>614</b>                    | <b>122.8%</b>               | <b>1,268</b>         | <b>768</b>                     | <b>154</b>                 | <b>153.6%</b>                | <b>13.8%</b>             |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway</b>                              |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 216                     | 327                 | 111                           | 51.4%                       | 384                  | 168                            | 57                         | 77.8%                        | 17.4%                    |
| Route 5 (Prospect Hill Road) Southbound  | 266                     | 584                 | 318                           | 119.5%                      | 661                  | 395                            | 77                         | 148.5%                       | 13.2%                    |
| <b>Overall</b>   | <b>489</b>              | <b>1,100</b>        | <b>611</b>                    | <b>124.9%</b>               | <b>1,209</b>         | <b>720</b>                     | <b>109</b>                 | <b>147.2%</b>                | <b>9.9%</b>              |
| <b>Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways</b>  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 240                     | 376                 | 136                           | 56.7%                       | 464                  | 224                            | 88                         | 93.3%                        | 23.4%                    |
| Route 5 (Prospect Hill Road) Southbound  | 275                     | 649                 | 374                           | 136.0%                      | 733                  | 458                            | 84                         | 166.5%                       | 12.9%                    |
| <b>Overall</b>   | <b>553</b>              | <b>1,080</b>        | <b>527</b>                    | <b>95.3%</b>                | <b>1,253</b>         | <b>700</b>                     | <b>173</b>                 | <b>126.6%</b>                | <b>16.0%</b>             |
| <b>Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways</b>  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 279                     | 428                 | 149                           | 53.4%                       | 503                  | 224                            | 75                         | 80.3%                        | 17.5%                    |
| Route 5 (Prospect Hill Road) Southbound  | 283                     | 650                 | 367                           | 129.7%                      | 743                  | 460                            | 93                         | 162.5%                       | 14.3%                    |
| <b>Overall</b>   | <b>654</b>              | <b>1,199</b>        | <b>545</b>                    | <b>83.3%</b>                | <b>1,367</b>         | <b>713</b>                     | <b>168</b>                 | <b>109.0%</b>                | <b>14.0%</b>             |
| <b>Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road</b>  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 785                     | 930                 | 145                           | 18.5%                       | 1,086                | 301                            | 156                        | 38.3%                        | 16.8%                    |
| Route 5 (Prospect Hill Road) Southbound  | 284                     | 675                 | 391                           | 137.7%                      | 797                  | 513                            | 122                        | 180.6%                       | 18.1%                    |
| <b>Overall</b>   | <b>2,536</b>            | <b>3,424</b>        | <b>888</b>                    | <b>35.0%</b>                | <b>3,958</b>         | <b>1,422</b>                   | <b>534</b>                 | <b>56.1%</b>                 | <b>15.6%</b>             |
| <b>Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway</b> |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 830                     | 967                 | 137                           | 16.5%                       | 1,138                | 308                            | 171                        | 37.1%                        | 17.7%                    |
| Route 5 (Prospect Hill Road) Southbound  | 971                     | 1,261               | 290                           | 29.9%                       | 1,603                | 632                            | 342                        | 65.1%                        | 27.1%                    |
| <b>Overall</b>   | <b>1,931</b>            | <b>2,375</b>        | <b>444</b>                    | <b>23.0%</b>                | <b>2,927</b>         | <b>996</b>                     | <b>552</b>                 | <b>51.6%</b>                 | <b>23.2%</b>             |
| <b>Route 5 (South Main Street) at Thompson Road</b>  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 788                     | 910                 | 122                           | 15.5%                       | 1,077                | 289                            | 167                        | 36.7%                        | 18.4%                    |
| Route 5 (South Main Street) Southbound   | 1,105                   | 1,372               | 267                           | 24.2%                       | 1,701                | 596                            | 329                        | 53.9%                        | 24.0%                    |
| <b>Overall</b>   | <b>2,114</b>            | <b>2,541</b>        | <b>427</b>                    | <b>20.2%</b>                | <b>3,060</b>         | <b>946</b>                     | <b>519</b>                 | <b>44.7%</b>                 | <b>20.4%</b>             |
| <b>Route 5 (South Main Street) at South Water Street / Pasco Drive</b>   |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 853                     | 978                 | 125                           | 14.7%                       | 1,135                | 282                            | 157                        | 33.1%                        | 16.1%                    |
| Route 5 (South Main Street) Southbound   | 943                     | 1,222               | 279                           | 29.6%                       | 1,542                | 599                            | 320                        | 63.5%                        | 26.2%                    |
| <b>Overall</b>   | <b>1,973</b>            | <b>2,379</b>        | <b>406</b>                    | <b>20.6%</b>                | <b>2,864</b>         | <b>891</b>                     | <b>485</b>                 | <b>45.2%</b>                 | <b>20.4%</b>             |
| <b>Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHHS) Driveway</b>                 |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 685                     | 803                 | 118                           | 17.2%                       | 1,014                | 329                            | 211                        | 48.0%                        | 26.3%                    |
| Route 5 (South Main Street) Southbound   | 1,107                   | 1,338               | 231                           | 20.9%                       | 1,658                | 551                            | 320                        | 49.8%                        | 23.9%                    |
| <b>Overall</b>   | <b>2,018</b>            | <b>2,437</b>        | <b>419</b>                    | <b>20.8%</b>                | <b>2,987</b>         | <b>969</b>                     | <b>550</b>                 | <b>48.0%</b>                 | <b>22.6%</b>             |
| <b>Route 5 (South Main Street) at Route 191 (Phelps Road)</b>  |                         |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 720                     | 878                 | 158                           | 21.9%                       | 1,151                | 431                            | 273                        | 59.9%                        | 31.1%                    |
| Route 5 (South Main Street) Southbound   | 1,085                   | 1,294               | 209                           | 19.3%                       | 1,513                | 428                            | 219                        | 39.4%                        | 16.9%                    |
| <b>Overall</b>   | <b>1,856</b>            | <b>2,235</b>        | <b>379</b>                    | <b>20.4%</b>                | <b>2,756</b>         | <b>900</b>                     | <b>521</b>                 | <b>48.5%</b>                 | <b>23.3%</b>             |

## Route 5 Corridor Study – Final Report

*Table 14: Weekday PM Base (2040) and Build (2040) Growth Summary*

| Intersection / Approach  | Weekday PM Peak        |                     |                               |                             |                      |                                |                            |                              |                          |
|--|------------------------|---------------------|-------------------------------|-----------------------------|----------------------|--------------------------------|----------------------------|------------------------------|--------------------------|
|  | Exiting (2017) Volumes | Base (2040) Volumes | Net Change (Existing to Base) | % Change (Existing to Base) | Build (2040) Volumes | Net Change (Existing to Build) | Net Change (Base to Build) | % Change (Existing to Build) | % Change (Base to Build) |
| <b>Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)</b>                                  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 550                    | 904                 | 354                           | 64.4%                       | 1,017                | 467                            | 113                        | 84.9%                        | 12.5%                    |
| Route 5 (Prospect Hill Road) Southbound  | 367                    | 512                 | 145                           | 39.5%                       | 621                  | 254                            | 109                        | 69.2%                        | 21.3%                    |
| <b>Overall</b>   | <b>2,619</b>           | <b>3,352</b>        | <b>733</b>                    | <b>28.0%</b>                | <b>3,771</b>         | <b>1,152</b>                   | <b>419</b>                 | <b>44.0%</b>                 | <b>12.5%</b>             |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway</b>                              |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 524                    | 831                 | 307                           | 58.6%                       | 951                  | 427                            | 120                        | 81.5%                        | 14.4%                    |
| Route 5 (Prospect Hill Road) Southbound  | 374                    | 549                 | 175                           | 46.8%                       | 638                  | 264                            | 89                         | 70.6%                        | 16.2%                    |
| <b>Overall</b>   | <b>898</b>             | <b>1,665</b>        | <b>767</b>                    | <b>85.4%</b>                | <b>1,879</b>         | <b>981</b>                     | <b>214</b>                 | <b>109.2%</b>                | <b>12.9%</b>             |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway</b>                              |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 496                    | 743                 | 247                           | 49.8%                       | 863                  | 367                            | 120                        | 74.0%                        | 16.2%                    |
| Route 5 (Prospect Hill Road) Southbound  | 371                    | 640                 | 269                           | 72.5%                       | 743                  | 372                            | 103                        | 100.3%                       | 16.1%                    |
| <b>Overall</b>   | <b>899</b>             | <b>1,608</b>        | <b>709</b>                    | <b>78.9%</b>                | <b>1,836</b>         | <b>937</b>                     | <b>228</b>                 | <b>104.2%</b>                | <b>14.2%</b>             |
| <b>Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 539                    | 797                 | 258                           | 47.9%                       | 938                  | 399                            | 141                        | 74.0%                        | 17.7%                    |
| Route 5 (Prospect Hill Road) Southbound  | 344                    | 689                 | 345                           | 100.3%                      | 798                  | 454                            | 109                        | 132.0%                       | 15.8%                    |
| <b>Overall</b>   | <b>1,009</b>           | <b>1,637</b>        | <b>628</b>                    | <b>62.2%</b>                | <b>1,908</b>         | <b>899</b>                     | <b>271</b>                 | <b>89.1%</b>                 | <b>16.6%</b>             |
| <b>Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 724                    | 1,086               | 362                           | 50.0%                       | 1,257                | 533                            | 171                        | 73.6%                        | 15.7%                    |
| Route 5 (Prospect Hill Road) Southbound  | 392                    | 725                 | 333                           | 84.9%                       | 866                  | 474                            | 141                        | 120.9%                       | 19.4%                    |
| <b>Overall</b>   | <b>1,527</b>           | <b>2,325</b>        | <b>798</b>                    | <b>52.3%</b>                | <b>2,637</b>         | <b>1,110</b>                   | <b>312</b>                 | <b>72.7%</b>                 | <b>13.4%</b>             |
| <b>Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (Prospect Hill Road) Northbound  | 885                    | 1,147               | 262                           | 29.6%                       | 1,518                | 633                            | 371                        | 71.5%                        | 32.3%                    |
| Route 5 (Prospect Hill Road) Southbound  | 571                    | 864                 | 293                           | 51.3%                       | 1,009                | 438                            | 145                        | 76.7%                        | 16.8%                    |
| <b>Overall</b>   | <b>3,374</b>           | <b>4,320</b>        | <b>946</b>                    | <b>28.0%</b>                | <b>4,993</b>         | <b>1,619</b>                   | <b>673</b>                 | <b>48.0%</b>                 | <b>15.6%</b>             |
| <b>Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway</b> |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 977                    | 1,197               | 220                           | 22.5%                       | 1,609                | 632                            | 412                        | 64.7%                        | 34.4%                    |
| Route 5 (Prospect Hill Road) Southbound  | 1,120                  | 1,293               | 173                           | 15.4%                       | 1,479                | 359                            | 186                        | 32.1%                        | 14.4%                    |
| <b>Overall</b>   | <b>2,290</b>           | <b>2,686</b>        | <b>396</b>                    | <b>17.3%</b>                | <b>3,401</b>         | <b>1,111</b>                   | <b>715</b>                 | <b>48.5%</b>                 | <b>26.6%</b>             |
| <b>Route 5 (South Main Street) at Thompson Road</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 858                    | 1,067               | 209                           | 24.4%                       | 1,466                | 608                            | 399                        | 70.9%                        | 37.4%                    |
| Route 5 (South Main Street) Southbound   | 1,166                  | 1,377               | 211                           | 18.1%                       | 1,593                | 427                            | 216                        | 36.6%                        | 15.7%                    |
| <b>Overall</b>   | <b>2,283</b>           | <b>2,730</b>        | <b>447</b>                    | <b>19.6%</b>                | <b>3,412</b>         | <b>1,129</b>                   | <b>682</b>                 | <b>49.5%</b>                 | <b>25.0%</b>             |
| <b>Route 5 (South Main Street) at South Water Street / Pasco Drive</b>   |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 943                    | 1,125               | 182                           | 19.3%                       | 1,516                | 573                            | 391                        | 60.8%                        | 34.8%                    |
| Route 5 (South Main Street) Southbound   | 1,131                  | 1,374               | 243                           | 21.5%                       | 1,555                | 424                            | 181                        | 37.5%                        | 13.2%                    |
| <b>Overall</b>   | <b>2,246</b>           | <b>2,806</b>        | <b>560</b>                    | <b>24.9%</b>                | <b>3,378</b>         | <b>1,132</b>                   | <b>572</b>                 | <b>50.4%</b>                 | <b>20.4%</b>             |
| <b>Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHHS) Driveway</b>                 |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 867                    | 1,039               | 172                           | 19.8%                       | 1,320                | 453                            | 281                        | 52.2%                        | 27.0%                    |
| Route 5 (South Main Street) Southbound   | 1,188                  | 1,507               | 319                           | 26.9%                       | 1,689                | 501                            | 182                        | 42.2%                        | 12.1%                    |
| <b>Overall</b>   | <b>2,168</b>           | <b>2,693</b>        | <b>525</b>                    | <b>24.2%</b>                | <b>3,280</b>         | <b>1,112</b>                   | <b>587</b>                 | <b>51.3%</b>                 | <b>21.8%</b>             |
| <b>Route 5 (South Main Street) at Route 191 (Phelps Road)</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 902                    | 1,067               | 165                           | 18.3%                       | 1,248                | 346                            | 181                        | 38.4%                        | 17.0%                    |
| Route 5 (South Main Street) Southbound   | 1,019                  | 1,297               | 278                           | 27.3%                       | 1,501                | 482                            | 204                        | 47.3%                        | 15.7%                    |
| <b>Overall</b>   | <b>1,972</b>           | <b>2,364</b>        | <b>392</b>                    | <b>19.9%</b>                | <b>2,921</b>         | <b>949</b>                     | <b>557</b>                 | <b>48.1%</b>                 | <b>23.6%</b>             |
| <b>Route 5 (South Main Street) at Southern Auto Auction Driveways</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 869                    | 1,014               | 145                           | 16.7%                       | 1,209                | 340                            | 195                        | 39.1%                        | 19.2%                    |
| Route 5 (South Main Street) Southbound   | 1,012                  | 1,261               | 249                           | 24.6%                       | 1,513                | 501                            | 252                        | 49.5%                        | 20.0%                    |
| <b>Overall</b>   | <b>1,997</b>           | <b>2,424</b>        | <b>427</b>                    | <b>21.4%</b>                | <b>2,871</b>         | <b>874</b>                     | <b>447</b>                 | <b>43.8%</b>                 | <b>18.4%</b>             |
| <b>Route 5 (South Main Street) at Stoughton Road / Commercial Driveway</b>                                     |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 881                    | 1,014               | 133                           | 15.1%                       | 1,233                | 352                            | 219                        | 40.0%                        | 21.6%                    |
| Route 5 (South Main Street) Southbound   | 1,027                  | 1,261               | 234                           | 22.8%                       | 1,537                | 510                            | 276                        | 49.7%                        | 21.9%                    |
| <b>Overall</b>   | <b>1,987</b>           | <b>2,424</b>        | <b>437</b>                    | <b>22.0%</b>                | <b>2,876</b>         | <b>889</b>                     | <b>452</b>                 | <b>44.7%</b>                 | <b>18.6%</b>             |
| <b>Route 5 (South Main Street) at Abbe Road / Commercial Driveway</b>  |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (South Main Street) Northbound   | 863                    | 1,050               | 187                           | 21.7%                       | 1,232                | 369                            | 182                        | 42.8%                        | 17.3%                    |
| Route 5 (South Main Street) Southbound   | 1,047                  | 1,302               | 255                           | 24.4%                       | 1,554                | 507                            | 252                        | 48.4%                        | 19.4%                    |
| <b>Overall</b>   | <b>1,941</b>           | <b>2,403</b>        | <b>462</b>                    | <b>23.8%</b>                | <b>2,837</b>         | <b>896</b>                     | <b>434</b>                 | <b>46.2%</b>                 | <b>18.1%</b>             |
| <b>Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road</b>   |                        |                     |                               |                             |                      |                                |                            |                              |                          |
| Route 5 (John Fitch Boulevard) Northbound  | 975                    | 1,242               | 267                           | 27.4%                       | 1,415                | 440                            | 173                        | 45.1%                        | 13.9%                    |
| Route 5 (John Fitch Boulevard) Southbound  | 1,061                  | 1,281               | 220                           | 20.7%                       | 1,542                | 481                            | 261                        | 45.3%                        | 20.4%                    |
| <b>Overall</b>   | <b>2,144</b>           | <b>2,694</b>        | <b>550</b>                    | <b>25.7%</b>                | <b>3,120</b>         | <b>976</b>                     | <b>426</b>                 | <b>45.5%</b>                 | <b>15.8%</b>             |

## 4.5 Future Traffic Operations

The study team evaluated traffic operations in the corridor for the Base and Build scenarios by determining *levels of service (LOS)* and *the volume-to-capacity ratio (v/c)* at corridor intersections. The traffic analysis assumes that traffic signal cycle lengths and timings would be optimized for future traffic conditions, but that the existing number of lanes and signal phasing would remain. Queues were also analyzed in order to test whether they would grow to excessive lengths and block adjacent intersections.

### 4.5.1 Base Scenario Traffic Operations

The results of the traffic operational analysis for the Base scenario are illustrated in *Figure 55*, *Table 15* (following) and *Table 16*, page 69. Levels of service E or worse and queue lengths over 500 feet are highlighted with maroon text in the two tables.

**Level of Service (LOS)** for an intersection is a qualitative measure of traffic operations that reflects the delay experienced by vehicles at the intersection. LOS values range from A to F. LOS A represents the best operational conditions with little delay. LOS F represents generally congested conditions with long delays and traffic queues. For the Route 5 corridor, LOS D or better represents an acceptable degree of congestion; LOS E and F represent an unacceptable degree of congestion.

**Volume-to-capacity ratio (v/c)** for an intersection represents the ability of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected. Under these conditions, vehicles may require more than one signal cycle to pass through the intersection (known as a cycle failure). (FHWA)

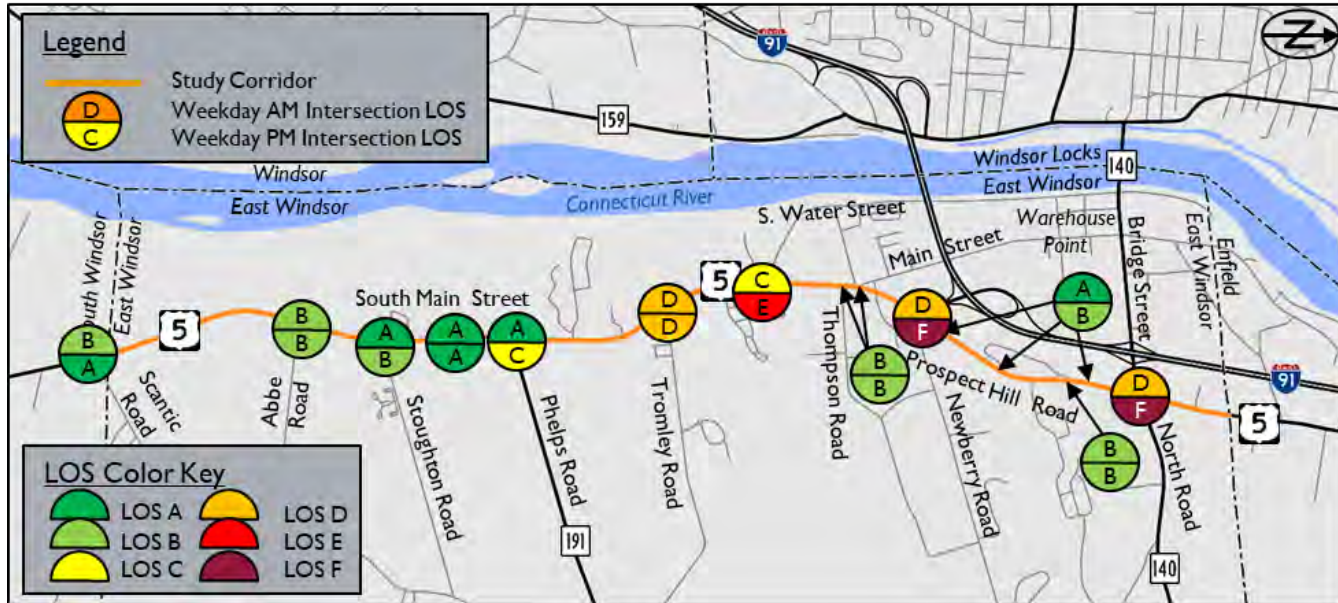


Figure 55: Base Scenario (2040) Weekday AM and PM Intersection Levels of Service

Under the Base scenario traffic operational deficiencies are expected at Route 140, the I-91 Ramps / Newberry Road, South Water Street and Tromley Road. At Route 140, the intersection is expected to operate at LOS F during the PM peak, with both Route 5 northbound and southbound experiencing heavy delays (both LOS F). During the AM peak, the intersection as a whole is expected to operate at LOS D, though the southbound Route 5 approach will experience heavier delays and operate at LOS F.

The intersection of Route 5 with the I-91 Ramps and Newberry Road is expected to operate at LOS F during the PM peak with significant delays and queuing on westbound Newberry Road and the I-91 off-ramps. Queueing on the ramps back towards the freeway presents a safety concern due to the speed differential between stopped, queued vehicles and those traveling at freeway speeds. During the AM peak, the intersection as a whole is expected to operate at LOS D, though the westbound Newberry Road approach will experience heavier delays and operate at LOS F.

Traffic is expected to flow acceptably through the southern part of the corridor (south of Tromley Road) and between the I-91 Ramps / Newberry Road and Route 140. However, several lengthy queues are expected, in particular for southbound Route 5 at Stoughton Road and Abbe Road.

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*Table 15: Base Scenario (2040) Weekday AM and PM Traffic Operations (1 of 2)*

| Intersection / Approach  | Weekday AM Peak |                   |                       |                | Weekday PM Peak |                   |                       |               |
|--|-----------------|-------------------|-----------------------|----------------|-----------------|-------------------|-----------------------|---------------|
|  | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max. V/C Ratio | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max V/C Ratio |
| <b>Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)</b>                                  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | D               | 50.9              | 190                   | 0.89           | F               | 128.4             | 483*                  | 1.28          |
| Route 5 (Prospect Hill Road) Southbound  | F               | 80.3              | 349*                  | 0.97           | F               | 240.1             | 482*                  | 1.59          |
| Route 140 (Bridge Street) Eastbound  | D               | 35.6              | 240*                  | 0.96           | D               | 36.3              | 462*                  | 0.96          |
| Route 140 (North Road) Westbound   | D               | 43.5              | 455*                  | 0.96           | C               | 29.4              | 184                   | 0.81          |
| <b>Overall</b>   | <b>D</b>        | <b>47.6</b>       |                       | <b>0.97</b>    | <b>F</b>        | <b>88.1</b>       |                       | <b>1.59</b>   |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway</b>                              |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 1.9               | 66                    | 0.24           | A               | 7.1               | 384                   | 0.60          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 3.9               | 51**                  | 0.37           | A               | 5.4               | 108**                 | 0.45          |
| MMCT Casino Driveway Eastbound   | C               | 25.4              | 140*                  | 0.69           | C               | 31.1              | 153*                  | 0.76          |
| Eversource Driveway Westbound  | C               | 33.0              | 54                    | 0.38           | C               | 22.8              | 37                    | 0.18          |
| <b>Overall</b>   | <b>A</b>        | <b>9.6</b>        |                       | <b>0.69</b>    | <b>B</b>        | <b>10.5</b>       |                       | <b>0.76</b>   |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway</b>                              |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 1.1               | 26                    | 0.23           | A               | 6.7               | 110                   | 0.58          |
| Route 5 (Prospect Hill Road) Southbound  | B               | 11.9              | 389                   | 0.49           | B               | 11.8              | 241                   | 0.55          |
| MMCT Casino Driveway Eastbound   | C               | 23.5              | 67                    | 0.47           | C               | 33.4              | 141*                  | 0.69          |
| Commercial Driveway Westbound  | C               | 25.6              | 31                    | 0.15           | A               | 0.3               | 0                     | 0.05          |
| <b>Overall</b>   | <b>B</b>        | <b>10.7</b>       |                       | <b>0.49</b>    | <b>B</b>        | <b>12.1</b>       |                       | <b>0.69</b>   |
| <b>Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 2.8               | 170                   | 0.24           | B               | 11.3              | 20                    | 0.52          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 1.8               | 63                    | 0.44           | A               | 5.6               | 51                    | 0.58          |
| Big Y Driveway Eastbound   | D               | 42.2              | 20                    | 0.2            | C               | 33.3              | 117*                  | 0.57          |
| Ethos Energy Driveway Westbound  | B               | 13.2              | 18                    | 0.09           | C               | 22.3              | 23                    | 0.10          |
| <b>Overall</b>   | <b>A</b>        | <b>2.8</b>        |                       | <b>0.44</b>    | <b>B</b>        | <b>10.8</b>       |                       | <b>0.58</b>   |
| <b>Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 3.1               | 40**                  | 0.14           | A               | 9.8               | 22*                   | 0.39          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 2.8               | 144                   | 0.47           | B               | 11.6              | 74                    | 0.72          |
| Commercial Driveway Eastbound  | A               | 0.0               | 0                     | 0.01           | C               | 26.7              | 57*                   | 0.56          |
| Walmart Driveway Westbound   | C               | 26.7              | 77                    | 0.41           | C               | 28.2              | 241*                  | 0.61          |
| <b>Overall</b>   | <b>A</b>        | <b>5.2</b>        |                       | <b>0.47</b>    | <b>B</b>        | <b>14.4</b>       |                       | <b>0.72</b>   |
| <b>Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | D               | 44.5              | 304*                  | 0.98           | D               | 40.9              | 304*                  | 0.98          |
| Route 5 (Prospect Hill Road) Southbound  | C               | 28.0              | 110                   | 0.69           | C               | 30.3              | 200                   | 0.84          |
| I-91 Off-Ramps Eastbound   | C               | 24.8              | 389*                  | 0.97           | F               | 126.2             | 606*                  | 1.48          |
| Newberry Road Westbound  | F               | 87.0              | 244*                  | 1.02           | F               | 105.2             | 269*                  | 1.10          |
| <b>Overall</b>   | <b>D</b>        | <b>38.4</b>       |                       | <b>1.02</b>    | <b>F</b>        | <b>82.1</b>       |                       | <b>1.48</b>   |
| <b>Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway</b> |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound   | B               | 11.6              | 94                    | 0.55           | B               | 12.7              | 94                    | 0.71          |
| Route 5 (Prospect Hill Road) Southbound  | B               | 12.9              | 460**                 | 0.64           | B               | 16.8              | 463**                 | 0.71          |
| Main Street (SR 510) Eastbound   | B               | 12.5              | 44                    | 0.39           | B               | 19.8              | 79                    | 0.45          |
| Prospect Hill Plaza Driveway Westbound   | A               | 0.0               | 0                     | 0.01           | C               | 20.2              | 28                    | 0.13          |
| <b>Overall</b>   | <b>B</b>        | <b>12.3</b>       |                       | <b>0.64</b>    | <b>B</b>        | <b>15.2</b>       |                       | <b>0.71</b>   |

\*95% queue length exceeds capacity, queue may be longer

\*\*95% queue length metered by adjacent traffic signal

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*Table 16: Base Scenario (2040) Weekday AM and PM Traffic Operations (2 of 2)*

| Intersection / Approach   | Weekday AM Peak |                   |                       |                | Weekday PM Peak |                   |                       |               |
|---|-----------------|-------------------|-----------------------|----------------|-----------------|-------------------|-----------------------|---------------|
|   | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max. V/C Ratio | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max V/C Ratio |
| <b>Route 5 (South Main Street) at Thompson Road</b>   |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | C               | 20.9              | 292                   | 0.56           | B               | 19.3              | 335**                 | 0.60          |
| Route 5 (South Main Street) Southbound  | B               | 12.2              | 229                   | 0.78           | A               | 7.1               | 120**                 | 0.64          |
| Thompson Road Westbound   | C               | 26.3              | 101                   | 0.61           | D               | 40.0              | 159*                  | 0.76          |
| <b>Overall</b>  | <b>B</b>        | <b>16.8</b>       |                       | <b>0.78</b>    | <b>B</b>        | <b>15.4</b>       |                       | <b>0.76</b>   |
| <b>Route 5 (South Main Street) at South Water Street / Pasco Drive</b>                        |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 12.6              | 713                   | 0.7            | C               | 23.1              | 617**                 | 1.03          |
| Route 5 (South Main Street) Southbound  | D               | 49.2              | 330*                  | 1.04           | F               | 106.2             | 540*                  | 1.18          |
| South Water Street Eastbound  | C               | 27.6              | 58*                   | 0.61           | F               | 137.7             | 210*                  | 1.44          |
| Pasco Drive Westbound   | D               | 35.7              | 25                    | 0.15           | C               | 31.8              | 30                    | 0.26          |
| <b>Overall</b>  | <b>C</b>        | <b>32.6</b>       |                       | <b>1.04</b>    | <b>E</b>        | <b>75.5</b>       |                       | <b>1.44</b>   |
| <b>Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHS) Driveway</b> |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 14.3              | 751*                  | 0.71           | D               | 54.7              | 887*/**               | 1.06          |
| Route 5 (South Main Street) Southbound  | D               | 54.6              | 1133*/**              | 1.08           | C               | 28.7              | 974*/**               | 1.02          |
| EWHS Eastbound  | E               | 58.1              | 66*                   | 0.5            | D               | 51.9              | 45                    | 0.35          |
| Tromley Road Westbound  | D               | 37.9              | 111*                  | 0.73           | B               | 19.4              | 45                    | 0.46          |
| <b>Overall</b>  | <b>D</b>        | <b>39.7</b>       |                       | <b>1.08</b>    | <b>D</b>        | <b>38.6</b>       |                       | <b>1.06</b>   |
| <b>Route 5 (South Main Street) at Route 191 (Phelps Road)</b>                                 |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 12.4              | 419                   | 0.75           | D               | 37.6              | 845*                  | 0.98          |
| Route 5 (South Main Street) Southbound  | A               | 6.1               | 156**                 | 0.79           | A               | 9.6               | 264**                 | 0.86          |
| Route 191 (Phelps Road) Westbound   | D               | 41.1              | 71*                   | 0.55           | D               | 39.7              | 61*                   | 0.50          |
| <b>Overall</b>  | <b>A</b>        | <b>9.6</b>        |                       | <b>0.79</b>    | <b>C</b>        | <b>22.7</b>       |                       | <b>0.98</b>   |
| <b>Route 5 (South Main Street) at Southern Auto Auction Driveways</b>                         |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | A               | 2.9               | 146                   | 0.42           | A               | 3.2               | 151                   | 0.40          |
| Route 5 (South Main Street) Southbound  | A               | 3.9               | 36                    | 0.75           | A               | 1.1               | 16                    | 0.56          |
| Southern Auto Auction Driveway Eastbound  | D               | 50.5              | 68                    | 0.46           | C               | 33.9              | 39                    | 0.34          |
| Southern Auto Auction Driveway Westbound  | D               | 41.5              | 71                    | 0.42           | D               | 44.8              | 101*                  | 0.65          |
| <b>Overall</b>  | <b>A</b>        | <b>5.6</b>        |                       | <b>0.75</b>    | <b>A</b>        | <b>4.5</b>        |                       | <b>0.65</b>   |
| <b>Route 5 (South Main Street) at Stoughton Road / Commercial Driveway</b>                    |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | A               | 8.9               | 567                   | 0.75           | A               | 9.3               | 597                   | 0.79          |
| Route 5 (South Main Street) Southbound  | A               | 2.0               | 16                    | 0.70           | B               | 15.1              | 1036*                 | 0.92          |
| Commercial Driveway Eastbound   | C               | 33.9              | 17                    | 0.06           | C               | 34.5              | 25                    | 0.11          |
| Stoughton Road Westbound  | D               | 48.2              | 90*                   | 0.62           | D               | 52.2              | 99*                   | 0.66          |
| <b>Overall</b>  | <b>A</b>        | <b>7.5</b>        |                       | <b>0.75</b>    | <b>B</b>        | <b>14.1</b>       |                       | <b>0.92</b>   |
| <b>Route 5 (South Main Street) at Abbe Road / Commercial Driveway</b>                         |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 16.8              | 396**                 | 0.71           | B               | 12.2              | 498                   | 0.72          |
| Route 5 (South Main Street) Southbound  | A               | 3.2               | 106                   | 0.70           | B               | 11.3              | 1010**                | 0.93          |
| Commercial Driveway Eastbound   | D               | 37.0              | 88*                   | 0.64           | C               | 20.4              | 26                    | 0.18          |
| Abbe Road Westbound   | C               | 30.9              | 35                    | 0.17           | C               | 26.6              | 23                    | 0.17          |
| <b>Overall</b>  | <b>B</b>        | <b>12.1</b>       |                       | <b>0.71</b>    | <b>B</b>        | <b>11.9</b>       |                       | <b>0.93</b>   |
| <b>Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road</b>                        |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (John Fitch Boulevard) Northbound   | A               | 8.9               | 202                   | 0.51           | A               | 6.2               | 231                   | 0.55          |
| Route 5 (John Fitch Boulevard) Southbound   | A               | 6.1               | 104                   | 0.55           | A               | 4.9               | 116**                 | 0.60          |
| Crow Park Drive Eastbound   | A               | 0.0               | 0                     | 0.01           | A               | 0.0               | 0                     | 0.01          |
| Scantic Road Westbound  | D               | 54.6              | 354*                  | 0.89           | D               | 38.8              | 139                   | 0.63          |
| <b>Overall</b>  | <b>B</b>        | <b>14.6</b>       |                       | <b>0.89</b>    | <b>A</b>        | <b>7.6</b>        |                       | <b>0.63</b>   |

\*95% queue length exceeds capacity, queue may be longer

\*\*95% queue length metered by adjacent traffic signal

#### 4.5.2 Build Scenario Traffic Operations

The results of the traffic operational analysis for the Build scenario are illustrated in *Figure 56*, *Table 17* (following) and *Table 18*, page 73. Levels of service E or worse and queue lengths over 500 feet are highlighted with maroon text in the two tables.

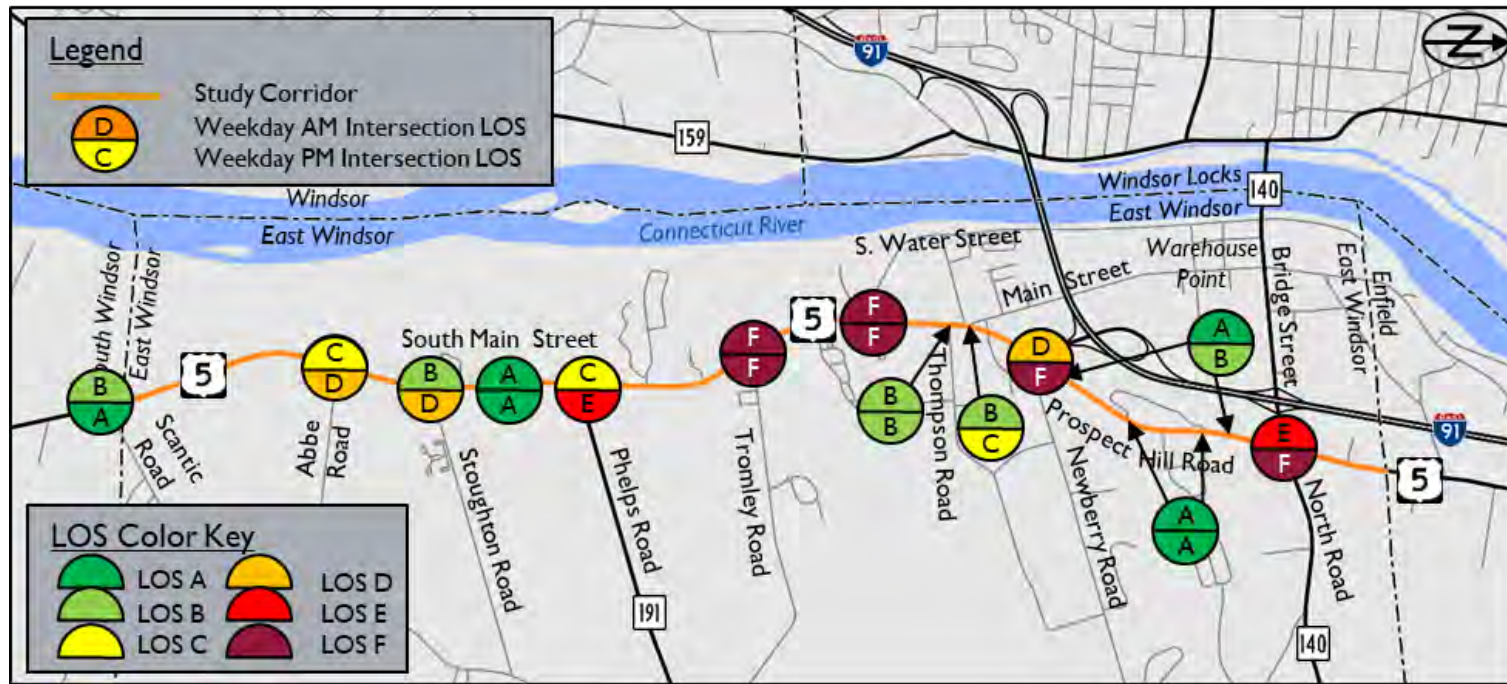


Figure 56: Build Scenario (2040) Weekday AM and PM Intersection Levels of Service

Under the Build scenario traffic operational deficiencies are expected at Route 140, the I-91 Ramps / Newberry Road, and many of the intersections in the southern part of the corridor, particularly South Water Street and Tromley Road.

At Route 140, the intersection is expected to operate at LOS F during the PM peak, with both Route 5 northbound and southbound and Route 140 eastbound experiencing heavy delays. During the AM peak, the intersection as a whole is expected to operate at LOS E, with both Route 5 northbound and southbound and Route 140 westbound experiencing heavy delays. Traffic is expected to flow acceptably between Route 5 and the I-91 Ramps / Newberry Road.

The intersection of Route 5 with the I-91 Ramps and Newberry Road is expected to operate at LOS F during the PM peak with significant delays and queuing on northbound Route 5, westbound Newberry Road and the I-91 off-ramps. Queuing on the ramps back towards the freeway

presents a safety concern due to the speed differential between stopped, queued vehicles and those traveling at freeway speeds. During the AM peak, the intersection as a whole is expected to operate at LOS D, though the westbound Newberry Road approach will experience heavier delays and operate at LOS F.

Traffic is expected to flow acceptably at the intersections with Thompson Road and Main Street, the section that carries two travel lanes in each direction. South of Thompson Road the existing roadway transitions to one lane in each direction. Operations in this segment, with one lane in each direction, are expected to deteriorate south of Thompson Road, with both the intersections with South Water Street and Tromley Road forecast to operate at LOS F during both peak periods and Phelps Road operating at LOS E during the PM peak.

At South Water Street, delays primarily affect Route 5 Southbound which would operate at LOS F in both peak periods with queues of approximately 1,500 feet (1/4 mile). At Tromley Road, both Road 5 approaches would experience significant delays, with northbound operating at LOS E during the AM and LOS F during the PM peak and southbound operating at LOS F during both periods. Queues on both approaches during both peak periods would approach 1,000 feet. At Phelps Road, the intersection would operate at LOS E during the PM peak. The northbound Route 5 approach would operate at LOS F with queues exceeding 1,000 feet. Traffic would flow acceptably through the southern part of the corridor. However, lengthy queues on Route 5 southbound are forecast at Stoughton Road and Abbe Road.

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*Table 17: Build Scenario (2040) Weekday AM and PM Traffic Operations*

| Intersection / Approach  | Weekday AM Peak |                   |                       |                | Weekday PM Peak |                   |                       |               |
|--|-----------------|-------------------|-----------------------|----------------|-----------------|-------------------|-----------------------|---------------|
|  | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max. V/C Ratio | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max V/C Ratio |
| <b>Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)</b>                                  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | E               | 59.5              | 248*                  | 0.94           | F               | 128.0             | 595*                  | 1.24          |
| Route 5 (Prospect Hill Road) Southbound  | F               | 93.3              | 426*                  | 1.06           | F               | 186.8             | 564*                  | 1.37          |
| Route 140 (Bridge Street) Eastbound  | D               | 46.5              | 269*                  | 1.03           | E               | 66.3              | 510*                  | 1.11          |
| Route 140 (North Road) Westbound   | E               | 67.2              | 501*                  | 1.05           | D               | 42.5              | 210                   | 0.95          |
| <b>Overall</b>   | <b>E</b>        | <b>64.6</b>       |                       | <b>1.06</b>    | <b>F</b>        | <b>98.4</b>       |                       | <b>1.37</b>   |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway</b>                              |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 6.7               | 146                   | 0.29           | A               | 7.2               | 464                   | 0.69          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 4.9               | 38**                  | 0.45           | A               | 7.6               | 159**                 | 0.52          |
| MMCT Casino Driveway Eastbound   | B               | 19.8              | 112                   | 0.56           | C               | 26.0              | 136*                  | 0.67          |
| Eversource Driveway Westbound  | C               | 24.9              | 48                    | 0.26           | C               | 25.9              | 43                    | 0.25          |
| <b>Overall</b>   | <b>A</b>        | <b>9.4</b>        |                       | <b>0.56</b>    | <b>B</b>        | <b>10.3</b>       |                       | <b>0.69</b>   |
| <b>Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway</b>                              |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 1.0               | 8                     | 0.28           | A               | 5.7               | 388                   | 0.68          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 5.3               | 78                    | 0.53           | A               | 7.4               | 75                    | 0.64          |
| MMCT Casino Driveway Eastbound   | C               | 23.5              | 67                    | 0.47           | C               | 33.6              | 118*                  | 0.70          |
| Commercial Driveway Westbound  | A               | 0.0               | 0                     | 0.00           | A               | 0.5               | 0                     | 0.08          |
| <b>Overall</b>   | <b>A</b>        | <b>6.4</b>        |                       | <b>0.53</b>    | <b>A</b>        | <b>9.5</b>        |                       | <b>0.70</b>   |
| <b>Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 2.7               | 74                    | 0.28           | A               | 8.1               | 292                   | 0.61          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 1.8               | 53                    | 0.51           | A               | 4.7               | 65                    | 0.66          |
| Big Y Driveway Eastbound   | B               | 13.2              | 20                    | 0.19           | C               | 31.5              | 75                    | 0.58          |
| Ethos Energy Driveway Westbound  | C               | 21.3              | 20                    | 0.09           | D               | 35.7              | 47                    | 0.32          |
| <b>Overall</b>   | <b>A</b>        | <b>2.8</b>        |                       | <b>0.51</b>    | <b>A</b>        | <b>8.9</b>        |                       | <b>0.66</b>   |
| <b>Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | A               | 2.0               | 22**                  | 0.17           | A               | 4.7               | 25**                  | 0.46          |
| Route 5 (Prospect Hill Road) Southbound  | A               | 4.6               | 123                   | 0.54           | B               | 18.6              | 628*                  | 0.82          |
| Commercial Driveway Eastbound  | A               | 0.0               | 0                     | 0.01           | C               | 26.8              | 55*                   | 0.55          |
| Walmart Driveway Westbound   | C               | 28.2              | 80                    | 0.44           | C               | 33.5              | 208*                  | 0.75          |
| <b>Overall</b>   | <b>A</b>        | <b>5.6</b>        |                       | <b>0.54</b>    | <b>B</b>        | <b>14.5</b>       |                       | <b>0.82</b>   |
| <b>Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road</b>  |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (Prospect Hill Road) Northbound  | D               | 54.9              | 397*                  | 1.07           | F               | 163.2             | 469*/**               | 1.52          |
| Route 5 (Prospect Hill Road) Southbound  | C               | 29.6              | 145                   | 0.76           | C               | 31.3              | 144**                 | 0.88          |
| I-91 Off-Ramps Eastbound   | C               | 29.2              | 416*                  | 1.01           | F               | 89.2              | 606*                  | 1.31          |
| Newberry Road Westbound  | F               | 87.0              | 244*                  | 1.02           | F               | 188.6             | 294*                  | 1.31          |
| <b>Overall</b>   | <b>D</b>        | <b>42.5</b>       |                       | <b>1.07</b>    | <b>F</b>        | <b>109.5</b>      |                       | <b>1.52</b>   |
| <b>Route 5 (Prospect Hill Road / South Main Street) at Main Street (SR 510) / Prospect Hill Plaza Driveway</b> |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound   | B               | 15.4              | 128                   | 0.75           | B               | 17.9              | 132**                 | 0.87          |
| Route 5 (Prospect Hill Road) Southbound  | C               | 22.1              | 668*/**               | 0.92           | D               | 38.7              | 592*/**               | 0.97          |
| Main Street (SR 510) Eastbound   | B               | 13.1              | 47                    | 0.34           | B               | 14.9              | 73                    | 0.35          |
| Prospect Hill Plaza Driveway Westbound   | A               | 0.5               | 0                     | 0.09           | C               | 20.6              | 77                    | 0.36          |
| <b>Overall</b>   | <b>B</b>        | <b>18.7</b>       |                       | <b>0.92</b>    | <b>C</b>        | <b>26.8</b>       |                       | <b>0.97</b>   |

\*95% queue length exceeds capacity, queue may be longer

\*\*95% queue length metered by adjacent traffic signal

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*Table 18: Build Scenario (2040) Weekday AM and PM Traffic Operations (2 of 2)*

| Intersection / Approach   | Weekday AM Peak |                   |                       |                | Weekday PM Peak |                   |                       |               |
|---|-----------------|-------------------|-----------------------|----------------|-----------------|-------------------|-----------------------|---------------|
|   | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max. V/C Ratio | LOS             | Delay (sec / veh) | 95% Queue Length (ft) | Max V/C Ratio |
| <b>Route 5 (South Main Street) at Thompson Road / Proposed Commercial Driveway</b>            |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 15.9              | 316                   | 0.76           | B               | 18.8              | 213**                 | 0.88          |
| Route 5 (South Main Street) Southbound  | B               | 13.4              | 171**                 | 0.83           | B               | 12.5              | 120**                 | 0.86          |
| Proposed Commercial Driveway Eastbound  | B               | 17.9              | 24                    | 0.06           | C               | 20.2              | 51                    | 0.20          |
| Thompson Road Westbound   | C               | 20.7              | 95                    | 0.31           | C               | 21.2              | 122                   | 0.44          |
| <b>Overall</b>  | <b>B</b>        | <b>14.9</b>       |                       | <b>0.83</b>    | <b>B</b>        | <b>16.1</b>       |                       | <b>0.88</b>   |
| <b>Route 5 (South Main Street) at South Water Street / Pasco Drive</b>                        |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | A               | 7.3               | 90**                  | 0.82           | E               | 66.6              | 85**                  | 1.12          |
| Route 5 (South Main Street) Southbound  | F               | 161.0             | 1488*                 | 1.30           | F               | 189.7             | 1502*                 | 1.37          |
| South Water Street Eastbound  | D               | 39.0              | 103*                  | 0.72           | F               | 104.1             | 200*                  | 1.22          |
| Pasco Drive Westbound   | D               | 35.3              | 27                    | 0.18           | C               | 27.9              | 29                    | 0.20          |
| <b>Overall</b>  | <b>F</b>        | <b>92.1</b>       |                       | <b>1.30</b>    | <b>F</b>        | <b>126.2</b>      |                       | <b>1.37</b>   |
| <b>Route 5 (South Main Street) at Tromley Road / East Windsor High School (EWHs) Driveway</b> |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | E               | 62.0              | 857*/**               | 1.10           | F               | 280.2             | 950*/**               | 1.59          |
| Route 5 (South Main Street) Southbound  | F               | 128.1             | 1103*/**              | 1.28           | F               | 90.5              | 966*/**               | 1.19          |
| EWHs Eastbound  | D               | 48.1              | 56                    | 0.39           | D               | 54.1              | 46*                   | 0.39          |
| Tromley Road Westbound  | C               | 31.4              | 105*                  | 0.69           | F               | 98.5              | 174*                  | 1.21          |
| <b>Overall</b>  | <b>F</b>        | <b>95.7</b>       |                       | <b>1.28</b>    | <b>F</b>        | <b>167.1</b>      |                       | <b>1.59</b>   |
| <b>Route 5 (South Main Street) at Route 191 (Phelps Road)</b>                                 |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | D               | 37.2              | 881*                  | 1.01           | F               | 121.7             | 1138*                 | 1.23          |
| Route 5 (South Main Street) Southbound  | C               | 20.5              | 367**                 | 1.02           | C               | 28.3              | 429**                 | 1.04          |
| Route 191 (Phelps Road) Westbound   | E               | 66.4              | 122*                  | 0.78           | F               | 204.5             | 257*                  | 1.29          |
| <b>Overall</b>  | <b>C</b>        | <b>29.0</b>       |                       | <b>1.02</b>    | <b>E</b>        | <b>78.6</b>       |                       | <b>1.29</b>   |
| <b>Route 5 (South Main Street) at Southern Auto Auction Driveways</b>                         |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | A               | 4.4               | 170**                 | 0.54           | A               | 5.6               | 243**                 | 0.54          |
| Route 5 (South Main Street) Southbound  | B               | 10.2              | 177*/**               | 0.91           | A               | 4.3               | 129**                 | 0.69          |
| Southern Auto Auction Driveway Eastbound  | D               | 51.6              | 70*                   | 0.47           | C               | 28.2              | 37                    | 0.27          |
| Southern Auto Auction Driveway Westbound  | D               | 42.3              | 71                    | 0.43           | C               | 33.7              | 76                    | 0.51          |
| <b>Overall</b>  | <b>A</b>        | <b>9.0</b>        |                       | <b>0.91</b>    | <b>A</b>        | <b>6.3</b>        |                       | <b>0.69</b>   |
| <b>Route 5 (South Main Street) at Stoughton Road / Commercial Driveway</b>                    |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | B               | 11.5              | 80*/**                | 0.96           | B               | 11.2              | 974*                  | 0.92          |
| Route 5 (South Main Street) Southbound  | A               | 2.3               | 1**                   | 0.78           | E               | 64.1              | 1348*                 | 1.11          |
| Commercial Driveway Eastbound   | D               | 38.7              | 17                    | 0.10           | D               | 41.1              | 27                    | 0.19          |
| Stoughton Road Westbound  | F               | 92.9              | 121*                  | 0.92           | F               | 111.5             | 130*                  | 0.99          |
| <b>Overall</b>  | <b>B</b>        | <b>10.7</b>       |                       | <b>0.96</b>    | <b>D</b>        | <b>42.8</b>       |                       | <b>1.11</b>   |
| <b>Route 5 (South Main Street) at Abbe Road / Commercial Driveway</b>                         |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (South Main Street) Northbound  | C               | 26.6              | 600*                  | 0.93           | B               | 15.1              | 630*                  | 0.84          |
| Route 5 (South Main Street) Southbound  | B               | 10.2              | 593**                 | 0.80           | E               | 61.8              | 986*/**               | 1.11          |
| Commercial Driveway Eastbound   | E               | 57.8              | 125*                  | 0.84           | C               | 21.5              | 27                    | 0.20          |
| Abbe Road Westbound   | D               | 38.6              | 42                    | 0.28           | C               | 28.3              | 23                    | 0.18          |
| <b>Overall</b>  | <b>C</b>        | <b>21.4</b>       |                       | <b>0.93</b>    | <b>D</b>        | <b>40.8</b>       |                       | <b>1.11</b>   |
| <b>Route 5 (John Fitch Boulevard) at Scantic Road / Crow Park Road</b>                        |                 |                   |                       |                |                 |                   |                       |               |
| Route 5 (John Fitch Boulevard) Northbound   | B               | 12.7              | 355                   | 0.66           | A               | 6.5               | 244                   | 0.61          |
| Route 5 (John Fitch Boulevard) Southbound   | A               | 9.3               | 233                   | 0.64           | A               | 7                 | 204**                 | 0.71          |
| Crow Park Drive Eastbound   | A               | 0.0               | 0                     | 0.01           | A               | 0.0               | 0                     | 0.00          |
| Scantic Road Westbound  | D               | 44.3              | 284                   | 0.83           | D               | 42.1              | 147                   | 0.67          |
| <b>Overall</b>  | <b>B</b>        | <b>15.4</b>       |                       | <b>0.83</b>    | <b>A</b>        | <b>8.6</b>        |                       | <b>0.71</b>   |

\*95% queue length exceeds capacity, queue may be longer

\*\*95% queue length metered by adjacent traffic signal

## 4.6 Future Transit Demand

The study team evaluated the future transit demand in East Windsor. A design year of 2025 was selected due to the desire to understand the near-term implementation potential for transit service. The analysis is based on projected *socioeconomic* changes forecast by the State and qualitative assessments based on the developments included in the base and build scenarios. Three different methodologies for calculating transit demand are detailed, each of these could be funded through the Federal Transportation Equity Act.

- **Program demand** - Applies to areas that may have a need for “limited” *demand response* services. This service can encompass subscription trips for clients to a social service agency or a demand response service only open to certain populations. This type of service is funded under Section 5310 of the Federal Transportation Equity Act.
- **Non-program demand** - applies to demand response services, flex route services open to the general public and can be funded through Section 5307 or Section 5311.
- **Commuter demand** – Applies to East Windsor residents and workers traveling farther distances to/from town via transit and can be funded through Section 5307 or Section 5311.

The potential future demand in the corridor is calculated using population projection data from the State for 2025. The percentage of those without access with a vehicle and with a disability are assumed to remain constant. Employment projections from Connecticut and Massachusetts come from each state’s respective labor market Information department. [Appendix 4 – Future Transit Demand Calculations](#) includes detailed calculations for the transit demand.

### 4.6.1 Program and Non-Program Demand

The calculated future program demand and non-program demand are listed in [Table 19](#), below.

*Table 19: Program and Non-Program Transit Demand*

| Demand Methodology | Annual Demand (trips per year) |
|--------------------|--------------------------------|
| Program            | 13,317                         |
| Non-Program        | 9,951                          |
| Total              | 23,268                         |

The program demand can be seen as a proxy for paratransit/ADA/demand response service; the non-program demand would be for fixed route demand. Therefore, two nearby demand response/fixed route systems nearby will be used to determine how much service should be provided to East Windsor.

Key **socioeconomic** indicators used in transportation planning include:

- Land use
- Population, income and housing
- Economics and employment
- Community facilities

**Demand-Response Transit:** Involves small- or medium-sized vehicles operating on flexible routes with flexible schedules that depend on passenger requests.

- *Northeastern Connecticut Transit District* provides 1.4 trips per revenue hour for demand response and 5.0 for fixed route
- *Northwestern Connecticut Transit District* 1.1 trips per revenue hour for demand response and 6.1 for fixed route

This would average 1.25 trips per hour for demand response service and 5.55 trips per hour for fixed route. This translates to 1,572 service hours needed annually for local fixed routes by 2025 and 12,106 service hours on local demand response service if 100 percent of transit demand was met. However, expecting to meet all possible demand in the town may be unrealistic. The transit demand met for Northeastern Connecticut Transit, for instance, is 22 percent.<sup>1</sup> Using this percentage as a guide, **3,098** service hours would be needed to be provided locally between the two modes by 2025; this low amount of needed service hours means that a local fixed route would not be feasible. One small vehicle could be used to provide those service hours via demand response service, assuming a weekday service span of 6:00 AM to 6:00 PM (12 hours)<sup>2</sup>.

Qualitatively, the opening of the new Windsor Locks rail station and planned surrounding *transit-oriented development* (TOD) in Warehouse Point should could provide additional demand. As development patterns continue for the Route 5 corridor, the potential linkages and provisions for transit service should be accounted for.

**Transit-oriented development** includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities.

#### 4.6.2 Commuter Demand Methodology

Due to East Windsor's equidistance from Springfield and Hartford, there may be enough residents traveling north and south along US 5 for commuter transit service to be an option. There is already a route along US 5 (Route 905) that operates local service between Windsor Locks and Hartford, but no transit service operates to the east or north of town.

In order to calculate the need for commuter routes, the "On the Map" function on the US Census Website<sup>3</sup> was used to calculate demand for commuter trips. A metric of estimated commuters riding public transit could then be established, and a flex commuter route was conceptualized, if necessary. Because East Windsor is both an employment center and residential community, both inflow and outflow commuting was used. In order to determine the threshold for establishing a new commuter route, the current demand for trips to and from Hartford is used as a threshold. This would indicate the threshold needed to establish a commuter route at 208 daily estimated trips. The calculated commuter service demand for three potential destinations is included in *Table 20*.

<sup>1</sup> There was a potential demand of 191,696 for transit rides in the Northeastern Connecticut Transit District (NECTD), but only 43,414 rides were taken last year.

<sup>2</sup> Formula to determine the number of vehicles needed: number of service hours divided by 255 days (annual weekdays), and then divided again by the proposed 12 hour service span to get the number of vehicles needed.

<sup>3</sup> <http://onthemap.ces.census.gov/>

Table 20: Commuter Transit Demand

| Potential Commuter<br>Route Destination | Daily Commutes to /<br>from East Windsor | Miles to Potential<br>Destination | Transit<br>Mode Share | Existing     |             | 2025         |             |
|---|--|-----------------------------------|-----------------------|--------------|-------------|--------------|-------------|
|   |  |                                   |                       | Annual Rides | Daily Rides | Annual Rides | Daily Rides |
| Hartford                                | 2,235                                    | 17                                | 5%                    | 53,000       | 208         | 56,710       | 222         |
| Springfield                             | 425                                      | 17                                | 2%                    | 4,600        | 18          | 4,775        | 19          |
| Windsor Locks                           | 428                                      | 6                                 | 2%                    | 5,400        | 21          | 5,778        | 23          |

The analysis yields the conclusion that there will not be enough demand to establish new commuter routes to surrounding towns. The potential new developments in the corridor should be tracked, particularly the two industrial / business parks (Sites 5 and 6) and whether changes in employment patterns increase demand to levels where a new commuter route could be warranted.

## 5 Alternatives Analysis

This section will explain and document the alternatives developed and analyze their ability to satisfy the vision, goals and objectives.

### 5.1 Corridor-wide Enhancements

Several recommendations, particularly those affecting pedestrian, bicyclist and transit mobility, were evaluated within the context of the entire project corridor to ensure consistency throughout the corridor. The primary corridor-wide recommendations are to:

- Improve signal infrastructure, specifically modernize detection systems
- Provide bicyclist and pedestrian amenities on at least one side of Route 5 and to serve key destinations
- Provide transit amenities near key destinations and seek to improve transit service

#### 5.1.1 Improve Signal Infrastructure

During the course of the existing conditions analysis the study conducted field work to evaluate whether the traffic signals were operating as expected via traffic modeling software. At several locations, traffic queues and delays appeared to be substantially greater than the modeling software indicated. Upon investigation, the study team identified several broken loop detectors that were fouling the operation of the coordinated signal system.

During the study, using public and private resources, the Town of East Windsor and CTDOT were able to install new video detection throughout the corridor. Field reviews and feedback from the public indicates that these change have had the desired effect of ensuring the traffic signals operate at their full capability for processing traffic efficiently.

#### 5.1.2 Transit Improvement Opportunities

The transit and innovative mobility improvements can be categorized into two sections. The first deals with potential improvements in transit service to East Windsor. The second deals with specific infrastructure, specifically bus stops with shelters that are recommended within the study corridor.

##### 5.1.2.1 Transit and Innovative Mobility Service Alternatives

Four preliminary alternatives have been developed as means to meet the future demand for the transit and mobility needs of the Route 5 corridor. This document includes a summary of the transit demand analysis that was included in the Future Conditions Assessment and four alternatives to add transit or innovative mobility services to the corridor. Innovative mobility services are included for consideration due to the low demand for traditional, fixed route transit.



*Extensive Vehicle Queue on Route 5 Southbound at South Water Street prior to Replacement of Detection Systems*

**Summary of Transit Demand Analysis**

The study team evaluated the future transit demand in East Windsor using published population and employment data from the State of Connecticut and the Commonwealth of Massachusetts for the selected design year of 2025. Three different types of demand were assessed: program (demand-response), non-program (local fixed route) and commuter (express). The results are documented in the following tables:

*Table 21: Program and Non-Program Transit Demand*

| Demand Methodology | Annual Demand (trips per year) |
|--------------------|--------------------------------|
| Program            | 13,317                         |
| Non-Program        | 9,951                          |
| Total              | 23,268                         |

*Table 22: Commuter Transit Demand*

| Potential Commuter Route Destination | Daily Commutes to / from East Windsor | Miles to Potential Destination | Transit Mode Share | Existing     |             | 2025         |             |
|--------------------------------------|---------------------------------------|--------------------------------|--------------------|--------------|-------------|--------------|-------------|
|                                      |                                       |                                |                    | Annual Rides | Daily Rides | Annual Rides | Daily Rides |
| Hartford                             | 2,235                                 | 17                             | 5%                 | 53,000       | 208         | 56,710       | 222         |
| Springfield                          | 425                                   | 17                             | 2%                 | 4,600        | 18          | 4,775        | 19          |
| Windsor Locks                        | 428                                   | 6                              | 2%                 | 5,400        | 21          | 5,778        | 23          |

The demand analysis, documented in more detail in the Future Conditions Assessment available on the study website, yielded the following conclusions:

- Demand for a new fixed route local bus services is limited.
- One small vehicle could support a demand-response service.
- There is limited demand to support new commuter routes to surrounding employment centers, particularly with the parallel CTrail Hartford Line service providing connectivity to Hartford and Springfield.

**Transit Alternative 1: Increase Current (Express) Transit Service in the Corridor**

Prior to August 2021, CTtransit’s Route 96 ran on Route 5 between Hartford and East Windsor on a few trips during the morning and evening peaks (towards Hartford in the morning; away in the evening). If employment in the corridor increases as expected, there should be an increase in reverse-commute transit service as well.

Instead of operating only a few Route 905 trips to East Windsor, this alternative envisions that a new route be created that follows the “E” trips on Route 905. The proposed routing is shown in Figure 57, right.

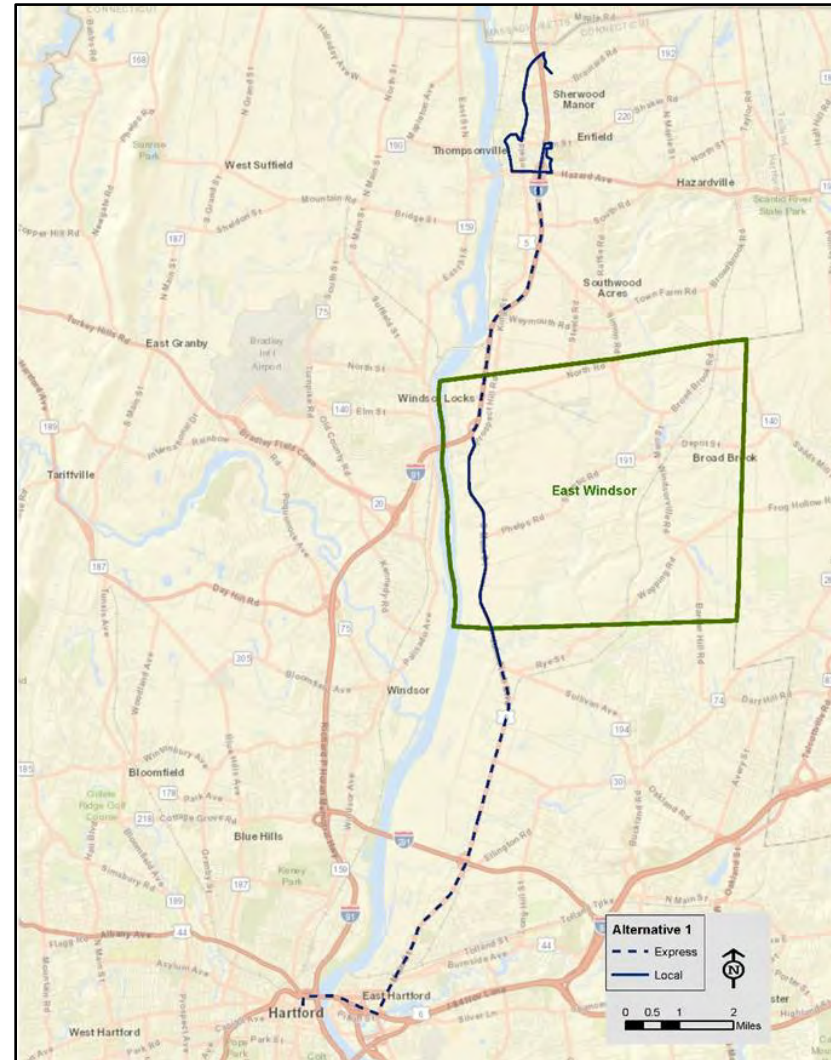
Because the anticipated job growth in the corridor would be mainly in warehousing (which has many shifts that are not the standard “9 to 5” shift), the schedule for this route will likely not be run on a standard headway. Rather, the schedule should be tailored around common shift times. For extremely early or late trips, East Windsor should approach the companies individually or the Chamber of Commerce to subsidize these trips.

The benefit of pursuing this alternative is that this would allow a relatively quick expansion of transit services to the town. The drawback would be that East Windsor could not directly control its transit service levels or schedules. Assumptions for this alternative include:

- Service would be operated by the existing operator under the CTtransit express umbrella

There may need to be a subsidy for late night / off peak service to be provided by East Windsor or its partners. This cost assumes that 2 round trips will need to be subsidized at the forecasted cost per hour for CTtransit (\$127.09 multiplied annual inflation rate of 1.20% over 5 years equals \$134.71).

Figure 57: Transit Alternative 1



**Initial Capital Cost: None**  
**Annual Operating Cost: \$129,600**  
**Estimated Annual Ridership: 56,000**

**Transit Alternative 2: New Local Bus Fixed-Route from Windsor Locks Station**

CTtransit is in the process of adding local bus service to the Windsor Locks Train Station, serving Amtrak and Harford Line service. A bus service from the station to Bradley International Airport, approximately 4 miles to the west, has been planned (Route 24) as well as adding two roundtrips from Hartford along Route 5.

The draft schedule for Route 24 shows several trips which have long layovers at Windsor Locks Station. The layovers are greater than 35 minutes, giving the buses sufficient time do a one directional loop in the Warehouse Point district of East Windsor and return to the station. This will allow riders from Hartford to be able to transfer from commuter trains and express buses to local bus service serving East Windsor.

Four trips are proposed—two in the morning and two in the evening peak.

*Table 23: Proposed Route 24 Schedule (Courtesy CTtransit)*

| Direction | Start   | Start Location           | Initial Arrival at Endpoint | Arrival at Endpoint After Loop | End Location                   |
|-----------|---------|--------------------------|-----------------------------|--------------------------------|--------------------------------|
| North     | 6:20 AM | Windsor Railroad Station | 6:57 AM                     | 7:24                           | Windsor Locks Railroad Station |
|           | 7:50 AM |                          | 8:27 AM                     | 8:54                           |                                |
|           | 4:11 PM |                          | 4:48 PM                     | 17:15                          |                                |
|           | 6:25 PM |                          | 7:02 PM                     | 19:29                          |                                |

This service could serve as a supplement the East Windsor Only Demand-Response System, described in Alternative 3, to reach even more local destinations.

The benefit of pursuing this alternative is that this would allow a relatively quick expansion of transit services to the town. Drawbacks would be that East Windsor could not directly control its transit service levels or schedules, and that only a small part of the town would be served by transit. Assumptions for this alternative include:

- Service would be operated by CTtransit
- CTtransit would “protect” these trips when making schedule adjustments in the future
- Big Y and Walmart will allow buses onto their property
- The running time for a round trip between the train station and the East Windsor loop does not exceed 27 minutes
- The estimated running time between Windsor Station and Windsor Locks Station rarely exceeds 37 minutes

This is a near term solution that can be implemented as soon as August 2021; when the station is moved to its new location, there is the possibility of all Route 24 trips being able to loop into East Windsor if the Windsor Locks Park and Ride is moved north as well.

Figure 58: Potential Routing for Transit Alternative 2

**Transit Alternative 3: East Windsor Only Demand-Response System**

This alternative would have East Windsor run their own demand-response transit system, which would supplement the limited CT transit service that would remain in operation on Route 5. The system would use one vehicle. The service area would be confined to the East Windsor town limits (with two exceptions). Residents without access to a vehicle, or who are unable to drive because of a disability, would be the most likely users of this alternative.

- 24-hour advance notice will be needed to reserve a trip except at the Windsor Locks train station
- The other out of service area stops would include Enfield Square and Brookside Plaza (there would not be designated times when the vehicle would arrive at these stops; reservations are required)
- Subscription trips would be available
- Door to door service (due to lack of sidewalks in the area)
- The fare should be close to the current Enfield Transit (Magic Carpet Bus) demand response fare (approximately \$1 per ride with multi-ride passes offering discounted fares)
- Weekday service from 6:00 AM to 6:00 PM
- Service not available on the following holidays: New Year's Day; Good Friday before Easter; Memorial Day; Independence Day; Labor Day; Thanksgiving; Friday after Thanksgiving; Christmas Day

Definitions / Further Explanation:

**Scheduled times:** The proposed times at the Windsor Locks commuter rail station where a rider could board an East Windsor transit vehicle without a reservation follow (the minutes shown is the time it would take to make a transfer to/from the train):

*Table 24: Transfer Times for Transit Alternative 3*

| Time     | SB Train Transfer Time (Minutes) | NB Train Transfer Time (Minutes) |
|----------|----------------------------------|----------------------------------|
| 9:00 AM  | 14                               | 20                               |
| 11:30 AM | 7                                |                                  |
| 1:45 PM  |                                  | 10                               |
| 5:15 PM  |                                  | 15                               |

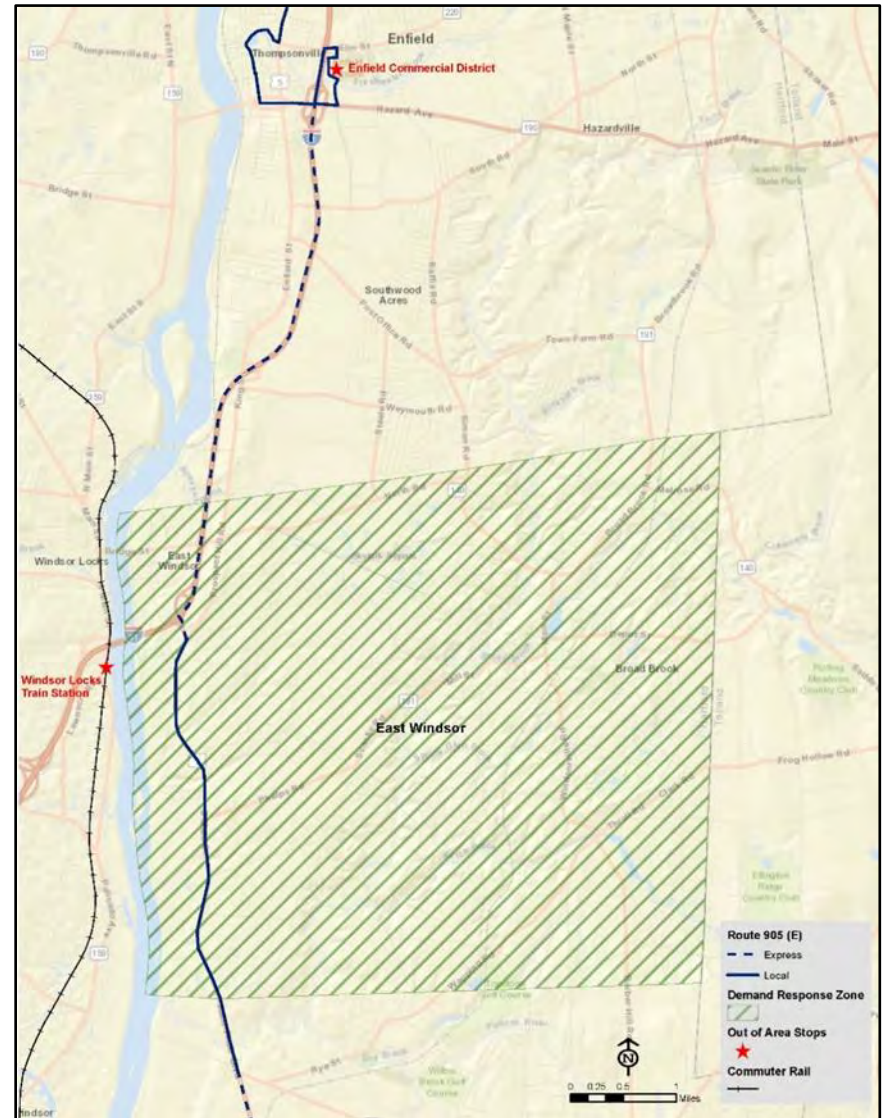
Other trips to the station could be made upon request at other times (subject to availability) and 24-hour advance notice would be required for those trips. In order to encourage riders to go to / from the station at these times, fares on these trips will be less than the standard demand response fare.

Assumptions for this alternative include:

- Initial capital cost for one vehicle (12 passengers, 2 wheelchairs) at the standard local match, assumed to be a Ford Starcraft Allstar shuttle bus
- Operating costs based on average cost per hour from NW and NE CT Transit Districts
- Only program ridership demand would be served

**Initial Capital Cost: \$13,000**  
**Annual Operating Cost: \$126,378**  
**Estimated Annual Ridership: 13,000**

*Figure 59: Transit Alternative 3*



#### Transit Alternative 4: Subsidized Transportation Network Company (TNC) Service

This alternative would use the private sector (TNCs) to provide transit service to East Windsor town residents. Examples of TNCs include Uber and Lyft. East Windsor would pay the difference between the actual cost of a TNC ride and a flat fare that a rider would pay.

Characteristics of the service include:

- No advance notice will be needed to reserve a trip
- Subscription trips would not be available
- Door to door service (due to lack of sidewalks in the area)
- The fare would be \$5; any costs over that would be subsidized by East Windsor
- Out of service area stops would include the Windsor Locks train station and the Enfield commercial area
- Service hours and days to be determined.
- Only **registered riders** from the **ADA eligible population** or those over 65 would be served to keep costs down<sup>4</sup>.

#### Definitions/Further Explanation:

**ADA eligible population:** Those individuals having a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment. These impairments would be<sup>5</sup>:

- Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory

including speech organs, cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin, and endocrine;

- Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities;

**Registered riders:** Only riders from the ADA eligible population or over 65 who are registered would be eligible to use the service. For over 65, a proof of age will be needed; for those with a disability, an application would need to be filled out and reviewed.

TNCs drivers would provide all the rides with their existing business model, with the rider only paying a flat fare for a ride within the town of East Windsor and certain out of town locations. A model for how a transit agency can work with a TNC to provide service is Direct Connect, operated by Pinellas Suncoast Transit (PSTA). Direct Connect replaced a low performing fixed route in a suburban part of the PSTA service area, increasing the ridership in the area previously served by the fixed route. PSTA subsidizes the cost of TNC rides up to \$5.00 (with the remainder paid by the rider) within a 15 square mile service area for all riders, regardless of ADA eligibility. Because the potential service area is almost twice as large as Direct Connect's (26 versus 15 square miles), allowing everyone to access the service would be prohibitively expensive. Therefore, this alternative would focus on those with the most mobility needs in the community.

The biggest benefit to East Windsor is that there would be no capital costs; the town's only commitment would be to provide the operating subsidy. Also, the service days and hours would be more flexible than with a transit agency run demand response service—potentially, rides could be taken 24 hours a day, seven days a week.

<sup>4</sup> This means only program ridership demand would be served.

<sup>5</sup> The following definition of ADA eligible comes from the FTA "Transportation Services for Individuals with Disabilities", (49CFR37§3)

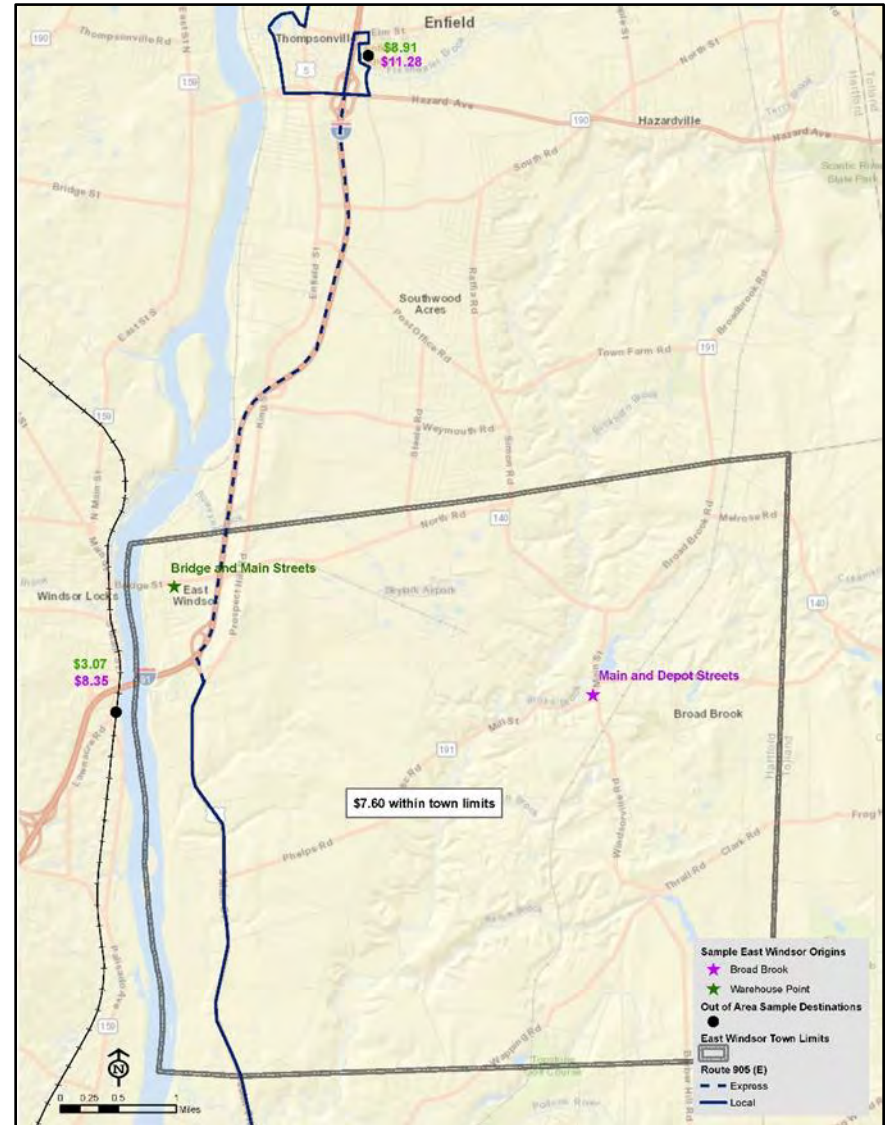
There are some large drawbacks, however. The cost to East Windsor would be higher than operating the transit service described in Alternatives 1 or 3, especially as it may be difficult to meet the equivalent service standard necessary to receive federal operating assistance. An additional issue is that, since most TNCs are considered an exclusive ride service, they are not eligible for FTA operating funds. Another barrier to partnering with TNCs is a lack of transparency from the TNCs. As private companies, TNCs consider their ride information proprietary, making it difficult for transit agencies to evaluate whether these partnerships are effective.

Assumptions for this alternative include:

- Costs shown on Figure 60 are from two sample origins in the population centers of East Windsor quoted for an Uber trip on September 24, 2020.
- The annual operation cost is calculated by the average subsidy (\$7.84) multiplied by the total program ridership (\$13,000).

**Initial Capital Cost: None**  
**Annual Operating Cost: \$101,946**  
**Estimated Annual Ridership: 13,000**

Figure 60: Transit Alternative 4



5.1.2.2 Transit Infrastructure Improvements

Transit infrastructure improvements are recommended at several locations within the study corridor. Given the local climate and long headways between buses, passenger comfort should be considered at stop locations. For this reason, bus shelters are recommended at several locations along Route 5.

The study team evaluated the surrounding land uses for potential ridership demand and identified suitable locations for stops. In

particular, sites with current and expected future employment were identified.

The majority of stop locations would include a solar-powered illuminated shelter, with sidewalk connections to adjacent building uses. Specific detail is provided on a site by site basis in Section 5.3.

Figure 61: Transit Infrastructure Locations



## 5.2 Bicyclist and Pedestrian Accommodations

To address the lack of bicyclist and pedestrian facilities throughout the corridor, the study team recommends the implementation of a 10 foot *sidepath* throughout the study corridor. Based upon the traffic volumes and speeds, all but the most experienced cyclists would be uncomfortable using an on-roadway bicycle lane or the roadway shoulder.

A **sidepath** is a designated path (typically bi-directional), for single use or shared use (i.e. bicyclists and pedestrians allowed) immediately adjacent to and parallel with (but separated from) the roadway. (USDOT)

The sidepath is recommended for the west side of Route 5 for the majority of the corridor. The Town should explore the potential expansion of the trail northerly to Enfield and southerly to South Windsor. Additional sidepath connections are also possible from the Route 5 corridor to Warehouse Point.

In addition to the sidepath, sidewalk connections on the opposite side of the street are recommended to help complete the pedestrian network. These bicyclist and pedestrian recommendations are detailed further in Section 5.3.

Figure 62: Bicyclist and Pedestrian Recommendations



### 5.3 Segmental Improvements

The study team subdivided the Route 5 corridor into five segments or areas based on the characteristics of the roadway and the deficiencies identified in the Existing and Future Conditions Assessments. These segments are highlighted in **Figure 63**, below.

Figure 63: Corridor Subdivision for Alternatives Analysis








### 5.3.1 Evaluation Categories

The study team identified five evaluation categories to assess the relative performance of the identified alternatives. These categories have been chosen based on the study's vision, goals and objectives, available on the Corridor Vision, Goals and Objectives Statement. The categories are as follows:

- Turn lanes
- Traffic operations
- Queueing
- Transit
- Bike / Ped

The descriptions of the alternatives, beginning with Section 5.3.2, include a description of how and why each alternative addresses the criteria. Each category includes a range of potential results for each alternative. These results range from a filled in upward green arrow as the best possible result, to a hollow upward green arrow, a yellow box indicating a neutral result, to downward facing hollow and solid red arrows. A graphic depiction of the symbols is included in [Table 25](#), right.

Table 25: Evaluation Category Ratings

| Rating  | Definition                              |
|---|---|
|  | Satisfies the category                  |
|  | Partially satisfies the category        |
|  | Neutral                                 |
|  | Partially does not satisfy the category |
|  | Does not satisfy the category           |

### 5.3.2 Northern Segment

The northern segment extends from the study’s northern limits at the Enfield town line to the signalized intersection between Route 5 and the commercial driveways serving the Big Y plaza and a commercial development east of Route 5. The northern segment is illustrated in more detail on Figure 64, below. Alternatives developed for the northern segment sought to address the following deficiencies in order to meet the study’s vision, goals and objectives:

- Lack of bicyclist and pedestrian facilities along Route 5 and connecting to the Warehouse Point neighborhood
- Lack of transit facilities
- Expected deterioration of traffic operations at the intersection of Route 5 and Route 140, resulting in LOS F during the Base scenario PM peak, LOS E during the Build scenario AM peak and LOS F during the Build scenario PM peak

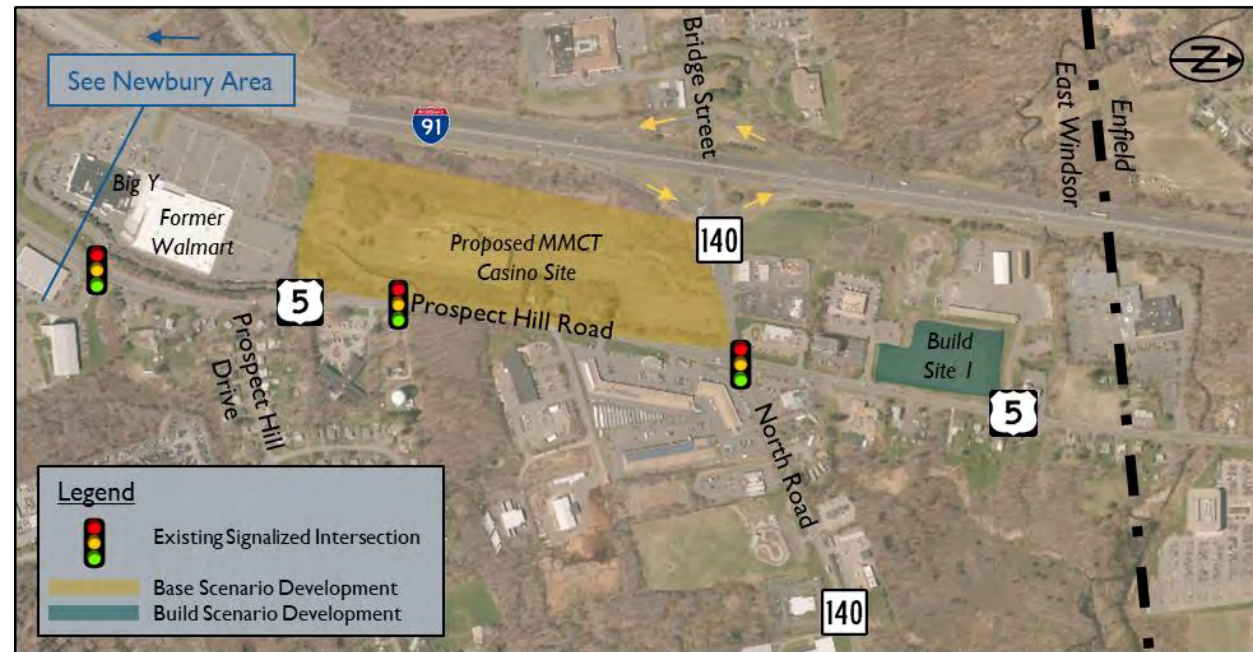
As discussed in Chapter 3, future traffic volumes in this area of the corridor are dependent on significant future development. In particular, the proposed MMCT casino site. While the future of that site is uncertain, there remain a strong desire from the Town to redevelop the site. Based on the uncertainty of the future traffic demand, the study includes an interactive improvement program designed to address existing deficiencies and plan for future growth.

Three alternatives have been developed for the northern section, identified as N-1, N-2 and N-3. They are described in Table 26 below. These alternatives are detailed on the following pages.

Table 26: Northern Segment Alternatives

| Alternative | Purpose   |
|-------------|---|
| N-1         | Address existing bicyclist and pedestrian deficiencies by provided a sidepath along Route 5 and pedestrian connections towards Warehouse Point and residential developments on Route 140.   |
| N-2         | Address expected traffic operational deterioration at the Route 140 intersection under the Base scenario by providing additional intersection capacity. Provide new signalized intersection at proposed MMCT casino access drive. |
| N-3         | Address expected traffic operational deterioration at the Route 140 intersection under the Base scenario by providing additional intersection capacity.   |

Figure 64: Northern Segment



5.3.2.1 Northern Alternative I (N-I)

Alternative N-I would address the existing deficiencies along the northern segment by installing a multi-use sidepath along Route 5 and providing key pedestrian connections to destinations along Route 140 to the east and west. N-I is depicted in Figure 65, below.

**Key Features:**

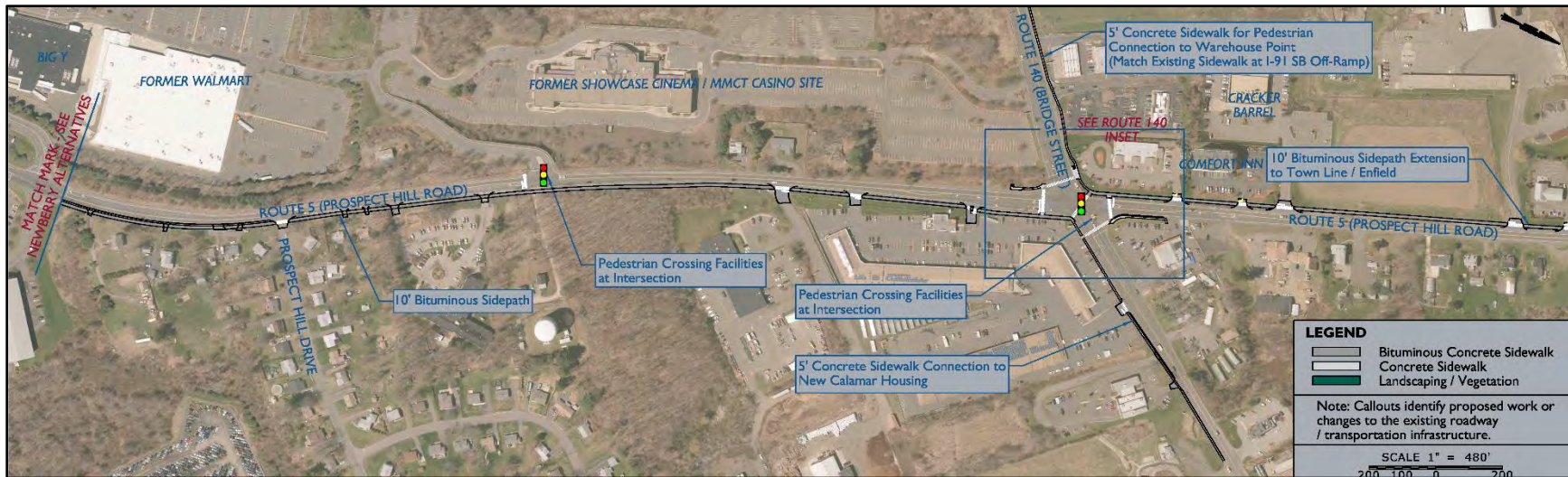
- Multi-use sidepath along west side of Route 5 extending northerly from Route 140 to the Enfield Town Line
- Multi-use sidepath along east side of Route 5 extending southerly from Route 140
- Sidewalk connection from Route 140 westerly towards Warehouse Point and the existing sidewalks west of I-91
- Sidewalk connection from Route 140 easterly along Route 140 to connect with recently constructed housing
- Pedestrian and cyclist crossings at signalized intersections and driveways

Table 27: Evaluation Criteria for Alternative N-I

| Objective          | Rating | Notes   |
|--------------------|--------|---|
| Turn lanes         | ▲      | Turn lanes provided at all intersections                          |
| Traffic operations | ■      | Does not address future scenario traffic operational deficiencies |
| Queuing            | ▲      | No queuing issues along this segment of Route 5                   |
| Transit            | ▲      | New bus stops and shelters for development node around Route 140  |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies          |

The estimated cost to implement this alternative is \$1,850,000. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 65: Northern Alternative I (N-I)



**Traffic Operations (N-1)**

Traffic operational analysis was conducted for Alternative N-1 using the Existing, Base and Build traffic forecasts. As intersection capacity improvements are not included as part of this alternative, the resulting traffic operations would be similar to the results presented in the existing and future conditions assessments.

To accommodate expected pedestrian patterns at the Route 140 intersection an exclusive pedestrian phase is recommended and has been modeled as part of the analysis as presented below.

Traffic operations for this alternative are expected to deteriorate under the Base forecast and further under the Build forecast. Should the development scenarios identified in those forecasts advance, additional capacity at the Route 140 intersection would be required.

*Table 28: Northern Alternative 1 (N-1) Traffic Operations*

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 44.9              | 1.09           | D               | 44.9              | 0.85          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | A               | 2.7               | 0.19           | A               | 3.7               | 0.35          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | F               | 114.0             | 1.70           | F               | 96.7              | 1.38          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | C               | 23.5              | 1.14           | B               | 20.0              | 0.86          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | F               | 143.6             | 1.83           | F               | 132.5             | 1.58          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | C               | 26.1              | 1.14           | C               | 24.4              | 0.88          |

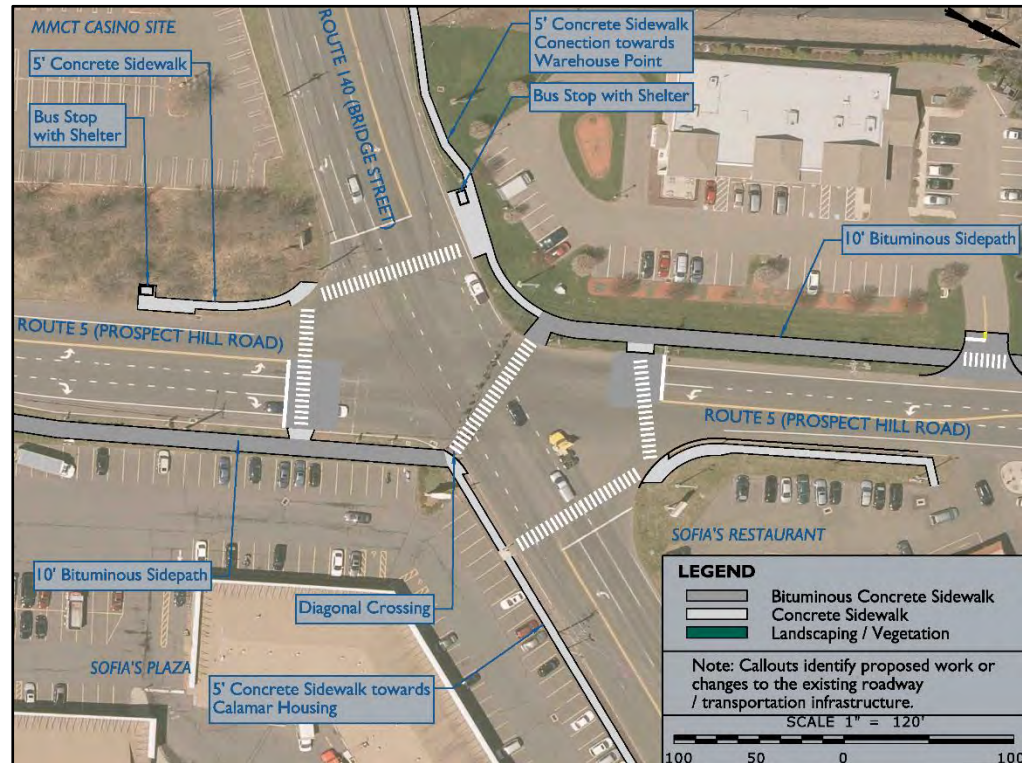
### Route 140 Intersection (N-1)

At the Route 140 intersection, this alternative would provide bicyclist, pedestrian and transit facilities to address existing deficiencies. The proposed multi-use sidepath would transition from the east side of Route 5 south of the intersection to the west side north of the intersection. New sidewalks are recommended to connect to local destinations and proposed transit stops.

Due to the skew of the intersection, an exclusive pedestrian phase is recommended to allow for diagonal crossing. This adjustment to the signal operation is accounted for in the previously presented traffic analysis. This would allow sidepath users to cross diagonally rather than cross two legs of the intersection to continue on the sidepath.

Two transit stops are included as part of this alternative. Based on the previously discussed extension of the CTtransit Route 96, stops are proposed near the Route 140 intersection to serve the surrounding development node. Northbound buses would turn left from Route 5 to Route 140 and stop on shortly after the intersection on the north side of Route 140. There are two lanes on this location of Route 140, allowing vehicles to bypass a stopped bus. Southbound buses would turn right from

Figure 66: North Alternative 1 (N-1) Route 140 Inset



Route 140 to Route 5 and stop shortly after the intersection. The existing configuration of Route 5 features a wide shoulder that would serve as a *de facto* bus bay.

5.3.2.2 Northern Alternative 2 (N-2)

Alternative N-2 would address the same deficiencies as Alternative N-1 and also address the traffic operational deficiencies expected to occur under the 2040 Base traffic forecast. Alternative N-2 is depicted in Figure 67, below. This alternative would be considered as part of an iterative approach to maintaining satisfactory traffic operations at the intersection of Route 5 and Route 140. It should be considered if the former Showcase Cinema / MMCT casino site is developed at a similar scale to that shown in the Base development scenario.

**Key Features:**

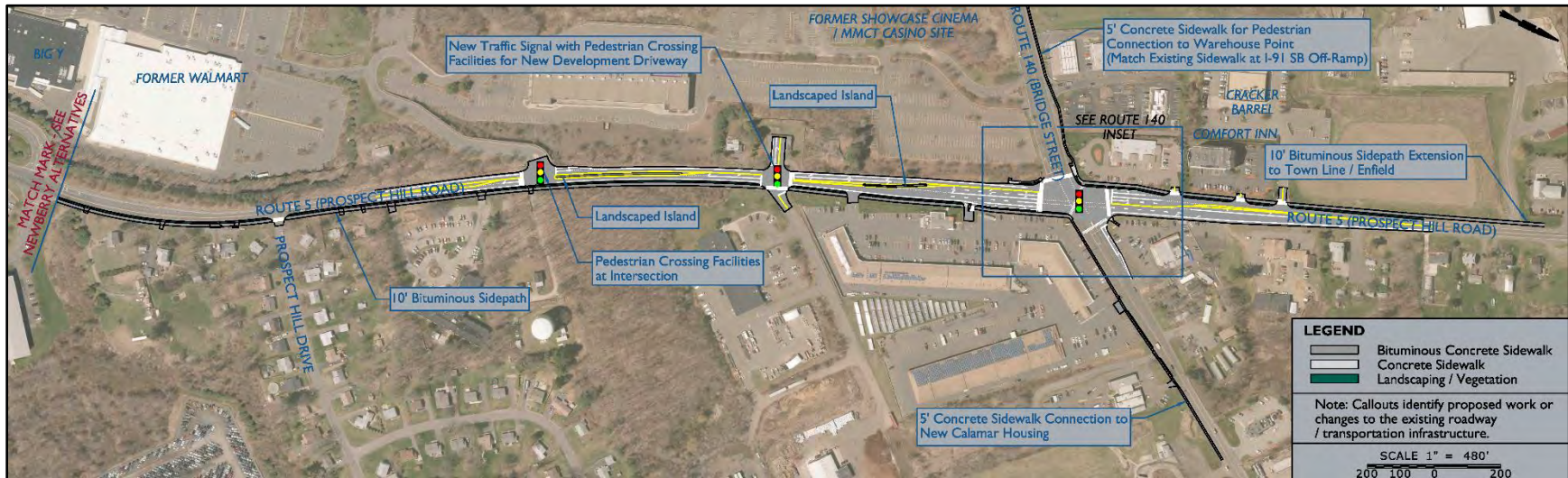
- Second northbound left-turn lane and southbound right-turn lane at Route 140 intersection
- New signalized intersection at the MMCT casino site
- Landscaped islands at two locations
- Bicyclist / pedestrian / transit amenities consistent with Alternative N-1

Table 29: Evaluation Criteria for Alternative N-2

| Objective          | Rating | Notes   |
|--------------------|--------|---|
| Turn lanes         | ▲      | Turn lanes provided at all intersections                          |
| Traffic operations | △      | Does not address future scenario traffic operational deficiencies |
| Queuing            | ▲      | No queueing issues along this segment of Route 5                  |
| Transit            | ▲      | New bus stops and shelters for development node around Route 140  |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies          |

The estimated construction cost to implement this alternative is \$5,200,000. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 67: Northern Alternative 2 (N-2)



**Traffic Operations (N-2)**

Traffic operational analysis was conducted for Alternative N-2 using the Existing, Base and Build traffic forecasts. The additional capacity provided at the Route 140 intersection enables this alternative to satisfy the study’s traffic operational goals under the Base traffic forecast. However, the higher traffic volumes of the Build forecast would still lead to delays at the Route 140 intersection. Improvements to the Route 140 intersection should be seen as iterative and dependent on specific developments moving forward.

**Major traffic generators are developments of more than 100,000 SF of floor space or 200 or more parking spaces. They are regulated by the Office of the State Traffic Administration (OSTA).**

For this alternative, the redevelopment of the former Showcase Cinema site / MMCT casino site as a *Major Traffic Generator* would prompt the implementation of this alternative. While the casino project had been initially approved by OSTA, the project has now been suspended due to initiatives to implement online gambling. The study team expects that the Town of East Windsor will continue to seek redevelopment of this site as a major traffic generator.

To accommodate expected pedestrian patterns at the Route 140 intersection an exclusive pedestrian phase is recommended and has been modeled as part of the analysis as presented below.

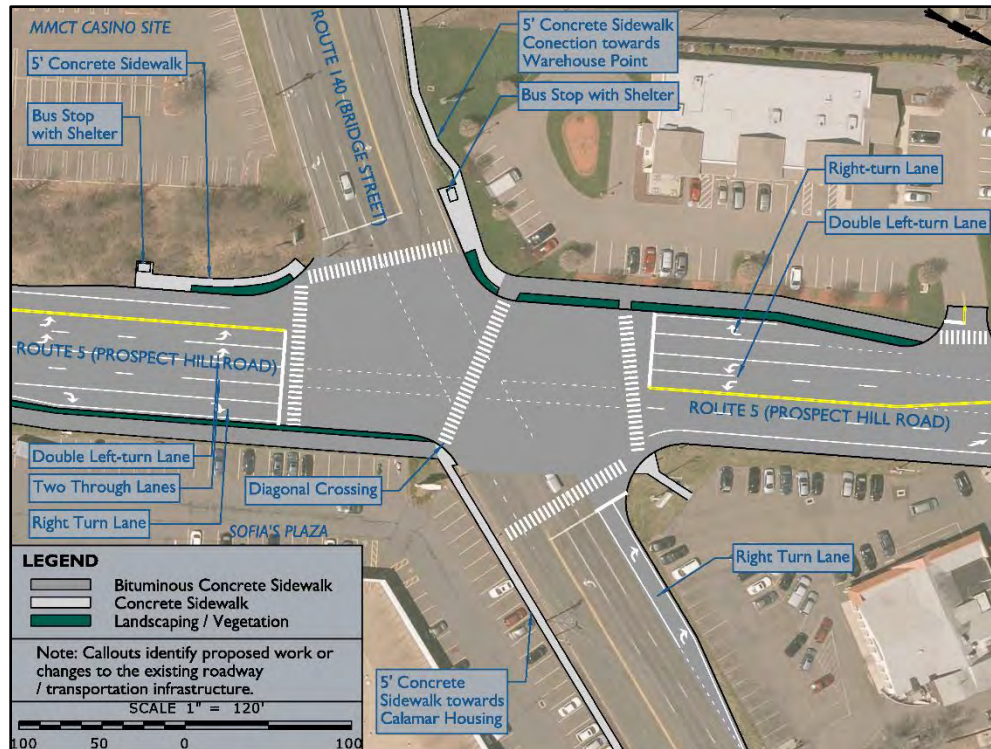
Table 30: Northern Alternative 2 (N-2) Traffic Operations

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 40.0              | 0.90           | D               | 47.8              | 0.85          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 0.3               | 0.16           | A               | 0.4               | 0.32          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | A               | 1.5               | 0.17           | A               | 3.9               | 0.36          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 42.2              | 0.95           | D               | 37.1              | 0.79          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 7.4               | 0.57           | B               | 10.4              | 0.61          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | C               | 20.9              | 0.44           | B               | 19.8              | 0.79          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 39.5              | 0.86           | D               | 37.1              | 0.79          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 8.4               | 0.50           | A               | 9.5               | 0.68          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | C               | 22.7              | 0.90           | C               | 23.2              | 0.88          |

**Route 140 Intersection (N-2)**

At the Route 140 intersection, this alternative would provide a new, second, left-turn lane on northbound Route 5 and a new right-turn lane on southbound Route 5, as illustrated in Figure 68, right. It would also maintain the bicyclist, pedestrian and transit amenities featured in Alternative N-1.

Figure 68: North Alternative 2 (N-2) Route 140 Inset



5.3.2.3 Northern Alternative 3 (N-3)

Alternative N-3 would address the same deficiencies as Alternatives N-1 and N-2 while also addressing the traffic operational deficiencies expected to occur under the 2040 Build traffic forecast. A second northbound through lane would be provided at the Route 140 intersection to satisfy the study’s goals for traffic operations. N-3 is depicted in Figure 69, below.

This alternative would be considered as part of an iterative approach

**Key Features:**

- Second northbound through lane at Route 140 intersection
- Traffic operational improvements and Bicyclist / pedestrian / transit amenities consistent with Alternatives N-1 and N-2

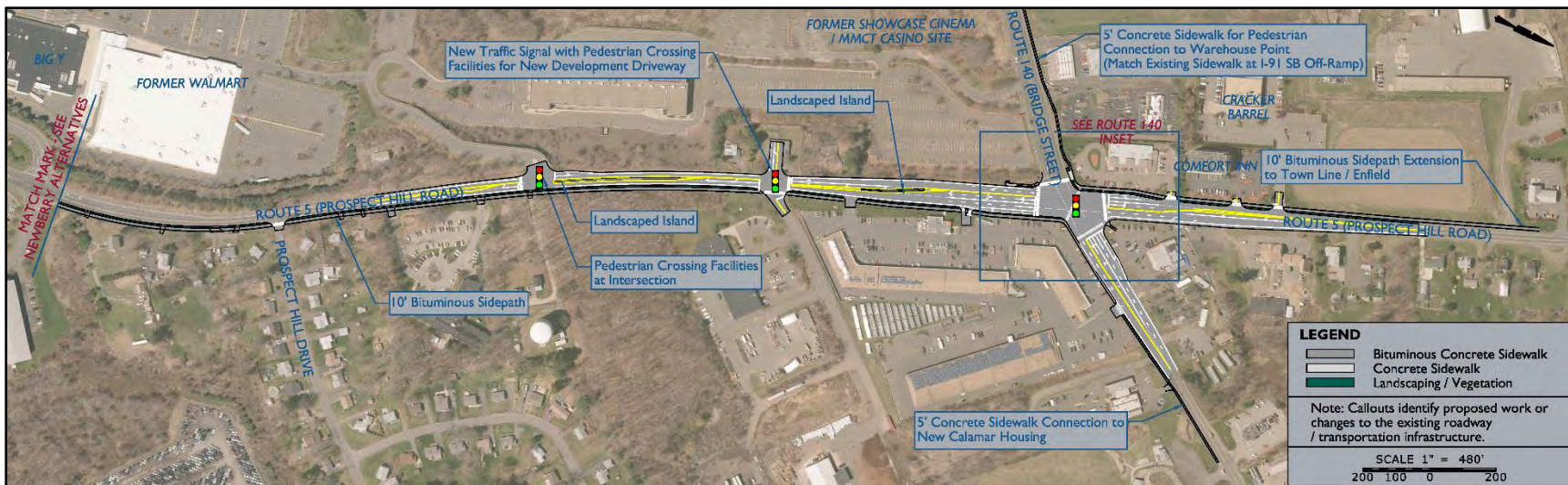
to maintaining satisfactory traffic operations at the intersection of Route 5 and Route 140. It should be considered if the former Showcase Cinema / MMCT casino site and the site north of the Cracker Barrel are developed as shown in the Base and Build development scenarios.

Table 3 I: Evaluation Criteria for Alternative N-3

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections                         |
| Traffic operations | ▲      | Meets operational goals for all traffic scenarios                |
| Queuing            | ▲      | No queueing issues along this segment of Route 5                 |
| Transit            | ▲      | New bus stops and shelters for development node around Route 140 |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies         |

The estimated cost to implement this alternative is \$2,300,000. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 69: Northern Alternative 3 (N-3)



**Traffic Operations (N-3)**

Traffic operational analysis was conducted for Alternative N-3 using the Existing, Base and Build traffic forecasts. The additional capacity provided at the Route 140 intersection enables this alternative to satisfy the study’s traffic operational goals under the Base and Build traffic forecasts. Improvements to the Route 140 intersection should be seen as iterative and dependent on specific developments moving forward.

For this alternative, the redevelopment of the former Showcase Cinema site / MMCT casino site as a Major Traffic Generator and the addition of a Major Traffic Generator at Build Site I would prompt the implementation of this alternative.

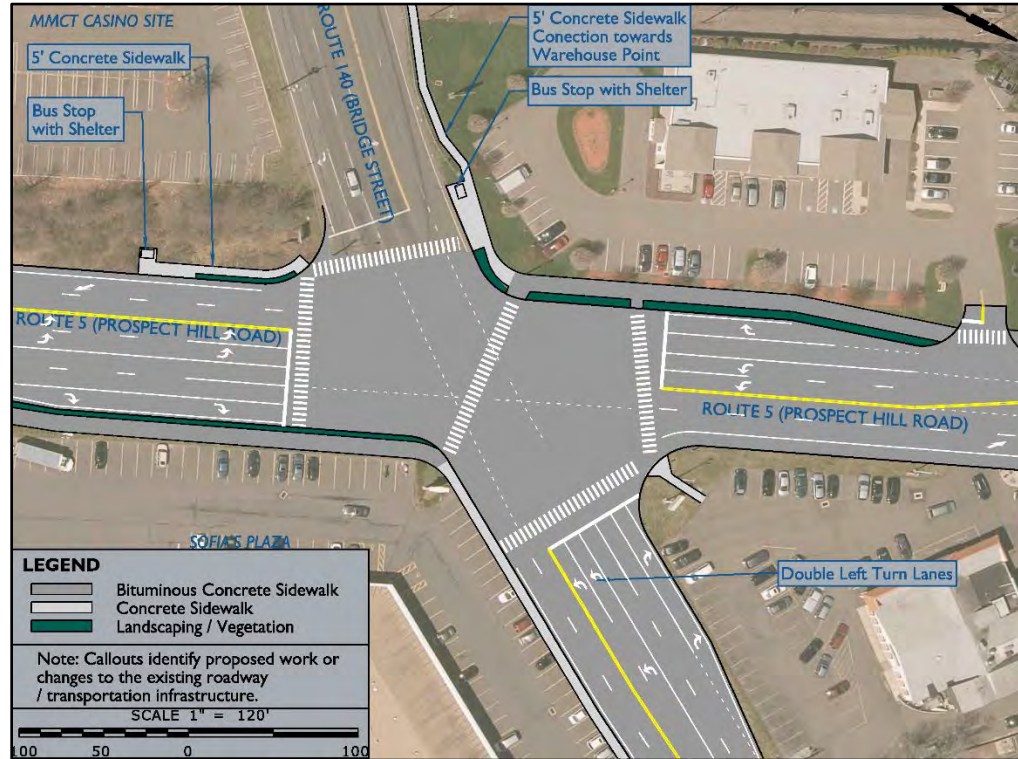
*Table 32: Northern Alternative 3 (N-3) Traffic Operations*

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 39.5              | 0.86           | D               | 37.1              | 0.79          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 0.5               | 0.16           | A               | 0.4               | 0.32          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | A               | 1.6               | 0.17           | A               | 3.9               | 0.37          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 39.5              | 0.86           | D               | 37.1              | 0.79          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 8.8               | 0.51           | A               | 9.9               | 0.62          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | B               | 17.2              | 0.86           | B               | 19.1              | 0.79          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Route 140 (North Road / Bridge Street)     | D               | 39.5              | 0.86           | D               | 37.1              | 0.79          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Eversource Driveway | A               | 8.7               | 0.51           | B               | 10.1              | 0.71          |
| Route 5 (Prospect Hill Road) at MMCT Casino Driveway / Commercial Driveway | B               | 19.8              | 0.88           | C               | 29.5              | 0.88          |

**Route 140 Intersection (N-3)**

At the Route 140 intersection, this alternative would provide an additional northbound through lane on Route 5. This would convert the existing northbound right-turn lane to a through-right. Route 5 north of the intersection would be widened to accommodate the second through lane, as illustrated in Figure 70, right. Shortly after the intersection the second lane would be dropped. It would also maintain the traffic operational improvements and bicyclist, pedestrian and transit amenities featured in Alternative N-1 and Alternative N-2.

Figure 70: North Alternative 3 (N-3) Route 140 Inset



### 5.3.3 Newberry Road Area

The Newberry Road area consists of Route 5 between Greenwood Lane and the Big Y / commercial driveway. There are three signalized intersections along Route 5, at the Big Y driveway, Newberry Road and the I-91 Exit 44 On- and Off-ramps and at the Walmart / commercial plaza driveway. One base scenario development is included in this area, the Crossroads Cathedral. A build scenario development is also included, consisting of an expansion of the existing commercial plaza opposite from Walmart. Alternatives developed for the Newberry Road area sought to address the following deficiencies in order to meet the study’s vision, goals and objectives:

- Existing traffic operational deficiencies at the intersection with Newberry Road and the I-91 on- and off-ramps, with

LOS E during both the AM and PM peak periods

- Queues from the merge between the two I-91 off-ramps that extend back towards the I-91 mainline
- Lack of bicyclist and pedestrian facilities along Route 5
- Lack of transit facilities
- Expected deterioration of traffic operations at the intersection of Route 5 and Route 140, resulting in LOS F during the Base scenario PM peak and LOS F during the Build scenario PM peak

Five alternatives were developed for the Newberry Road area, identified as New-1, New-2, New-3, New-4 and New-5. They are described in, Table 33, following. These alternatives are detailed on the following pages.

Figure 71: Newberry Road

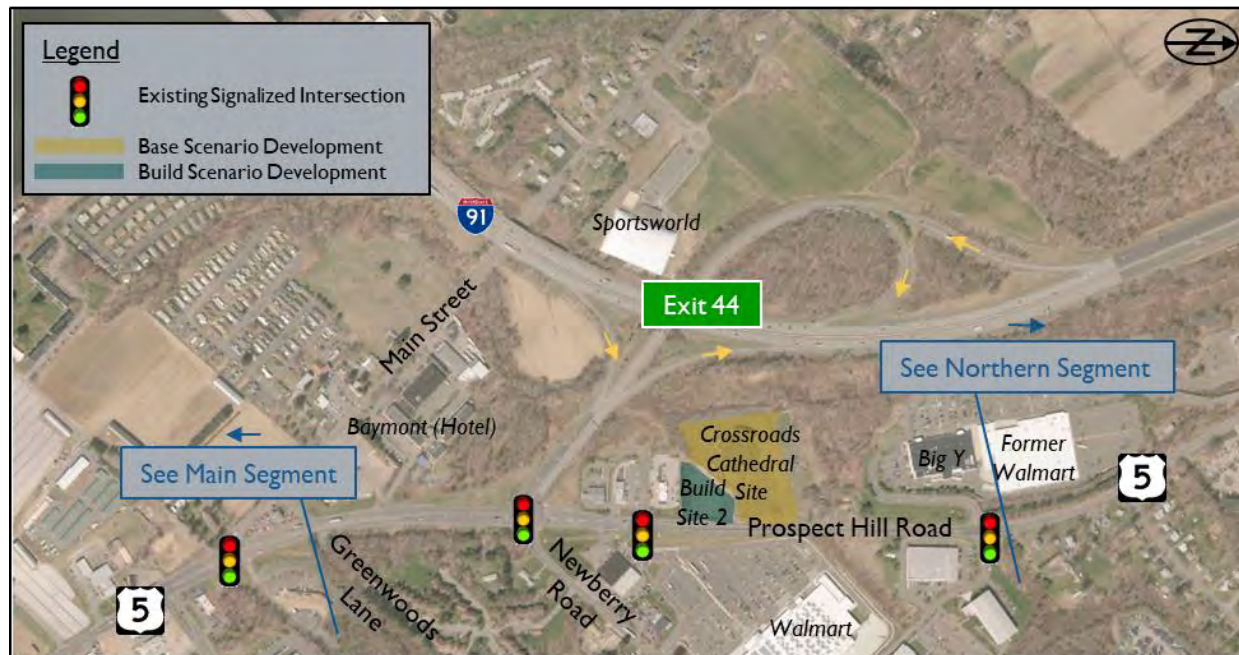


Table 33: Newberry Area Alternatives

| Alternative | Purpose  |
|-------------|--|
| New-1       | Reconfigure lane configuration on the I-91 off-ramp approach to the Newberry Road signalized intersection. Address existing bicyclist, pedestrian and transit deficiencies by providing a sidepath along Route 5, with sidewalks providing key connections to developments along with transit stops. |
| New-2       | Install a pre-signal at the point the two I-91 off-ramps merge prior to the signalized intersection with Newberry Road. Based on initial feedback this alternative is not recommended for further evaluation.  |
| New-3       | Realign I-91 southbound off-ramp to merge from the right of the northbound off-ramp. Based on initial feedback, this alternative is recommended for further analysis as part of a study of the interchange and adjacent segments of I-91.  |
| New-4       | Extend Newberry Road to Main Street with a reconfigured interchange. Based on initial feedback, this alternative is recommended for further analysis as part of a study of the interchange and adjacent segments of I-91.  |
| New-5       | Provide capacity improvements at the signalized intersection with Newberry Road to address deteriorating operations in the future base and build scenarios.  |

5.3.3.1 Newberry Alternative I (New-I)

Alternative New-I would address the existing deficiencies in the Newberry Road area by reconfiguring the I-91 off-ramp approach to the Route 5 / Newberry Road intersection, providing a multi-use sidepath along Route 5, providing key pedestrian connections to destinations along Route 5 and installing two bus shelters.

**Key Features:**

- Provide second eastbound right turn lane at Newberry Road / I-91 ramps intersection
- Lengthen storage for northbound left turns at Newberry Road / I-91 ramps interaction
- Multi-use sidepath along east side of Route 5
- Sidewalk on the west of Route 5 from the Big Y driveway southerly
- New bus shelters near the Walmart driveway

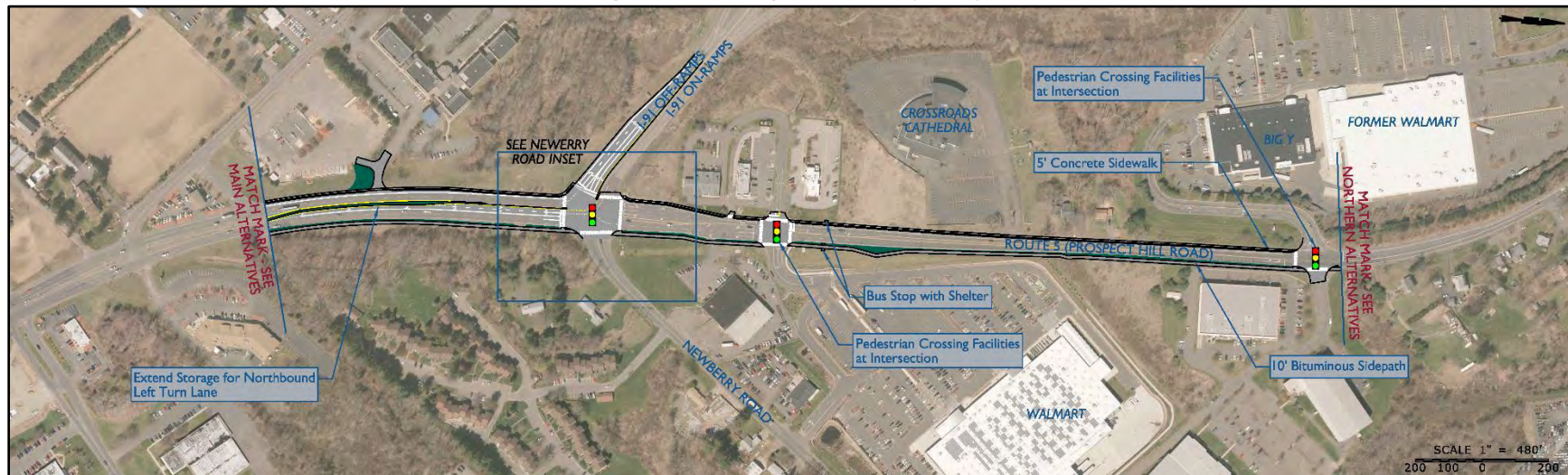
New bus shelters are recommended near the Walmart to enhance the transit experience for shoppers and employees.

Table 34: Evaluation Criteria for Alternative New-I

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ■      | Does not address future scenario traffic operational deficiencies                |
| Queuing            | ■      | Does not address queuing for off-ramp merge point back towards the I-91 mainline |
| Transit            | ▲      | New bus stops and shelters for development around Walmart                        |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies                         |

The estimated cost for this alternative is \$2,000,000. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 72: Newberry Alternative I (New-I)



**Traffic Operations (New-1)**

Traffic operational analysis was conducted for Alternative New-1 using the Existing, Base and Build traffic forecasts. The addition of the second right turn lane would help improve traffic operations under existing conditions both in terms of delay and queueing. As the eastbound right-turn is the highest volume movement in both the AM and PM peak periods, providing the additional capacity to this movement both reduces queue lengths and overall delay.

Operations at the I-91 ramps / Newberry Road intersection are expected to deteriorate under the Build scenario volumes. In the PM peak users would experience LOS E with a volume to capacity ratio of 1.20 for the northbound left turn movement. Newberry Alternative 5 (New-5) has been developed to address the deficiencies under the Build scenario.

Intersection operations at the other two signalized intersections within this segment are expected to remain acceptable under each of the evaluated scenarios.

*Table 35: Newberry Alternative 1 (New-1) Traffic Operations*

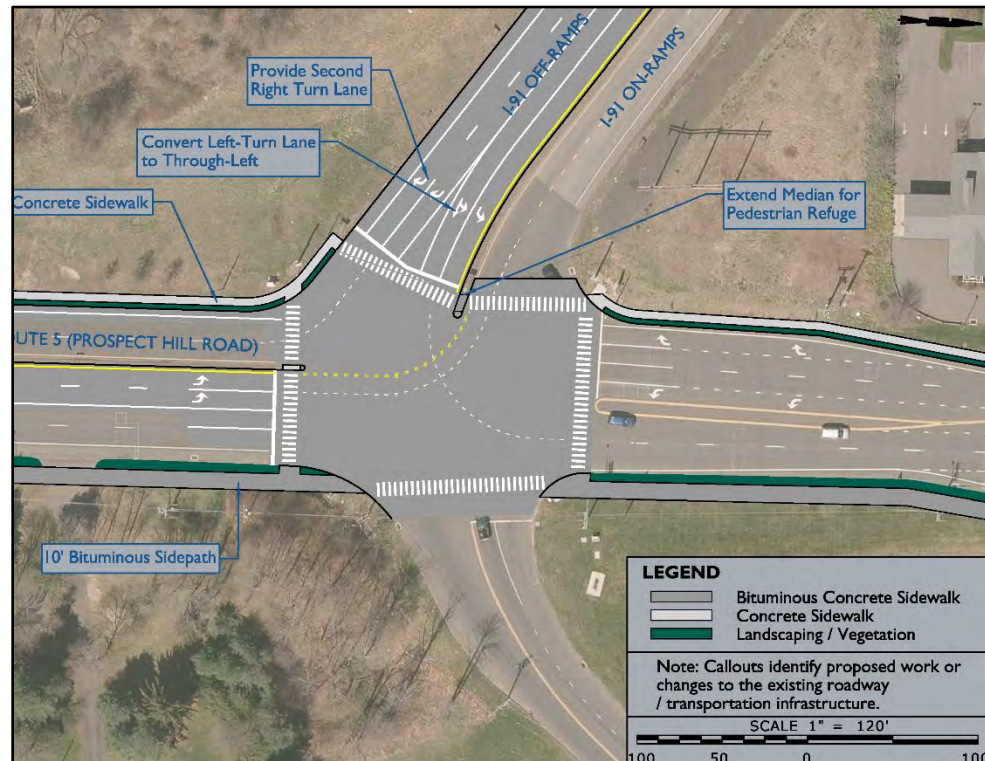
| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                         |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | A               | 4.6               | 0.21           | B               | 11.1              | 0.63          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | A               | 7.5               | 0.42           | B               | 17.5              | 0.71          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | D               | 38.5              | 1.12           | D               | 40.8              | 0.92          |
| <b>Base (2040) Traffic Forecast</b>                            |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | A               | 3.4               | 0.44           | B               | 10.6              | 0.58          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | A               | 6.4               | 0.49           | B               | 15.0              | 0.77          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | D               | 36.9              | 1.08           | D               | 53.1              | 0.98          |
| <b>Build (2040) Traffic Forecast</b>                           |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | B               | 12.2              | 0.71           | A               | 3.8               | 0.50          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | B               | 19.4              | 0.88           | A               | 7.9               | 0.52          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | D               | 36.2              | 1.12           | E               | 79.4              | 1.20          |

### Newberry Road Intersection

At the Newberry Road intersection, this alternative would reconfigure the eastbound approach to provide two right-turn lanes and convert the second existing double left-turn lane to a through-left. In addition bicyclist, and pedestrian facilities would be provided to address existing deficiencies. The proposed multi-use sidepath is recommended on the east side of Route 5 to avoid conflicts with the high volume of eastbound right turning traffic from the I-91 off-ramps.

Sidewalks are recommended on the west side of Route 5 to provide connections between developments on that side of the road. Two of the dividing islands at the intersection are recommended to be extended to help provide pedestrian refuge and reduce the distance pedestrians need to cross at one time.

Figure 73: Newberry Alternative I (New-I) Newberry Road Inset



5.3.3.2 Newberry Alternative 2 (New-2)

Alternative New-2 would attempt to address the existing traffic operational deficiencies at the Newberry Road intersection by installing a *presignal* to control the merge between the I-91 off-ramps. Based on preliminary analysis and discussions with the advisory committee it was decided to not further pursue this alternative for the following reasons:






A **presignal** is a signalized intersection that is placed in advance of an intersection. In this instance it would control the merging of two parallel streams of traffic from the I-91 northbound and southbound off-ramps.

- Despite acceptable delays, it is possible that queuing distance is limited on the northbound off-ramp and queues could extend back to mainline I-91
- Space is limited to provide advance signing of the lane configuration at the presignal, which could lead to additional merging congestion and sideswipe collisions as drivers compete for space in their desired lane
- Queues would extend further down the northbound off-ramp than they currently do under existing conditions, possible leading to increases in the number of rear end collisions, with some potentially at high speed.

Figure 74: Newberry Alternative 2 (New-2)



Table 36: Evaluation Criteria for Newberry Alternative 2 (New-2)

| Objective          | Rating  | Notes  |
|--------------------|---|--|
| Turn lanes         |  | Turn lanes provided at all intersections                         |
| Traffic operations |  | Operations would deteriorate under future Build scenario volumes |
| Queuing            |  | Could exacerbate queuing issues on the I-91 northbound off-ramp  |
| Transit            |  | New bus stops and shelters for development around Walmart        |
| Bike / Ped         |  | Addresses existing bicyclist and pedestrian deficiencies         |

5.3.3.3 Newberry Alternative 3 (New-3)

Alternative New-3 would address the existing queuing issues between the northbound and southbound off-ramps by realigning the southbound off-ramp so that it merged from the right of the northbound off-ramp. A review of travel patterns illustrated that a higher number and percentage of southbound vehicles turn right at the intersection with Route 5 as opposed to northbound vehicles.

After coordination with CTDOT, it was determined that this alternative should be included in a broader assessment of the operations of I-91 along this segment. Therefore, this alternative is recommended for further evaluation outside this study.

Table 37: Evaluation Criteria for Alternative New-3

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ■      | Operations would deteriorate under future Build scenario volumes without capacity improvements at the Newberry Road intersection |
| Queuing            | △      | Would improve but not eliminate merging operations between the northbound and southbound off-ramps                               |
| Transit            | ▲      | New bus stops and shelters for development around Walmart  |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies   |

Figure 75: Newberry Alternative 3 (New-3)



5.3.3.4 Newberry Alternative 4 (New-4)

Alternative New-4 would address the existing queuing issues between the northbound and southbound off-ramps and operational deficiencies at the Route 5 / Newberry Road signalized intersection by reconfiguring the interchange with I-91 into a more traditional interchange. Newberry Road would be extended across I-91 to Main Street and two signalized intersections would be created with the northbound and southbound ramps.

After coordination with CTDOT, it was determined that this alternative should be included in a broader assessment of the operations of I-91 along this segment. Therefore, this alternative is recommended for further evaluation outside this study.

Table 38: Evaluation Criteria for Alternative New-4

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ▲      | Operations would exceed metrics for all traffic scenarios  |
| Queuing            | ▲      | Would eliminate merging between southbound and northbound off-ramp. Geometry would limit the storage available for the northbound off-ramp |
| Transit            | ▲      | New bus stops and shelters for development around Walmart  |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies   |

Figure 76: Newberry Alternative 4 (New-4)



5.3.3.5 Newberry Alternative 5 (New-5)

Alternative New-5 would address the traffic operational deficiencies expected under the future Build scenario by providing additional capacity at the Newberry Road / I-91 ramps intersection. Bicyclist, pedestrian and transit improvements would be maintained from Alternative New-5.

**Key Features:**

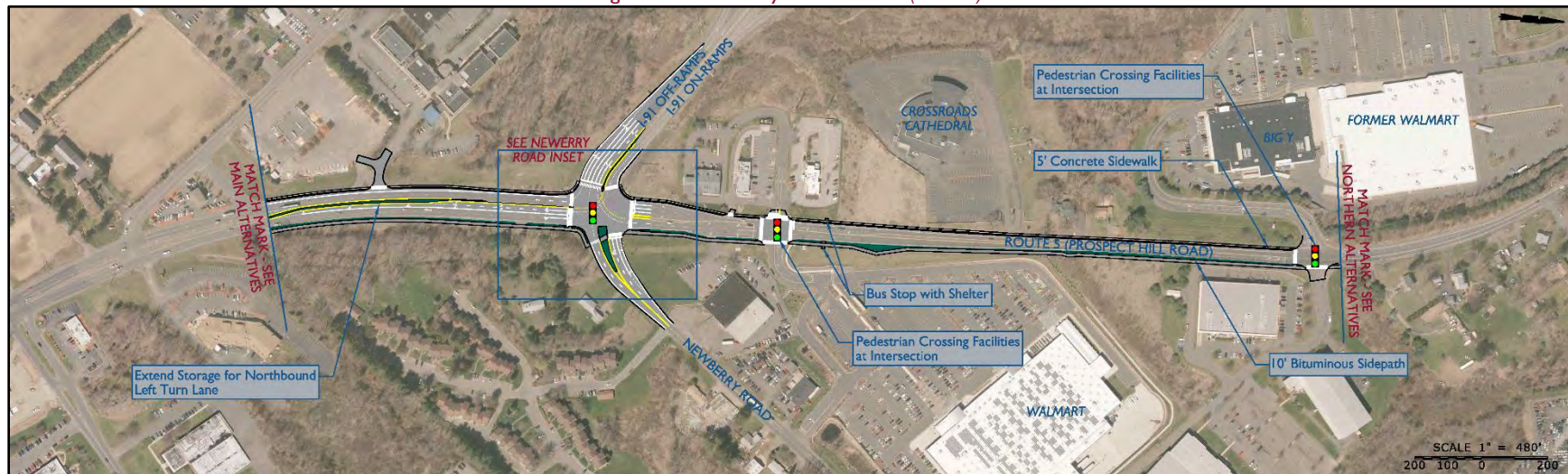
- Second eastbound through lane with receiving lane on Newberry Road
- Improvements consistent with Alternative New-1:
  - Lengthen storage for northbound left turns at Newberry Road / I-91 ramps interaction
  - Multi-use sidepath along east side of Route 5
  - Sidewalk on the west of Route 5 from the Big Y driveway southerly
  - New bus shelters near the Walmart driveway

Table 39: Evaluation Criteria for Alternative New-5

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ▲      | Operations would exceed metrics for all traffic scenarios  |
| Queuing            | ■      | No change to merge between off-ramps, although additional storage would help minimize queues generated by the traffic signal |
| Transit            | ▲      | New bus stops and shelters for development around Walmart  |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies   |

The estimated cost for this alternatives is \$1,200,000. This assumes that improvements initially recommended under Alternative New-1 have previously been constructed. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 77: Newberry Alternative 5 (New-5)



**Traffic Operations (New-5)**

Traffic operational analysis was conducted for Alternative New-5 using the Existing, Base and Build traffic forecasts. The addition of the second eastbound through lane alleviate delay sufficiently to allow intersection to meet the criteria for traffic operations, LOS D or better.

Intersection operations at the other two signalized intersection within the segment are expected to remain acceptable under each of the evaluated scenarios.

*Table 40: Newberry Alternative 5 (New-5) Traffic Operations*

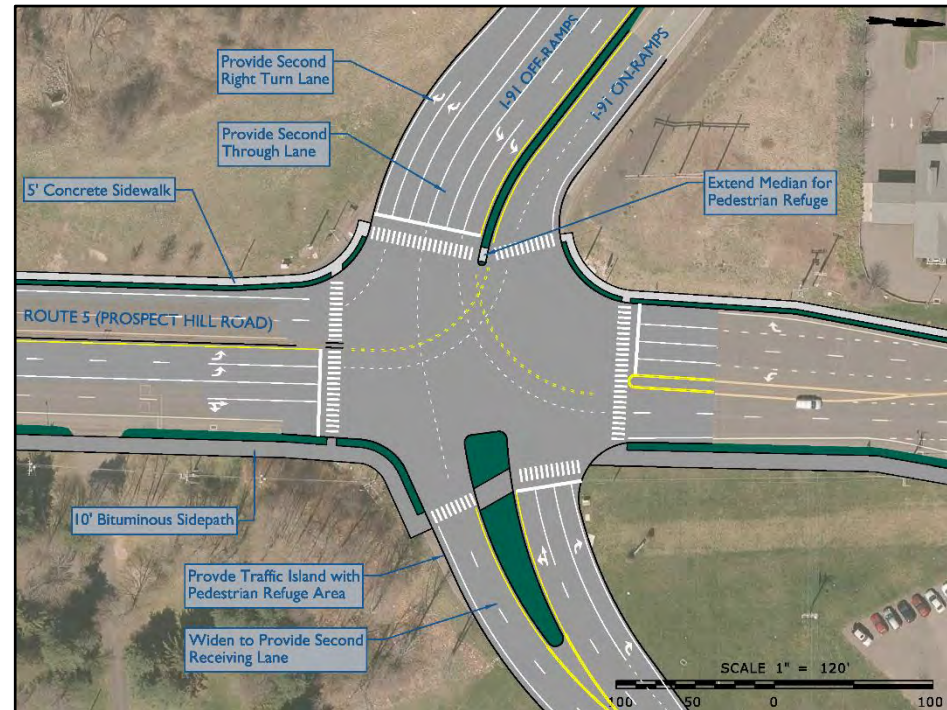
| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                         |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | A               | 4.8               | 0.23           | B               | 11.0              | 0.62          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | A               | 7.3               | 0.38           | B               | 16.8              | 0.71          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | C               | 28.1              | 0.79           | C               | 29.1              | 0.79          |
| <b>Base (2040) Traffic Forecast</b>                            |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | A               | 3.8               | 0.46           | A               | 8.2               | 0.56          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | A               | 5.4               | 0.47           | B               | 16.9              | 0.78          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | C               | 29.4              | 0.85           | D               | 39.3              | 0.88          |
| <b>Build (2040) Traffic Forecast</b>                           |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Big Y / Ethos Energy Driveways | A               | 4.1               | 0.52           | B               | 11.8              | 0.71          |
| Route 5 (Prospect Hill Road) at Walmart / Commercial Driveways | A               | 5.4               | 0.54           | B               | 19.7              | 0.88          |
| Route 5 (Prospect Hill Road) at I-91 Ramps / Newberry Road     | C               | 34.1              | 0.88           | D               | 47.1              | 0.94          |

### Newberry Road Intersection (New-5)

At the Newberry Road intersection, this alternative would add capacity to the eastbound and westbound approaches. On the west approach, the new capacity would be used as a second eastbound through lane, while also providing a second eastbound left-turn lane.

The east approach would be widened to include a second eastbound receiving lane, and an additional westbound lane, providing a second through lane. A refuge island would be provided to reduce the pedestrian crossing distance. Bicyclist, pedestrian and transit recommendations would be consistent with Alternative New-1.

Figure 78: Newberry Alternative 5 (New-5) Newberry Road Insert



### 5.3.4 Main / Thompson Segment

The Main / Thompson segment extends from the southern limits of the Newberry area southerly through the intersection with Thompson Road. It includes two signalized intersections, at Main Street and Thompson Road. The Main segment is illustrated on **Figure 79**, below. Alternatives developed for the Main segment sought to address the following deficiencies in order to meet the study’s vision, goals and objectives:

- Lack of bicyclist and pedestrian facilities along Route 5 and connecting north along Main Street towards the Warehouse Point neighborhood
- Intersection skew angle at Main Street, reduced distance between the Thompson Road and Main Street signalized

intersection contributes to decreased operational performance.

The segment includes Build Site 3, which incorporates infill development at three separate sites around the segment.

Two alternates were developed for the Main / Thompson segment, identified as Main-1 and Main-2. They are described in **Table 41**. These alternatives are detailed on the following pages.

*Table 41: Main / Thompson Segment Alternatives*

| Alternative | Purpose   |
|-------------|---|
| Main-1      | Address bicyclist and pedestrian deficiencies   |
| Main-2      | Realign Main Street to reduce intersection skew, improving traffic operations and safety, incorporate bicyclist and pedestrian improvements recommended in Alterernative Main-1 |

*Figure 79: Main / Thompson Segment*



5.3.4.1 Main / Thompson Alternative I (Main-I)

Alternative Main-I would address the existing bicyclist and pedestrian deficiencies in the Main / Thompson segment by providing new sidewalks and sidepaths along with crossing infrastructure at signalized intersections.

**Key Features:**

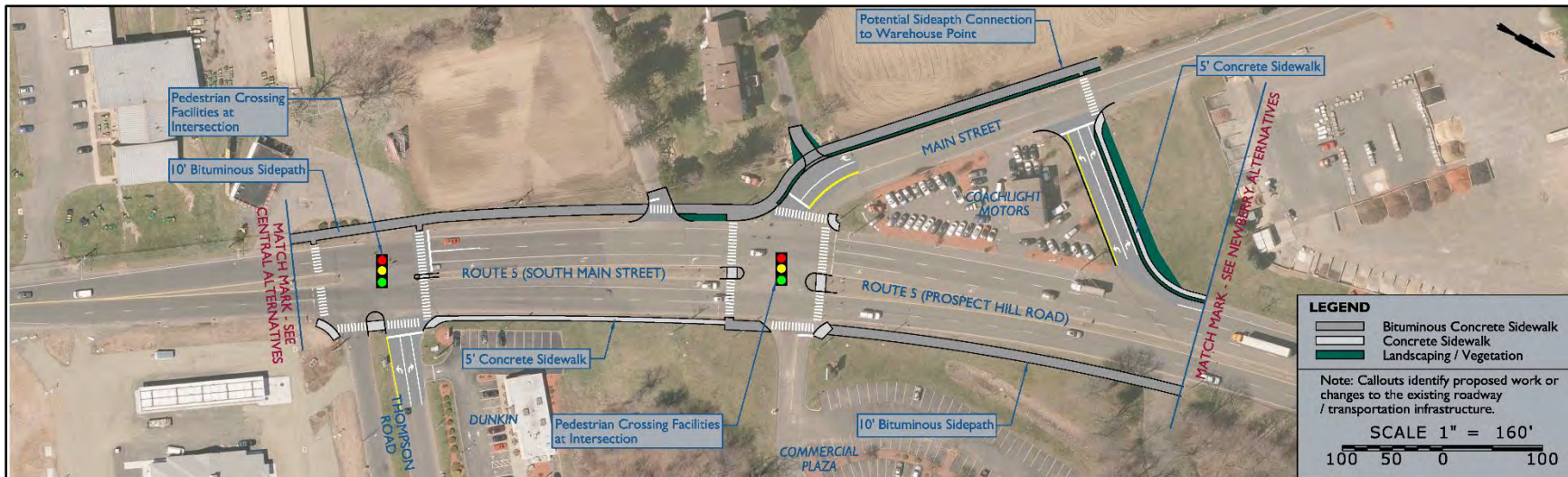
- Provide continuous sidepath, transitioning from east to west side of Route 5 at Main Street
- Sidewalk connection on west side of Route 5 from Main Street extending to the north
- Sidewalk connecting commercial plaza opposite Main Street with Thompson Road
- Reduce width of southbound connection between Route 5 and Main Street
- Provide for potential sidepath connection north to Warehouse Point along Main Street

Table 42: Evaluation Criteria for Alternative Main-I

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | △      | Operations would exceed metrics for all traffic scenarios, would not address intersection skew |
| Queuing            | ■      | No improvement to distance between Main Street and Thompson Road intersection                  |
| Transit            | ■      | No bus shelters recommended for this segment   |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies                                       |

The estimated cost for this alternative is \$750,000. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 80: Main Alternative I (Main-I)



**Traffic Operations (Main-1)**

Traffic operational analysis was conducted for Alternative Main-1 using the Existing, Base and Build traffic forecasts. The intersections within this segment are expected to operate acceptably under all

*Table 43: Main Alternative 1 (Main-1) Traffic Operations*

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | B               | 12.8              | 0.72           | B               | 12.8              | 0.74          |
| Route 5 (South Main Street) at Thompson Road                               | B               | 10.2              | 0.72           | B               | 10.2              | 0.72          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | B               | 13.5              | 0.80           | C               | 21.5              | 0.84          |
| Route 5 (South Main Street) at Thompson Road                               | B               | 16.3              | 0.80           | B               | 18.1              | 0.84          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | C               | 27.7              | 0.94           | C               | 23.0              | 0.88          |
| Route 5 (South Main Street) at Thompson Road                               | C               | 20.6              | 0.94           | B               | 19.1              | 0.88          |

traffic scenarios. Some degradation in LOS and delay is expected to occur, particularly under the Build forecast, but the results indicate the intersections will operate well within the established criteria of LOS D or better.

5.3.4.2 Main Alternative 2 (Main-2)

Alternative Main-2 would address the existing bicyclist and pedestrian and intersection skew deficiencies by realigning Main Street to intersection Route 5 at a perpendicular angle.

**Key Features:**

- Realign Main Street to create perpendicular intersection with increased spacing between Main Street and Thompson Road
- Similar bicyclist and pedestrian amenities as Alternative Main-2
- Combined driveway serving commercial plaza and condo complex
- Convert existing commercial driveway to right-in / right-out

Table 44: Evaluation Criteria for Alternative Main-2

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ▲      | Operations would exceed metrics for all traffic scenarios and increased storage distance between Main Street and Thompson Road |
| Queuing            | ▲      | Storage distance increased between Main Street and Thompson Road   |
| Transit            | ■      | No bus shelters recommended for this segment   |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies   |

Figure 81: Main Alternative 2 (Main-2)



The estimated cost for this alternative is \$2,725,000. See Chapter 6 for information on how this alternative is recommended as part of the study's implementation plan.

#### Traffic Operations

Traffic operational analysis was conducted for Alternative Main-2 using the Existing, Base and Build traffic forecasts. The intersections within this segment are expected to operate acceptably under all traffic scenarios. Some degradation in LOS and delay is expected to occur, particularly under the Build forecast, but the results indicate the intersections will operate well within the established criteria of LOS D or better.

Table 45: Main Alternative 2 (Main-2)

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | B               | 15.2              | 0.63           | B               | 17.1              | 0.74          |
| Route 5 (South Main Street) at Thompson Road                               | B               | 18.1              | 0.63           | B               | 11.8              | 0.74          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | B               | 15.8              | 0.73           | B               | 19.0              | 0.84          |
| Route 5 (South Main Street) at Thompson Road                               | B               | 15.9              | 0.73           | B               | 19.0              | 0.84          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (Prospect Hill Road) at Main Street (SR 710) / Commerical Driveway | B               | 19.2              | 0.84           | C               | 23.5              | 0.88          |
| Route 5 (South Main Street) at Thompson Road                               | B               | 18.3              | 0.84           | B               | 19.5              | 0.88          |

### 5.3.5 Central Segment

The central segment extends from the Thompson Road intersection southerly to south of Tromley Road. The central segment is illustrated in more detail on **Figure 82**, below. Alternatives developed for the central segment sought to address the following deficiencies in order to meet the study’s vision, goals and objectives:

- Poor existing traffic operations at South Water Street, LOS F in both the AM and PM peak periods
- Expected deterioration of traffic operations at Tromley Road under the Build scenario, resulting in LOS F in both the AM and PM peak periods
- Lack of bicyclist, pedestrian and transit amenities

As discussed in future conditions assessment, the future Build scenario traffic volumes in this area of the corridor are dependent on significant future development. The study recommends an interactive improvement program designed to address existing deficiencies and plan for future growth.

Table 46: Central Segment Alternatives

| Alternative | Purpose   |
|-------------|---|
| C-1         | Address existing traffic operational deficiencies at South Water Street and lack of bicyclist, pedestrian and transit amenities |
| C-2         | Address deteriorated traffic operations under the future Build scenario   |

Figure 82: Central Segment



5.3.5.1 Central Alternative I (C-I)

Alternative C-I would address the existing deficiencies and expected deficiencies under the future Base scenario in the central segment by providing additional southbound capacity on Route 5 and providing new sidewalks, sidepaths and transit amenities.

**Key Features:**

- Extend second southbound through lane beyond South Water Street
- Provide sidepath along west side of Route 5
- Provide sidewalks along the east side of Route 5
- Allow for potential future sidepath connection north to Warehouse Point along South Water Street
- Add transit stop amenities near South Water Street and Tromley Road

Table 47: Evaluation Criteria for Alternative C-I

| Objective          | Rating | Notes   |
|--------------------|--------|---|
| Turn lanes         | ▲      | Turn lanes provided at all intersections  |
| Traffic operations | ▲      | Satisfactory operations under Existing volumes and Base scenario, operations would deteriorate under Build scenario |
| Queuing            | ■      | Queueing distances become lengthy during the Base scenario and deteriorate further under the Build scenario         |
| Transit            | ▲      | Two new sets of bus shelters provided   |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies  |

The estimated construction cost to implement this alternative is \$4.8 million. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 83: Central Alternative I (C-I)



**Traffic Operations (C-1)**

Traffic operational analysis was conducted for Alternative C-1 using the Existing, Base and Build traffic forecasts. The intersections within the segment are expected to acceptably under the existing traffic volumes and the Base scenario, though some delays and queuing will occur at Tromley Road, particularly during the AM peak period.

The implementation of the potential developments outlined in the Build scenario, particularly at Build Site 5, would likely cause traffic operations to deteriorate under this alternative, particularly at Tromley Road. The increases in northbound and southbound through traffic at both South Water Street and Tromley Road indicate a need to provide additional capacity to provide acceptable operations under the Build scenario. For this purpose, Alternative C-2 has been developed.

Table 48: Central Alternative 1 (C-1) Traffic Operations

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 8.6               | 0.70           | A               | 8.6               | 0.70          |
| Route 5 (South Main Street) at Tromley Road                                | B               | 15.2              | 0.79           | B               | 15.2              | 0.79          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 7.1               | 0.67           | B               | 14.0              | 0.86          |
| Route 5 (South Main Street) at Tromley Road                                | C               | 30.6              | 1.01           | D               | 45.4              | 1.06          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 7.9               | 0.80           | E               | 66.6              | 1.24          |
| Route 5 (South Main Street) at Tromley Road                                | E               | 58.8              | 1.14           | F               | 181.6             | 1.62          |

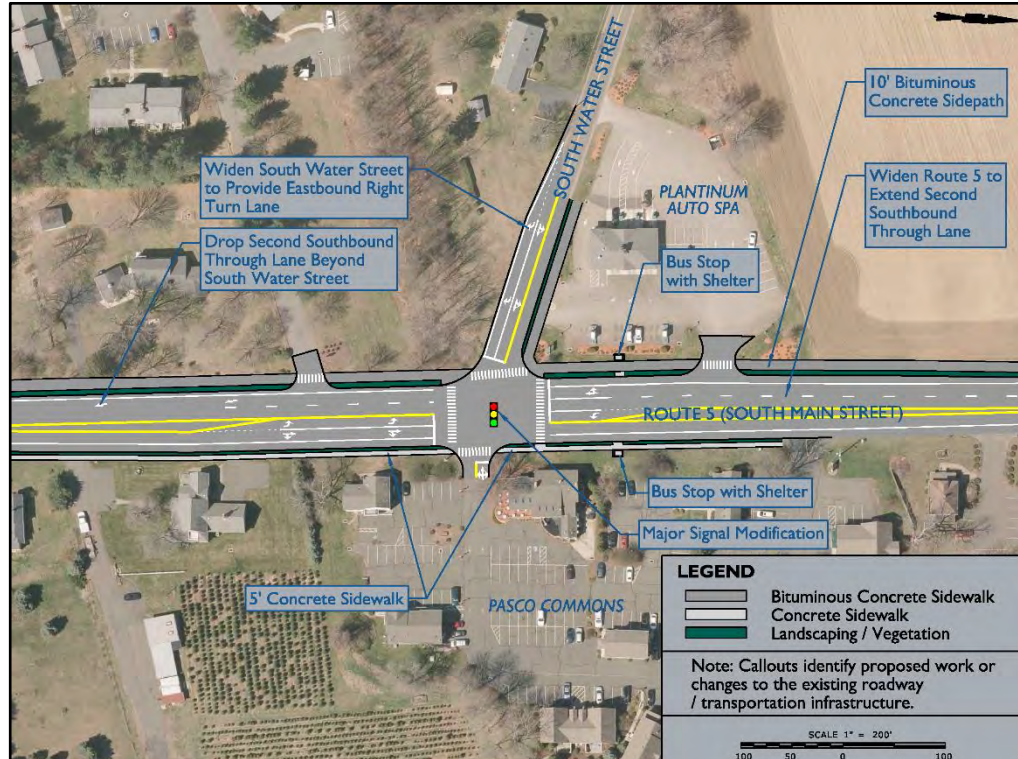
**South Water Street Intersection (C-1)**

At the South Water Street intersection, this alternative would provide additional capacity to address existing operational deficiencies. Pedestrian, bicyclist and transit amenities would also be provided. The additional capacity would be in the form of the second southbound through lane and an eastbound right-turn lane. The second southbound through lane would be dropped south of the intersection. The extension distance and taper distance would be compliant with CTDOT’s *Highway Design Manual*.

The proposed multi-use sidepath would follow the west side of Route 5, with sidewalks provided on the east side to facilitate pedestrian connectivity with Pasco Commons and with residential developments to the south.

Bus shelters are recommended on both sides of Route 5, north of the intersection with South Water Street. For northbound buses, the existing wide shoulder, approximately eight feet wide, would serve as a de facto bus pullout. For southbound buses, a near-side stop is recommended, due to the private road intersection and lane merging activity south of the intersection. A widened shoulder is proposed to reduce the effect of the near-side stop on vehicular operations. These stops would provide access to Pasco Commons, adjacent residential development and the proposed Silverman Group development site.

Figure 84: Central Alternative 1 (C-1) South Water Street Inset



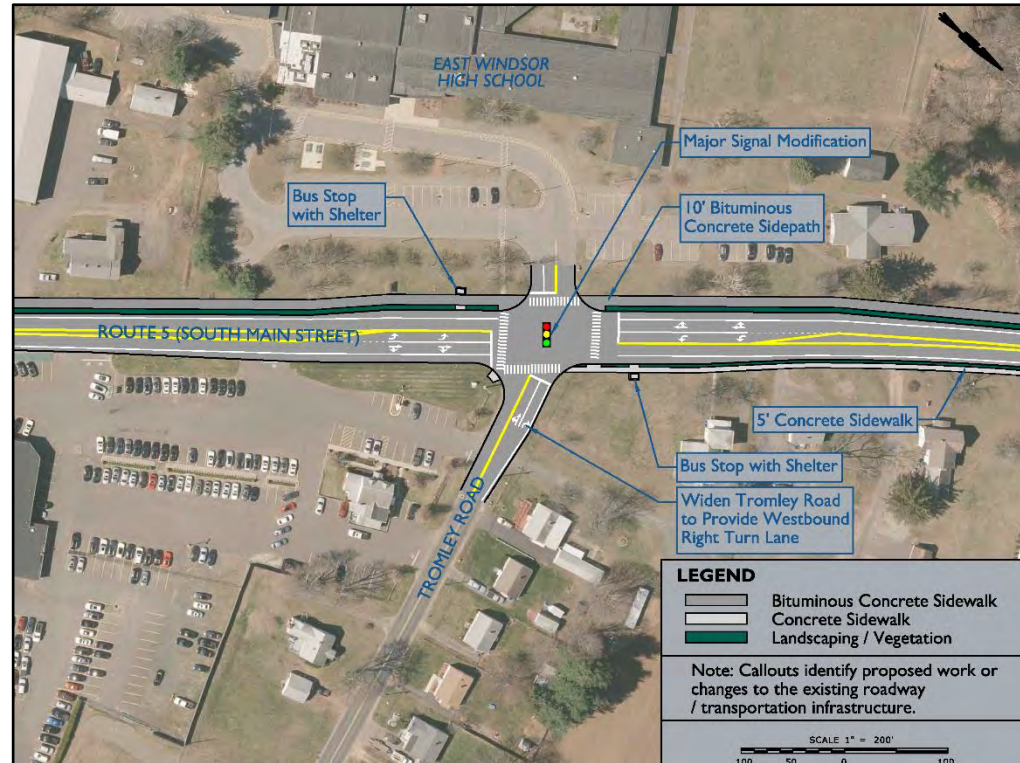
### Tromley Road Intersection (C-1)

At the Tromley Road intersection, this alternative would provide additional capacity on the Tromley Road approach to address existing operational deficiencies. The additional capacity would be in the form of a westbound right-turn lane. The existing Route 5 approaches would be widened slightly to provide eight foot wide shoulders, providing the ability for right turning vehicles to bypass through traffic.

The proposed multi-use sidepath would follow the west side of Route 5. It is recommended that the Town consider making parking in the East Windsor High School parking lot available for sidepath users. A sidewalk is recommended on the east side of Route 5 north of the intersection. This sidewalk would provide pedestrian access from the High School to the numerous residential properties along Route 5 and within the residential complex on Regina Drive.

Bus shelters are recommended on both sides of Route 5, as far-side bus stops. In these areas a widened 8 foot shoulder would be provided, see previous discussion regarding right turning traffic, which would reduce the effect of the stops on through vehicle operations. These stops would provide access to the High School (an employment center), other employers, and residents to the north along Regina Drive. They would also serve new development on Build Site 5, located just to the north of the intersection.

Figure 85: Central Alternative 1 (C-1) Tromley Road Inset



5.3.5.2 Central Alternative 2 (C-2)

Alternative C-2 would address the traffic operational deficiencies expected to occur under the Build scenario by providing additional through capacity on Route 5. The sidewalks, sidepaths and transit amenities would remain consistent with Alternative C-1 but would need to be reconstructed to facilitate the roadway widening.

**Key Features:**

- Widen Route 5 to provide two through lanes in each direction between Thompson Road and Tromley Road
- Provide two-way left turn lane in areas with concentration of commercial and consolidated residential access
- Provide landscaped median in other areas as traffic calming and safety measure
- Relocate or maintain similar bicyclist, pedestrian and transit improvements as Alternative C-1

Table 49: Evaluation Criteria for Alternative C-2

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections                     |
| Traffic operations | ▲      | Satisfactory operations under all traffic forecast scenarios |
| Queuing            | ▲      | Provision of two through lanes would reduce queue lengths    |
| Transit            | ▲      | Two new sets of bus shelters provided                        |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies     |

The estimated construction cost to implement this alternative is \$9.5 million. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 86: Central Alternative 2 (C-2)



**Traffic Operations (C-2)**

Traffic operational analysis was conducted for Alternative C-2 using the Existing, Base and Build traffic forecasts. The intersections within the segment are expected to operate acceptably under all scenarios. Under the Build scenario, the development of Build Site 5, north of Tromley Road, is expected to primarily utilize Tromley Road for access from the north and to the south. This would avoid the need for the introduction on left-turning traffic onto Route 5.

As a result, traffic volumes would increase substantially on Tromley Road, particularly the number of vehicles making a westbound left turn during the PM peak hour. The analysis indicates that this would result in an overall intersection LOS C. As development plans for Build Site 5 are advanced, care should be taken to ensure the Tromley Road approach to Route 5 operates acceptably.

*Table 50: Central Alternative 2 (C-2) Traffic Operations*

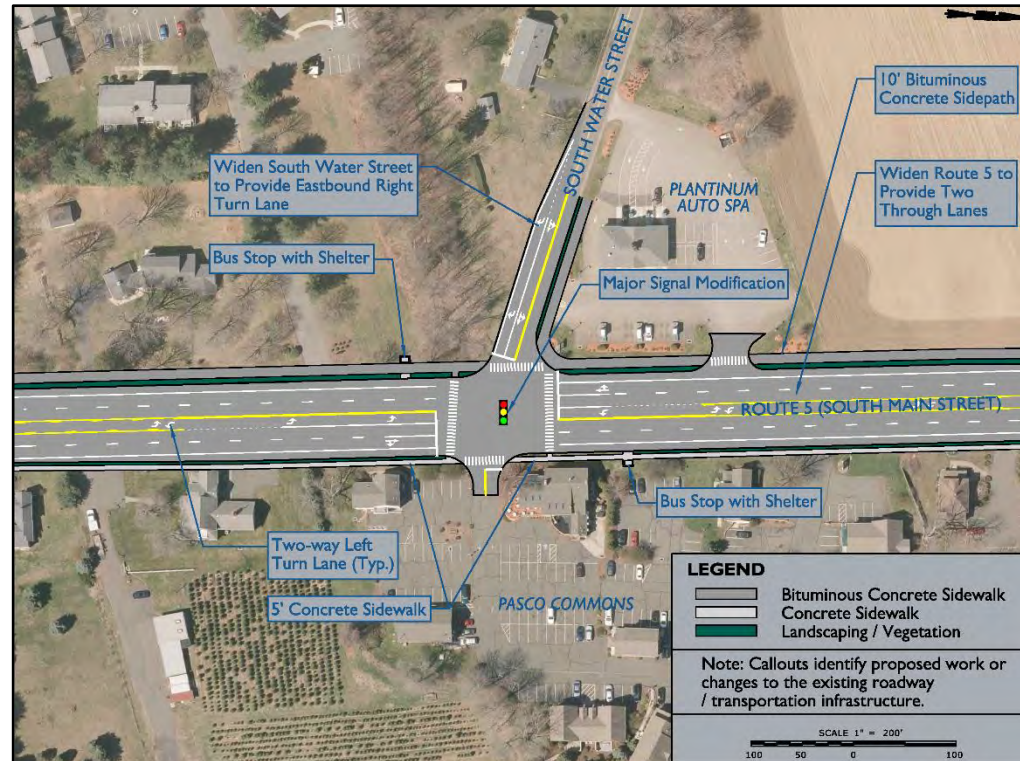
| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                                     |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 5.7               | 0.61           | A               | 6.0               | 0.57          |
| Route 5 (South Main Street) at Tromley Road                                | A               | 7.2               | 0.52           | A               | 6.5               | 0.46          |
| <b>Base (2040) Traffic Forecast</b>  |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 7.2               | 0.58           | B               | 16.5              | 0.79          |
| Route 5 (South Main Street) at Tromley Road                                | B               | 11.4              | 0.72           | A               | 9.5               | 0.58          |
| <b>Build (2040) Traffic Forecast</b>                                       |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at South Water Street / Pasco Commons Driveway | A               | 9.5               | 0.73           | B               | 19.4              | 0.91          |
| Route 5 (South Main Street) at Tromley Road                                | B               | 12.3              | 0.83           | C               | 21.4              | 1.14          |

**South Water Street Intersection (C-2)**

At the South Water Street intersection, this alternative would provide additional capacity to address expected operational deficiencies under the Build scenario. Pedestrian, bicyclist and transit amenities would be provided, generally consistent with Alternative C-1. The additional capacity would be in the form of additional through lanes for both northbound and southbound Route 5. An eastbound right turn lane is also recommended on South Water Street. Along Route 5 in either direction, a two-way left turn lane would be provided due to the concentration of driveways near this intersection.

The one change from the bicyclist, pedestrian and transit recommendations between Alternative C-1 and C-2 is in the placement of the southbound bus stop. Alternative C-2 would relocate the stop to the far side of the signalized intersection at South Water Street. For both stops near the intersection at South Water Street, eight foot shoulders would be provided on Route 5. In addition to improving the ability for right-turning vehicles to bypass queued vehicles, the wide shoulder would reduce the effect of the bus stops on vehicular operations.

Figure 87: Central Alternative 2 (C-2) South Water Street Inset

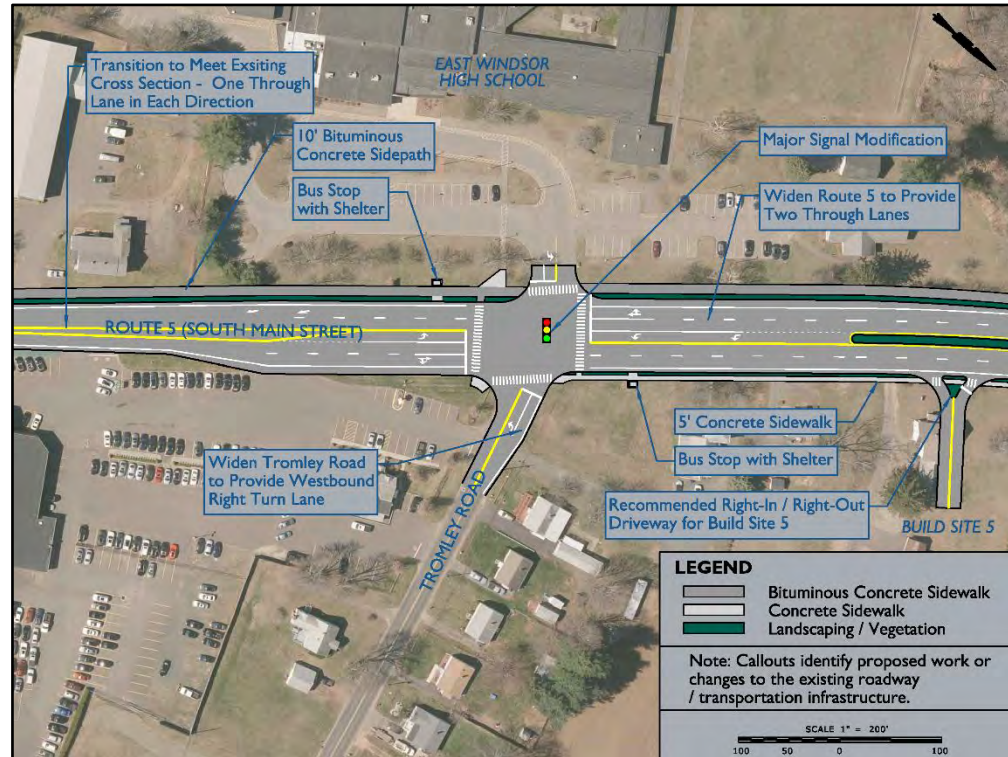


**Tromley Road Intersection (C-2)**

At the Tromley Road intersection, this alternative would provide additional capacity on Route 5 to address expected deficiencies under the Build scenario. The additional capacity would be in the form of two through lanes in each direction on Route 5. Immediately to the south of the intersection, Route 5 would transition to match its existing cross section, containing one through lane in each direction. Widened, eight foot, shoulders would be provided on both sides of Route 5.

Bicyclist, pedestrian and transit accommodations would be consistent with those provided under Alternative C-2.

Figure 88: Central Alternative 2 (C-2) Tromley Road Inset



### 5.3.6 Southern Segment

The southern segment extends from north of the Phelps Road (Route 191) intersection southerly to Scantic Road. Scantic Road is the southern boundary of the study area. The southern segment is illustrated in more detail on Figure 89, below. Alternatives developed for the southern segment sought to address the following deficiencies in order to meet the study’s vision, goals and objectives:

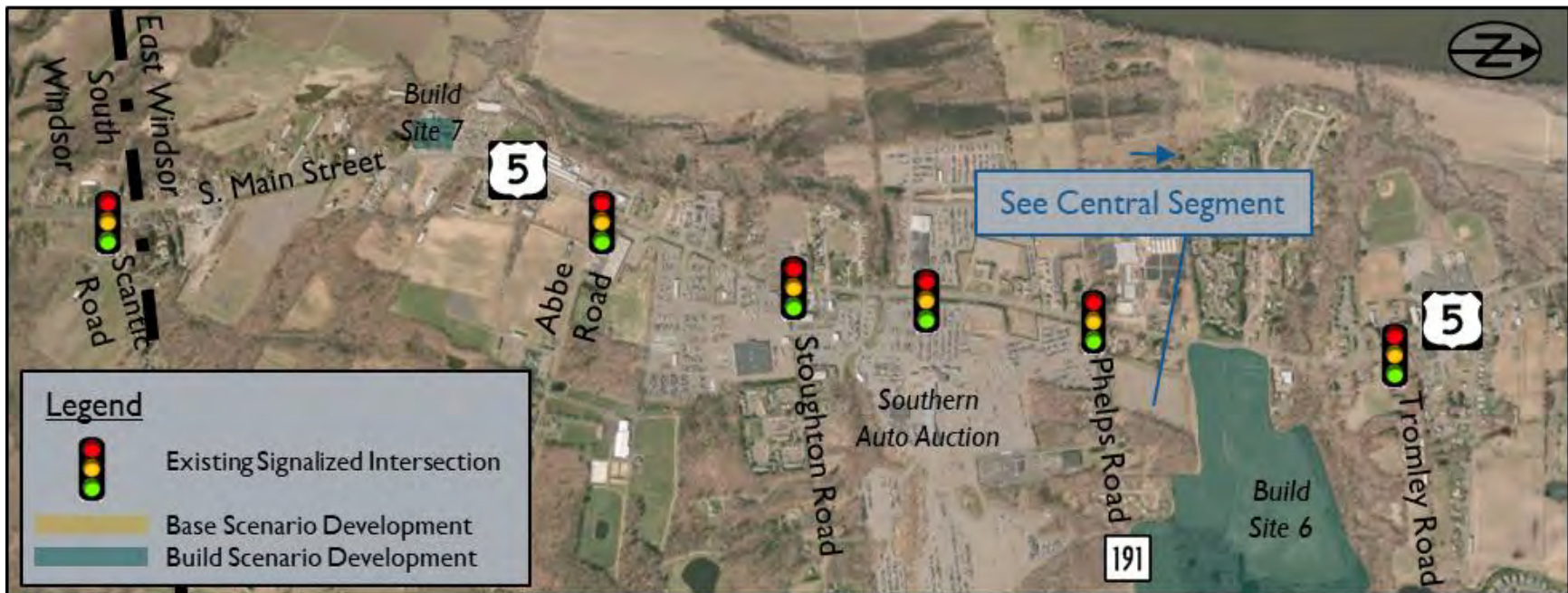
- Lack of turn lanes at signalized intersection
- Lack of bicyclist and pedestrian amenities
- Increasing delays and queuing under future volumes
- Access management deficiencies in the form of overly-wide driveways and numerous curb cuts
- Elevated crash rates on segments between Stoughton Road and Phelps Road

As discussed in the future conditions assessment, the future Build scenario traffic volumes in this area of the corridor are dependent on significant future development. The study recommends an interactive improvement program designed to address existing deficiencies and plan for future growth.

Table 51: Southern Segment Alternatives

| Alternative | Purpose   |
|-------------|---|
| S-1         | Provide turn lanes at signalized intersections, and address other existing deficiencies                 |
| S-2         | Address deteriorated traffic operations under the future Build scenario, north of Southern Auto Auction |
| S-3         | Address deteriorated traffic operations under the future Build scenario south of Southern Auto Auction  |

Figure 89: Southern Segment



5.3.6.1 Southern Alternative 1 (S-1)

Alternative S-1 would address the existing deficiencies in the southern segment but adding turn lanes at signalized intersections, reconfiguring Route 5’s lane arrangement in the vicinity of Southern Auto Auction and provide a sidepath.

**Key Features:**

- Provide turn lanes at all signalized intersections
- Reconfigure Route 5 between Stoughton Road and Tromley Road using a road diet
- Provide a sidepath along the west side of Route 5

A **road diet** is a reduction in the number of travel lanes, typically including the conversion of an existing four-lane undivided roadway segment to a three-lane segment consisting of two through lanes and a center, two-way left turn lane. (FHWA)

Table 52: Evaluation Criteria for Alternative S-1

| Objective          | Rating | Notes   |
|--------------------|--------|---|
| Turn lanes         | ▲      | Turn lanes provided at all intersections  |
| Traffic operations | △      | Satisfactory operations under Existing and Base scenarios. Delays would increase under the Build scenario.            |
| Queuing            | ■      | Satisfactory queuing under Existing scenario. Queues would lengthen significantly under the Base and Build scenarios. |
| Transit            | ■      | Based on the current and proposed land uses, opportunities for bus stops with shelters are limited                    |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies  |

The estimated construction cost to implement this alternative is \$7.4 million. It is anticipated that the road diet conversion could be accomplished via the state’s Vendor-in-Place pavement program. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 90: Southern Alternative 1 (S-1) (1 of 2)



Figure 91: Southern Alternative 1 (S-1) (2 of 2)



The purpose of the road diet between Phelps Road and Stoughton Road is to address the elevated crash rates in the areas where the existing Route 5 merges from two lanes to one (southbound approaching Stoughton Road and northbound approaching Phelps Road). These two merge lengths do not meet modern design standards, there is not sufficient distance to provide merge lengths between the signalized intersections that meets the standard.

#### Traffic Operations (S-1)

Traffic operational analysis was conducted for Alternative S-1 using the Existing, Base and Build traffic forecasts. The intersections in the segment are expected to operate acceptably under the existing traffic volumes and the Base scenario. The results are presented in [Table 53](#), following.

The implementation of the potential developments under the Build scenario would cause a deterioration of traffic operations in the form of LOS E at the Southern Auto Auction driveway intersection. Other intersections within the corridor would experience volume to capacity ratios in excess of 1.0. This means that volume would exceed capacity and that queues would continue to extend throughout the peak period. Based on this expected deterioration of operations, Alternatives S-2 and S-3 have been developed

Table 53: Southern Alternative 1 (S-1) Traffic Operations

| Intersection   | Weekday AM Peak |                      |                   | Weekday PM Peak |                      |                  |
|--|-----------------|----------------------|-------------------|-----------------|----------------------|------------------|
|  | LOS             | Delay (sec /<br>veh) | Max. V/C<br>Ratio | LOS             | Delay (sec /<br>veh) | Max V/C<br>Ratio |
| <b>Existing (2017) Traffic Volumes</b>                               |                 |                      |                   |                 |                      |                  |
| Route 5 (South Main Street) at Phelps Road (Route 191)               | A               | 3.7                  | 0.65              | A               | 7.4                  | 0.67             |
| Route 5 (South Main Street) at Southern Auto Auction (SAA) Driveways | A               | 8.7                  | 0.67              | A               | 9.8                  | 0.77             |
| Route 5 (South Main Street) at Stoughton Road                        | A               | 7.9                  | 0.61              | A               | 6.9                  | 0.74             |
| Route 5 (South Main Street) at Abbe Road                             | A               | 8.3                  | 0.57              | A               | 5.2                  | 0.71             |
| Route 5 (South Main Street) at Scantic Road                          | A               | 7.3                  | 0.60              | A               | 4.7                  | 0.44             |
| <b>Base (2040) Traffic Forecast</b>                                  |                 |                      |                   |                 |                      |                  |
| Route 5 (South Main Street) at Phelps Road (Route 191)               | A               | 5.5                  | 0.77              | A               | 8.1                  | 0.84             |
| Route 5 (South Main Street) at SAA Driveways                         | B               | 18.1                 | 0.89              | C               | 23.1                 | 0.96             |
| Route 5 (South Main Street) at Stoughton Road                        | A               | 9.0                  | 0.77              | B               | 15.4                 | 0.94             |
| Route 5 (South Main Street) at Abbe Road                             | B               | 11.0                 | 0.71              | A               | 8.1                  | 0.88             |
| Route 5 (South Main Street) at Scantic Road                          | B               | 14.1                 | 0.71              | A               | 8.9                  | 0.66             |
| <b>Build (2040) Traffic Forecast</b>                                 |                 |                      |                   |                 |                      |                  |
| Route 5 (South Main Street) at Phelps Road (Route 191)               | C               | 24.8                 | 1.07              | D               | 46.7                 | 1.09             |
| Route 5 (South Main Street) at SAA Driveways                         | E               | 57.4                 | 1.18              | E               | 65.9                 | 1.17             |
| Route 5 (South Main Street) at Stoughton Road                        | B               | 14.1                 | 0.97              | D               | 54.0                 | 1.15             |
| Route 5 (South Main Street) at Abbe Road                             | B               | 17.2                 | 0.91              | C               | 29.6                 | 1.06             |
| Route 5 (South Main Street) at Scantic Road                          | B               | 15.4                 | 0.79              | A               | 9.8                  | 0.73             |

**Phelps Road (Route 191) Intersection (S-1)**

At the Phelps Road intersection, this alternative would widen Route 5 to provide a southbound left turn lane. Phelps Road would be widened to provide an eight-foot-wide shoulder, allowing right turning vehicles the opportunity to bypass left turning traffic.

The northbound right turn lane would be retained as part of the reconstruction of Route 5. South of the intersection the roadway configuration would transition to the road diet section. This would convert the existing four-lane section to a three-lane section with a two-way left-turn lane.

A landscaped median would be provided south of the intersection, shadowing the southbound left turn lane. The proposed multi-use sidepath would follow the west side of Route 5.

**Stoughton Road Intersection (S-1)**

At the Stoughton Road intersection, this alternative would widen Route 5 to provide northbound and southbound left turn lanes. South of the intersection, the roadway would transition to its existing two-lane section, one lane in each direction.

Figure 92: Southern Alternative I (S-1) Phelps Road Inset

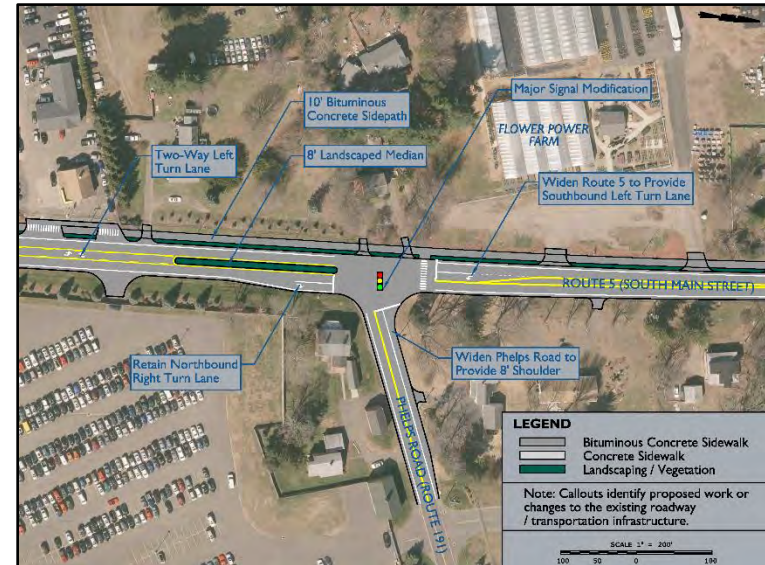


Figure 93: Southern Alternative I (S-1) Stoughton Road Inset



**Abbe Road Intersection (S-I)**

At the Abbe Road intersection, this alternative would widen Route 5 to provide northbound and southbound left turn lanes and a southbound right turn lane. North and south of the intersection, Route 5 would transition to its existing cross section, with one lane in each direction. The proposed multi-use sidepath would follow the west side of Route 5.

**Scantic Road Intersection**

At the Scantic Road intersection, this alternative would provide a southbound left turn lane to Scantic Road and the land uses on the east side of Route 5. Due to the wide landscaped median south of the intersection, an *offset southbound left turn lane* is recommended.

**An offset left turn lane provides improved sight distance and helps improve driver's ability to correctly judge gaps in traffic. It separates the left turn lane from the same direction through lanes. (AASHTO)**

Figure 94: Southern Alternative I (S-I) Abbe Road Inset

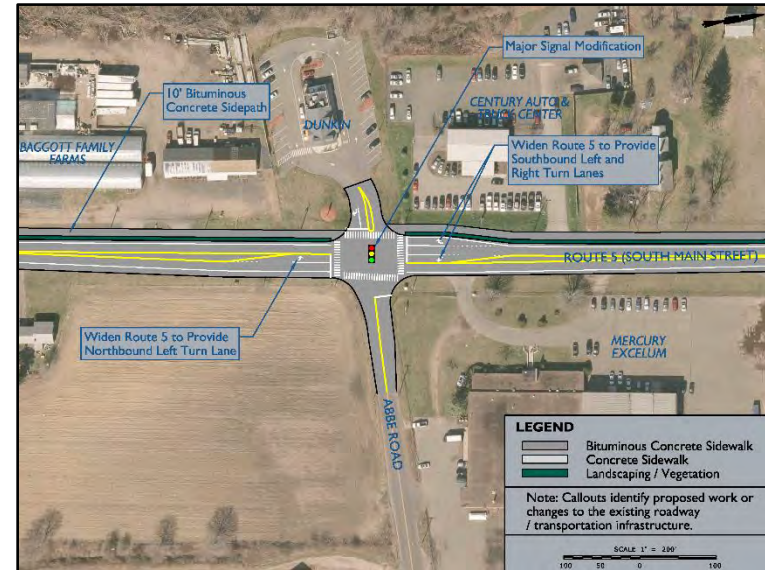


Figure 95: Southern Alternative I (S-I) Scantic Road Inset



5.3.6.2 Southern Alternative 2 (S-2)

Alternative S-2 would address the expected traffic operational deficiencies under the Base and Build scenarios between Tromley Road and Phelps Road. The sidepath recommended in Alternative S-1 would need to be relocated to facilitate the widened roadway. This alternative would be a continuation of the recommendations in *Central Alternative 2 (C-2)*. The southern boundary of this alternative would have the roadway transition to meet Southern Alternative 1 (S-1).

**Key Features:**

- Widen Route 5 to provide two through lanes in each direction
- Provide two-way left turn lane in areas with concentration of commercial and consolidated residential access
- Provide landscaped median in other areas as traffic calming and safety measure
- Bus stops with shelters near Phelps Road / Build Site 6
- Relocate or maintain similar bicyclist and pedestrian improvements as Alternative S-1

Table 54: Evaluation Criteria for Alternative S-2

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections                                     |
| Traffic operations | ▲      | Satisfactory operations under all scenarios.                                 |
| Queuing            | ▲      | Satisfactory queuing under all scenarios.                                    |
| Transit            | ▲      | Transit stop and amenities recommended to serve Phelps Road and Build Site 6 |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies                     |

The estimated cost to implement this alternative is \$10.2 million. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 96: Southern Alternative 2 (S-2)



**Traffic Operations (S-2)**

Traffic operational analysis was conducted for Alternative S-2 using the Existing, Base and Build traffic forecasts. The intersection of Route 5 and Phelps Road, the only signalized intersection within the limits of this alternative, would operate acceptably under all forecasts.

The introduction of this alternative would only be warranted if developments of the scale identified in the Build scenario occur. CTDOT and the Town should monitor future development plans. As any plans become realities, the need to widen this segment of Route 5 should be considered, based on the projected traffic demands.

*Table 55: Southern Alternative 2 (S-2) Traffic Operations*

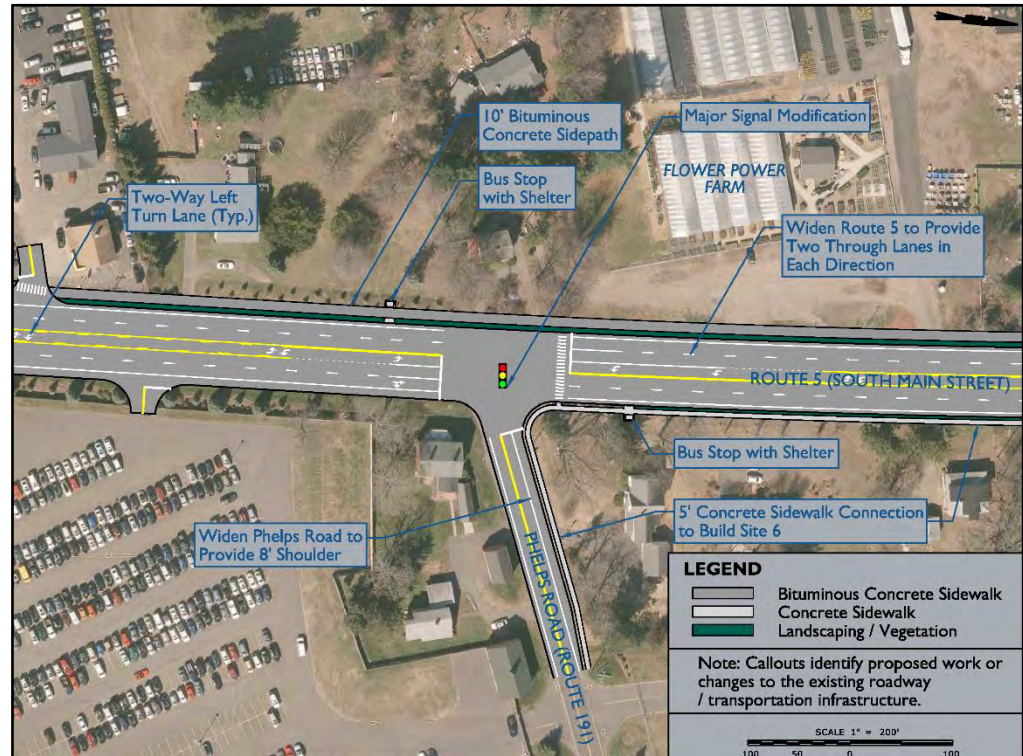
| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                 |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at Phelps Road (Route 191) | A               | 2.4               | 0.34           | A               | 5.0               | 0.36          |
| <b>Base (2040) Traffic Forecast</b>                    |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at Phelps Road (Route 191) | A               | 4.6               | 0.42           | A               | 4.8               | 0.45          |
| <b>Build (2040) Traffic Forecast</b>                   |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at Phelps Road (Route 191) | A               | 6.8               | 0.62           | A               | 7.3               | 0.59          |

**Phelps Road (Route 191) Intersection (S-2)**

At the Phelps Road intersection, this alternative would widen Route 5 to provide two through lanes in each direction. With the improved overall operation of the intersection, the existing northbound right turn lane would be converted to a through-right lane. An eight foot shoulder would be provided on northbound Route 5.

The proposed multi-use sidepath would follow the west side of Route 5. New bus stops with shelters and sidewalks are proposed. The two bus stops would be far-side stops. Sidewalk connections are recommended to be provided to Build Site 6.

Figure 97: Southern Alternative 2 (S-2) Phelps Road Inset



5.3.6.3 Southern Alternative 3 (S-3)

Alternative S-3 would address the expected traffic operational deficiencies under the Base and Build scenarios between Phelps Road and Scantic Road. The sidepath recommended in Alternative S-1 would need to be relocated to facilitate the widened roadway. This alternative would be a continuation of the recommendations in Southern Alternative 2 (S-2).

**Key Features:**

- Widen Route 5 to provide two through lanes in each direction
- Provide two-way left turn lane in areas with concentration of commercial and consolidated residential access
- Provide landscaped median in other areas as traffic calming and safety measure
- Relocate or maintain similar bicyclist and pedestrian improvements as Alternative S-1

Table 56: Evaluation Criteria for Alternative S-3

| Objective          | Rating | Notes  |
|--------------------|--------|--|
| Turn lanes         | ▲      | Turn lanes provided at all intersections   |
| Traffic operations | ▲      | Satisfactory operations under all scenarios.   |
| Queuing            | ▲      | Satisfactory queuing under all scenarios.  |
| Transit            | ■      | Based on the current and proposed land uses, opportunities for bus stops with shelters are limited |
| Bike / Ped         | ▲      | Addresses existing bicyclist and pedestrian deficiencies   |

The estimated cost to implement this alternative is \$17.3 million. See Chapter 6 for information on how this alternative is recommended as part of the study’s implementation plan.

Figure 98: Southern Alternative 3 (S-3) (1 of 2)



Figure 99: Southern Alternative 3 (S-3) (2 of 2)



**Traffic Operations (S-3)**

Traffic operational analysis was conducted for Alternative S-3 using the Existing, Base and Build traffic forecasts. The intersections within this segment would operate acceptably under all traffic scenarios.

The introduction of this alternative would only be warranted if developments of the scale identified in the Build scenario occur. CTDOT and the Town should monitor future development plans. As any plans become realities, the need to widen this segment of Route 5 should be considered, based on the projected traffic demands.

*Table 57: Southern Alternative 3 (S-3) Traffic Operations*

| Intersection   | Weekday AM Peak |                   |                | Weekday PM Peak |                   |               |
|--|-----------------|-------------------|----------------|-----------------|-------------------|---------------|
|  | LOS             | Delay (sec / veh) | Max. V/C Ratio | LOS             | Delay (sec / veh) | Max V/C Ratio |
| <b>Existing (2017) Traffic Volumes</b>                               |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at Southern Auto Auction (SAA) Driveways | A               | 6.0               | 0.38           | A               | 4.0               | 0.41          |
| Route 5 (South Main Street) at Stoughton Road                        | A               | 4.2               | 0.43           | A               | 3.6               | 0.45          |
| Route 5 (South Main Street) at Abbe Road                             | A               | 4.2               | 0.44           | A               | 1.7               | 0.38          |
| Route 5 (South Main Street) at Scantic Road                          | A               | 9.2               | 0.57           | A               | 6.8               | 0.50          |
| <b>Base (2040) Traffic Forecast</b>                                  |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at SAA Driveways                         | A               | 5.9               | 0.50           | A               | 4.3               | 0.51          |
| Route 5 (South Main Street) at Stoughton Road                        | A               | 4.5               | 0.48           | A               | 5.2               | 0.51          |
| Route 5 (South Main Street) at Abbe Road                             | A               | 5.4               | 0.58           | A               | 2.5               | 0.46          |
| Route 5 (South Main Street) at Scantic Road                          | B               | 13.8              | 0.82           | A               | 6.8               | 0.61          |
| <b>Build (2040) Traffic Forecast</b>                                 |                 |                   |                |                 |                   |               |
| Route 5 (South Main Street) at SAA Driveways                         | A               | 8.3               | 0.66           | A               | 5.4               | 0.61          |
| Route 5 (South Main Street) at Stoughton Road                        | A               | 5.7               | 0.53           | A               | 9.6               | 0.61          |
| Route 5 (South Main Street) at Abbe Road                             | A               | 6.2               | 0.58           | A               | 2.7               | 0.56          |
| Route 5 (South Main Street) at Scantic Road                          | B               | 15.4              | 0.79           | A               | 6.7               | 0.65          |

**Stoughton Road Intersection (S-3)**

At the Stoughton Road intersection, this alternative would widen Route 5 to provide two lanes in each direction. Both north and south of the intersection, the roadway would feature a two-way left turn lane.

The proposed multi-use sidepath is recommended for the west side of Route 5.

Figure 100: Southern Alternative 3 (S-3) Stoughton Road Inset

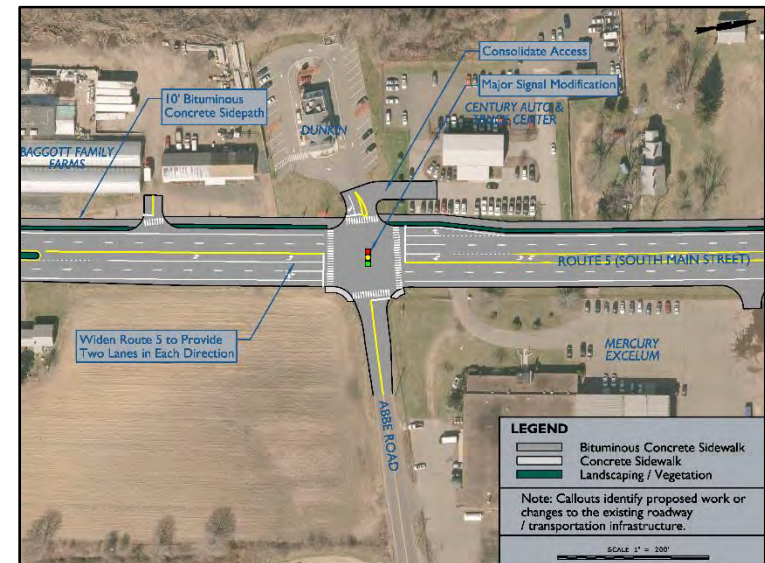


**Abbe Road Intersection (S-3)**

At the Stoughton Road intersection, this alternative would widen Route 5 to provide two lanes in each direction. North of the intersection, the roadway would feature a two-way left turn lane. South of the intersection, a landscaped median is recommended. Due to the proximity of the Century Auto & Truck Center driveway to the signalized intersection, consolidation of access with the adjacent Dunkin driveway is recommended.

The proposed multi-use sidepath is recommended on the west side of Route 5.

Figure 101: Southern Alternative 3 (S-3) Abbe Road Inset



**Scantic Road Intersection (S-3)**

At the Scantic Road intersection, this alternative would provide a southbound left turn lane to Scantic Road and the land uses on the east side of Route 5. Due to the wide landscaped median south of the intersection, an offset southbound left turn lane is recommended. The proposed multi-use sidepath could either terminate or be continued southerly into South Windsor.

Figure 102: Southern Alternative 3 (S-3) Scantic Road Inset



## 6 Implementation Plan and Funding Opportunities

This section of the report summarizes the recommended implementation plan for the alternatives analyzed in Chapter 5. It also identifies potential funding mechanisms that the Town of East Windsor, CRCOG and CTDOT.

### 6.1 Implementation Plan

The study team has identified three types of improvement recommendation from the previously identified alternatives:

**Near Term:** Improvements that address existing needs, are relatively low cost and low impact (environmental, ROW) and could / should be pursued immediately.

**Mid Term:** Improvements that address existing future Base scenario needs, are higher cost and could have potential environmental and ROW impacts. These alternatives would either require environmental review (if initiated immediately) or could have outside actions, such as development, that would trigger the need to implement them.

**Long Term:** Improvements that address future Build scenario needs, are high cost and likely require environmental and ROW impacts. These alternatives have outside actions, such as development, that would trigger the need to implement them.

The alternatives presented in Chapter 5 are listed in *Table 58*, right, and classified by the type of improvement recommendation.

### 6.2 Cost Estimating

Planning-level cost estimates were prepared for each alternative. *Table 58*, below, includes these costs for the current year (2021) and escalated to the year 2025 and 2030, using a rate of inflation of 3.5% consistent with CTDOT estimating guidelines. The costs are program costs, and include costs to complete engineering and necessary right-of-way acquisition in addition to construction.

*Table 58: Implementation Plan*

| Alternative  | Cost in 2021 \$ | Cost in 2025 \$ | Cost in 2030 \$ | Notes  |
|--|-----------------|-----------------|-----------------|--|
| <b>Near Term</b>                                       |                 |                 |                 |  |
| N-1  | \$1,850,000     | \$2,130,000     | \$2,530,000     | Could all be implemented immediately   |
| New-1  | \$2,000,000     | \$2,300,000     | \$2,730,000     |  |
| Main-1   | \$750,000       | \$870,000       | \$1,030,000     |  |
| C-1  | \$4,800,000     | \$5,510,000     | \$6,550,000     |  |
| S-1  | \$7,400,000     | \$8,500,000     | \$10,090,000    |  |
| <b>Mid Term</b>  |                 |                 |                 |  |
| Main-2   | \$1,250,000     | \$1,440,000     | \$1,710,000     | Could be implemented immediately   |
| C-2  | \$9,540,000     | \$10,950,000    | \$13,010,000    | Should be implemented with development of MMCT casino or other significant development on that site and completion of Base scenario developments |
| N-2  | \$5,200,000     | \$7,090,000     | \$7,600,000     |  |
| <b>Long Term</b>                                       |                 |                 |                 |  |
| N-3  | \$2,300,000     | \$3,140,000     | \$3,360,000     | Should be implemented with development of the Build scenario sites   |
| New-5  | \$1,200,000     | \$1,380,000     | \$1,640,000     |  |
| S-2  | \$10,190,000    | \$11,700,000    | \$13,010,000    |  |
| S-3  | \$17,300,000    | \$19,860,000    | \$23,580,000    |  |
| <b>Alternatives in Need of Further, Separate Study</b> |                 |                 |                 |  |
| New-3  |                 |                 |                 | Alternatives need to be evaluated in   |
| New-4  |                 |                 |                 |  |
| <b>Alternative Dismissed</b>                           |                 |                 |                 |  |
| New-2  |                 |                 |                 | Alternative not recommended for further study  |

### 6.3 Funding Opportunities

There are several different types of both state and federal funding that could be used by the Town, CRCOG and CTDOT. These are documented in [Table 59](#), below. Additionally, as potential developments occur within the corridor, opportunities should be taken to improve the sidewalk, sidepath and transit amenities. The Town may also use the access management appendix in assessing potential changes to or new developments.

*Table 59: Potential Funding Programs*

| Program  | State / Federal | Notes   |
|--|-----------------|---|
| Congestion Mitigation and Air Quality Improvement Program (CMAQ)           | Federal         | Discretionary grant program managed by FHWA. Primary goal to improve air quality.             |
| Local Transportation Capital Improvement Program (LoTCIP)                  | State           | Discretionary grant program managed by CTDOT.   |
| Rebuilding American Infrastructure with Sustainability and Equity (RAISE ) | Federal         | Discretionary grant program managed by USDOT, prioritizes economy, safety and the environment |
| Local Capital Improvement Program (LoCIP)                                  | State           | State managed formula-based entitlement funds for municipal projects                          |
| Transportation Alternatives Program (TAP)                                  | Federal         | FHWA managed program funding non-driver access to transportation                              |
| Surface Transportation Program (STP)                                       | Federal         | The most flexible Federal-aid highway program   |
| National Highway Performance Program (NHPP)                                | Federal         | Federal program aimed at helping highway facilities meet local performance measures           |

## 7 Public Involvement and Endorsements

Public involvement for the Project included focused interviews with critical stakeholders throughout the corridor, presence at two pop-up events to spread awareness of the project, and two formal public informational meetings, one in person and one online. In addition to these meetings, there were two newsletters and a 16-question survey, which collected 182 responses, as well as eight Advisory Committee meetings.

This table presents the date and purpose of each public involvement activity.

| Meeting Date | Meeting Type              | Purpose   |
|--------------|---------------------------|---|
| 4/21/2018    | Pop-Up Event              | Project booth at Abby's Walk                                      |
| 5/3/2018     | Stakeholder Meeting       | Meeting with East Windsor Town Planning                           |
| 5/18/2018    | Stakeholder Meeting       | Meeting with East Windsor Police Department                       |
| 5/24/2018    | Stakeholder Meeting       | Meeting with East Windsor Department of Public Works              |
| 5/30/2018    | Stakeholder Meeting       | Meeting with East Windsor Board of Education                      |
| 6/21/2018    | Stakeholder Meeting       | Meeting with Southern Auto Auction                                |
| 9/18/2018    | Stakeholder Meeting       | Meeting with Walmart  |
| 9/18/2018    | Stakeholder Meeting       | Meeting with Sofia's Restaurant                                   |
| 9/22/2018    | Pop-Up Event              | Project booth at East Windsor 250th Anniversary Parade            |
| 10/11/2018   | Stakeholder Meeting       | Meeting with South Windsor Walk & Wheel Ways                      |
| 11/7/2018    | Stakeholder Meeting       | Meeting with Sofia's Plaza  |
| 11/7/2018    | Stakeholder Meeting       | Meeting with Nutmeg Restaurant                                    |
| 1/21/2020    | Public Info Meeting       | Public Meeting #1 breakout session at Senior Center               |
| 1/22/2020    | Public Info Meeting       | Public Meeting #1 to collect public input and vision              |
| 7/28/2021    | Public Info Meeting       | Public Meeting #2 to present recommendations                      |
| 10/20/2021   | Presentation for Approval | Presentation of study findings to East Windsor Board of Selectmen |

**RESOLUTION  
FOR ENDORSEMENT OF THE  
ROUTE 5 (EAST WINDSOR) CORRIDOR STUDY**

**WHEREAS**, the Capitol Region Council of Governments worked with the Connecticut Department of Transportation (CTDOT) and the Town of East Windsor to undertake the Route 5 Corridor Study to evaluate traffic and development along this corridor; and

**WHEREAS**, the study aimed to develop a comprehensive transportation plan for the Route 5 Corridor in East Windsor to address safety, congestion, and mobility of the transit system, pedestrians, and bicyclists and that would assess travel demand growth and its impacts on area roadways, including traffic associated with development within the study area; and

**WHEREAS**, the study analyzed existing roadway and traffic conditions, land use and development, pedestrians and bicyclists, and transit routes within the study area, which is approximately five miles in length along Route 5 in the Town of East Windsor; and

**WHEREAS**, the Route 5 Study Advisory Committee, which included representatives of the Town of East Windsor, East Windsor Planning and Zoning Commission, East Windsor Public Works, East Windsor Public Schools, local businesses, town residents, CTDOT, and other stakeholders, met throughout the study to provide input; and

**WHEREAS**, the public had numerous opportunities to offer input via a study website, public open house meetings and Advisory Committee meetings, emailed newsletters, a presentation of the draft recommendations, and a 30-day public comment period on the DRAFT Recommendations and Implementation Plan; and

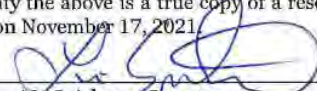
**WHEREAS**, the Town of East Windsor Board of Selectmen has reviewed the study, has found its recommendations to be reasonable, and has endorsed the effort; and

**WHEREAS**, the CRCOG Transportation Committee has reviewed the study, has found its recommendations to be reasonable, and has endorsed the effort;

**NOW THEREFORE BE IT RESOLVED THAT**, the Capitol Region Council of Governments does hereby endorse the recommendations of the Route 5 (East Windsor) Corridor Study as described in the Recommendations and Implementation Plan. Furthermore, study documents may be marked FINAL and dated November 2021, and study recommendations may henceforth be incorporated into agency planning documents.

**CERTIFICATE**

I certify the above is a true copy of a resolution adopted by the Policy Board at its meeting held on November 17, 2021.

BY:  DATE: 11/17/2021  
Lori L. Spielman, Secretary

**AUTHORIZING RESOLUTION  
FOR ADOPTION OF THE  
ROUTE 5 (EAST WINDSOR) CORRIDOR STUDY  
FINAL REPORT**

**WHEREAS**, the Capitol Region Council of Governments undertook an effort to develop a recommendation and implementation plan to create a multimodal transportation system that supports continued social and economic growth in the Route 5 corridor; and

**WHEREAS**, the study process included a variety of opportunities for public and stakeholder involvement and inputs to guide the project; and

**WHEREAS**, the study investigated potential impacts on the Title VI and Limited English Proficiency populations; and

**WHEREAS**, regional and local stakeholders were engaged throughout the study process; and

**WHEREAS**, the public had sufficient opportunity to offer input on study findings in accordance with CRCOG's Public Participation Plan; and


**WHEREAS**, the study team determined several locations along Route 5 for potential improvements based on public inputs and existing conditions as well as future scenario;

**NOW THEREFORE BE IT RESOLVED THAT**, the East Windsor Board of Selectmen does hereby endorse the Final Report for the Route 5 Corridor Study – dated November 4, 2021.

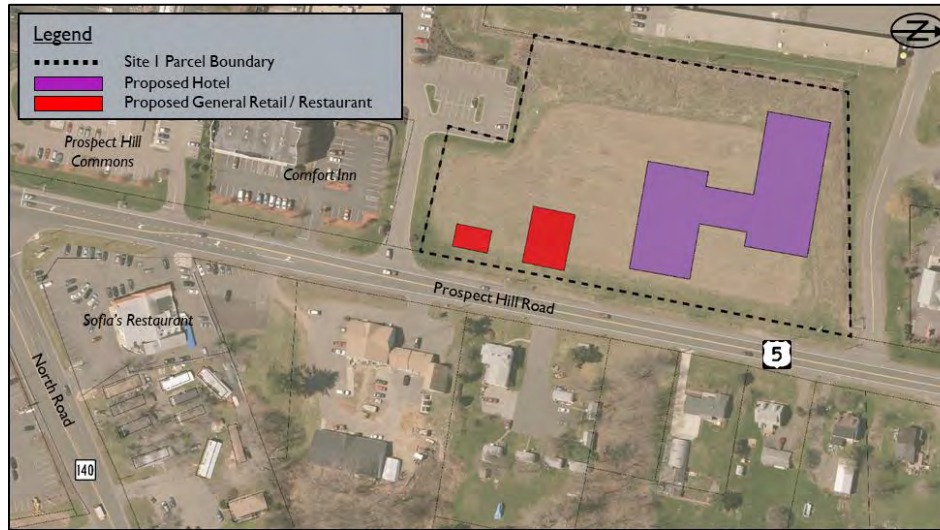
**CERTIFICATE**

I certify the above is a true copy of a resolution adopted by the East Windsor Board of Selectmen at its meeting held on November 4, 2021.

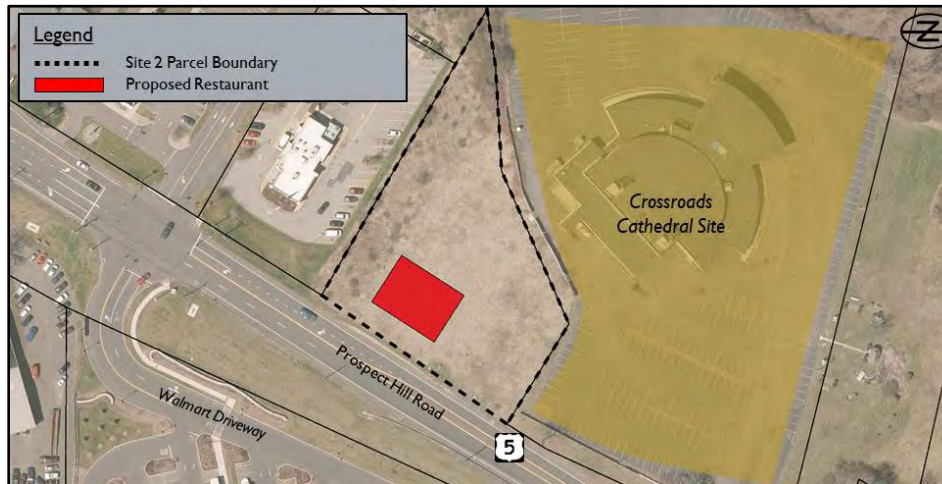
BY:  DATE: 11/4/21  
First Selectman

BY:  DATE: November 5, 2021  
Town Clerk

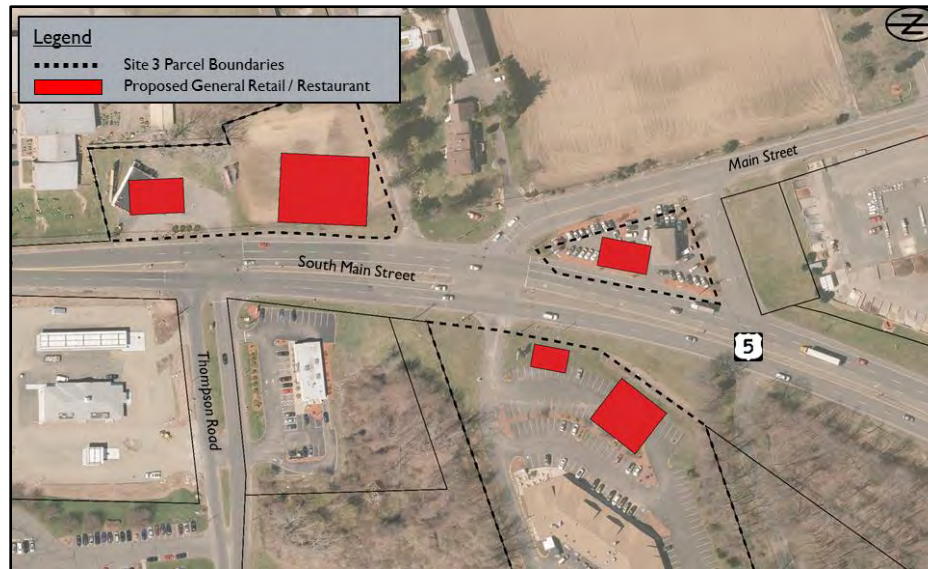
## Appendix I – Build Development Sites



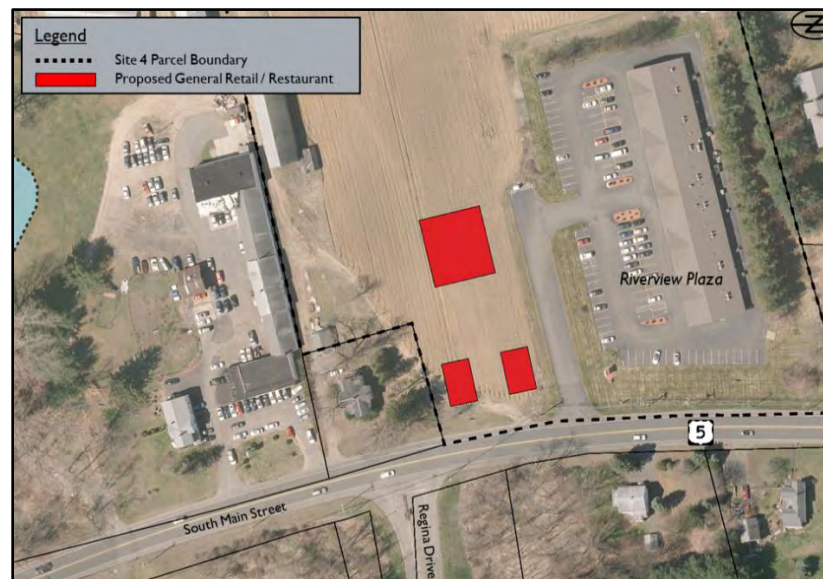
Site 1 – Hotel with Supporting Commercial Uses



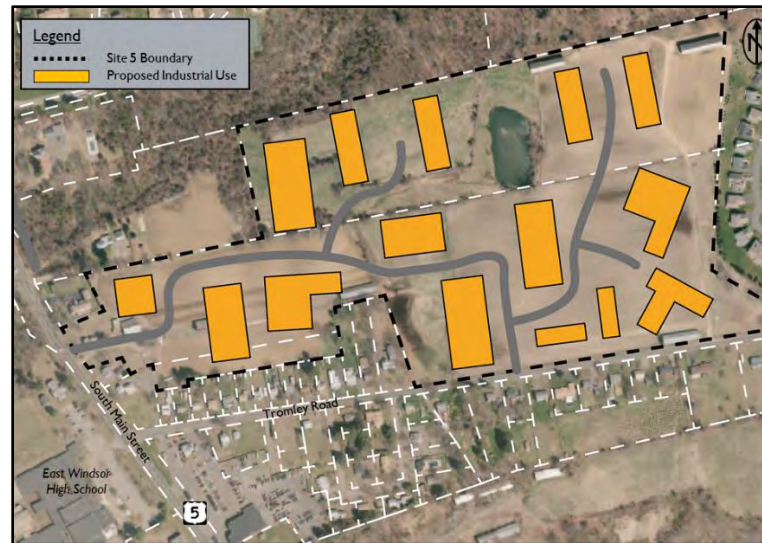
Site 2 - Restaurant



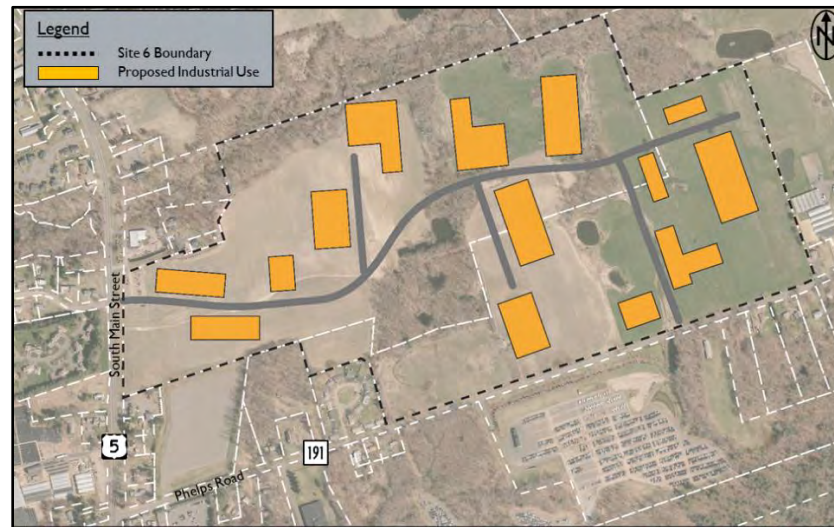
Site 3 – Mixed-use Commercial



Site 4 – Mixed-use Commercial



Site 5 – Industrial Park



Site 6 – Industrial Park



Site 7 – Agricultural Distribution

## Appendix 2 – Build Scenario Trip Generation

| Site 1                     |  |                      |                      |               |               |                 |               |                 |            |           |         | Trip Generation |       |      |       |       |      |       |
|----------------------------|--|----------------------|----------------------|---------------|---------------|-----------------|---------------|-----------------|------------|-----------|---------|-----------------|-------|------|-------|-------|------|-------|
| Route 5 North of Route 140 |  |                      |                      |               |               |                 |               |                 |            |           |         |                 |       |      |       |       |      |       |
| Parcel                     | Use                                    | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone | Remove Existing | Time Frame | Employees | ITE LUC | Daily           | AM    |      |       | PM    |      |       |
|                            |  |                      |                      |               |               |                 |               |                 |            |           |         |                 | Enter | Exit | Total | Enter | Exit | Total |
| 1                          | Hotel- 115 Rooms                       | 48000                | 48000                | 2             | 2.5           | 4.15            | B-2           | No              | 5+ Years   | 70        | 310     | 871             | 32    | 22   | 54    | 30    | 30   | 60    |
| 2                          | Mixed Commercial, Suggested Restaurant | 4000                 | 5000                 | 0.5           | 1.5           | 4.15            | B-2           | No              | 2+ Years   | 20        | 932     | 505             | 25    | 20   | 45    | 27    | 17   | 44    |
| 3                          | Mixed Commercial                       | 1500                 | 2000                 | 0.5           | 1             | 4.15            | B-2           | No              | 2+ Years   | 4         | 816     | 18              | 1     | 1    | 2     | 2     | 3    | 5     |
| Total                      |  | 53500                | 55000                | 3             | 5             |                 |               |                 |            | 94        | TOTAL   | 1394            | 58    | 43   | 101   | 59    | 50   | 109   |
| Average                    |  | 54250                | square feet          | 4             | acres         |                 |               |                 |            |           |         |                 |       |      |       |       |      |       |

| Site 2                    |                  |                      |                      |               |               |                 |               |                            |            |           |         | Trip Generation |       |      |       |       |      |       |
|---------------------------|------------------|----------------------|----------------------|---------------|---------------|-----------------|---------------|----------------------------|------------|-----------|---------|-----------------|-------|------|-------|-------|------|-------|
| Route 5 North of I-91 x44 |                  |                      |                      |               |               |                 |               |                            |            |           |         |                 |       |      |       |       |      |       |
| Parcel                    | Use              | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone | Remove Existing            | Time Frame | Employees | ITE LUC | Daily           | AM    |      |       | PM    |      |       |
|                           |                  |                      |                      |               |               |                 |               |                            |            |           |         |                 | Enter | Exit | Total | Enter | Exit | Total |
| 1                         | Mixed Commercial | 4000                 | 5000                 | 0.5           | 1.5           | 8.23            | HIFZ          | Yes (not currently in use) | 5+ Years   | 20        | 932     | 505             | 25    | 20   | 45    | 27    | 17   | 44    |
| 2                         | Large Clinic     | 40000                | 40000                | 3.5           | 4             | 8.23            | HIFZ          | Yes (not currently in use) | 5+ Years   |           |         |                 |       |      |       |       |      |       |
| Total                     |                  | 44000                | 45000                | 4             | 5.5           |                 |               |                            |            |           |         |                 |       |      |       |       |      |       |
| Average                   |                  | 4500                 | square feet          | 4.75          | acres         |                 |               |                            |            |           | TOTAL   | 505             | 25    | 20   | 45    | 27    | 17   | 44    |

## Route 5 Corridor Study – Final Report

| Site 3                 |   |                      |                      |               |               |                 |               |           |         |       | Trip Generation |      |       |       |      |       |  |
|------------------------|---|----------------------|----------------------|---------------|---------------|-----------------|---------------|-----------|---------|-------|-----------------|------|-------|-------|------|-------|--|
| Route 5 at Main Street |   |                      |                      |               |               |                 |               |           |         |       | AM              |      |       | PM    |      |       |  |
| Parcel                 | Use   | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone | Employees | ITE LUC | Daily | Enter           | Exit | Total | Enter | Exit | Total |  |
| 1                      | Mixed Commercial (example Fast-casual Restaurant, ex. Chipotle) | 2600                 | 2600                 | 0.5           | 1             | 0.43            | B-2           | 25        | 932     | 292   | 14              | 12   | 26    | 15    | 10   | 25    |  |
| 2                      | Mixed Commercial (Office Use)                                   | 6000                 | 6000                 | 1             | 1.5           | 6.53            | B-2           | 25        | 720     | 209   | 14              | 4    | 18    | 6     | 16   | 22    |  |
| 3                      | Mixed Commercial  | 2800                 | 2800                 | 0.5           | 1.5           | 6.53            | B-2           | 8         | 820     | 106   | 2               | 1    | 3     | 5     | 6    | 11    |  |
| 4                      | Mixed Commercial, (example CVS Pharmacy)                        | 10000                | 13000                | 1             | 2             | 0.81            | B-1           | 20        | 881     | 1419  | 26              | 24   | 50    | 67    | 67   | 134   |  |
| 5                      | Mixed Commercial (Service like Bank of America)                 | 4000                 | 6000                 | 1             | 1             | 1.37            | B-1           | 20        | 912     | 614   | 33              | 24   | 57    | 61    | 62   | 123   |  |
| Total                  |   | 25400                | 30400                | 4             | 7             |                 |               |           | TOTAL   | 2640  | 89              | 65   | 154   | 154   | 161  | 315   |  |
| Average                |   | 27900 square feet    |                      | 5.5 acres     |               |                 |               |           |         |       |                 |      |       |       |      |       |  |

| Site 4                  |  |                      |                      |               |               |                 |               |                              |           |         | Trip Generation |       |      |       |       |      |       |
|-------------------------|--|----------------------|----------------------|---------------|---------------|-----------------|---------------|------------------------------|-----------|---------|-----------------|-------|------|-------|-------|------|-------|
| Route 5 at Regina Drive |  |                      |                      |               |               |                 |               |                              |           |         | AM              |       |      | PM    |       |      |       |
| Parcel                  | Use  | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone | Remove Existing              | Employees | ITE LUC | Daily           | Enter | Exit | Total | Enter | Exit | Total |
| 1                       | Mixed Commercial                                       | 1500                 | 2000                 | 0.25          | 1             | 20.7            | B-2           | No (Assumes dividing parcel) | 10        | 937     | 1641            | 91    | 87   | 178   | 43    | 44   | 87    |
| 2                       | Mixed Commercial                                       | 1500                 | 2000                 | 0.25          | 1             | 20.7            | B-2           | No (Assumes dividing parcel) | 4         | 816     | 18              | 1     | 1    | 2     | 2     | 3    | 5     |
| 3                       | Mixed Commercial (suggested, office or restaurant use) | 6000                 | 6000                 | 1             | 1.5           | 20.7            | B-2           | No (Assumes dividing parcel) | 30        | 931     | 503             | 2     | 2    | 4     | 31    | 16   | 47    |
| Total                   |  | 9000                 | 10000                | 1.5           | 3.5           |                 |               |                              |           |         | 2162            | 94    | 90   | 184   | 76    | 63   | 139   |
| Average                 |  | 9500 square feet     |                      | 2.5 acres     |               |                 |               |                              |           |         |                 |       |      |       |       |      |       |

| Site 5                       |                           |                      |                      |               |               |                 |                          |  |           |         | Trip Generation |       |      |       |       |      |       |
|------------------------------|---------------------------|----------------------|----------------------|---------------|---------------|-----------------|--------------------------|--|-----------|---------|-----------------|-------|------|-------|-------|------|-------|
| Tromley Road Industrial Park |                           |                      |                      |               |               |                 |                          |  |           |         | AM              |       |      | PM    |       |      |       |
| Parcel                       | Use                       | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone            | Remove Existing                        | Employees | ITE LUC | Daily           | Enter | Exit | Total | Enter | Exit | Total |
| 1-14                         | Industrial or Office Park | 4000                 | 50000                | 50            | 150           | 160             | Agricultural Residential | All new development- Combine 2 parcels | 650       | 130     | 2583            | 227   | 53   | 280   | 59    | 221  | 280   |
| Total                        |                           | 56000                | 700000               | 50            | 150           |                 |                          |  |           |         |                 |       |      |       |       |      |       |
| Average                      |                           | 378000 square feet   |                      | 100 acres     |               |                 |                          |  |           |         |                 |       |      |       |       |      |       |
|                              |                           |                      |                      |               |               |                 |                          |  |           | TOTAL   | 2583            | 227   | 53   | 280   | 59    | 221  | 280   |

## Route 5 Corridor Study – Final Report

| Site 6                      |                           |                      |                      |               |               |                 |                          |  |           |         |       | Trip Generation |      |       |       |      |       |     |
|-----------------------------|---------------------------|----------------------|----------------------|---------------|---------------|-----------------|--------------------------|--|-----------|---------|-------|-----------------|------|-------|-------|------|-------|-----|
| Phelps Road Industrial Park |                           |                      |                      |               |               |                 |                          |  |           |         |       |                 |      |       |       |      |       |     |
| Parcel                      | Use                       | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available | Existing Zone            | Remove Existing                        | Employees | ITE LUC | Daily | AM              |      |       | PM    |      |       |     |
|                             |                           |                      |                      |               |               |                 |                          |  |           |         |       | Enter           | Exit | Total | Enter | Exit | Total |     |
| 1-14                        | Industrial or Office Park | 4000                 | 50000                | 50            | 150           | 160             | Agricultural Residential | All new development- Combine 2 parcels | 650       | 130     | 2583  | 227             | 53   | 280   | 59    | 221  | 280   |     |
| Total                       |                           | 56000                | 700000               | 50            | 150           |                 |                          |  |           |         |       |                 |      |       |       |      |       |     |
| Average                     |                           | 378000               | square feet          | 100           | acres         |                 |                          |  |           |         | TOTAL | 2583            | 227  | 53    | 280   | 59   | 221   | 280 |
|                             |                           |                      |                      |               |               |                 |                          |  |           |         |       |                 |      |       |       |      |       |     |
|                             |                           |                      |                      |               |               |                 |                          |  |           |         |       |                 |      |       |       |      |       |     |

| Site 7                     |                                    |                      |                      |               |               |                                   |               |                 |           |         |       | Trip Generation |      |       |       |      |       |    |
|----------------------------|------------------------------------|----------------------|----------------------|---------------|---------------|-----------------------------------|---------------|-----------------|-----------|---------|-------|-----------------|------|-------|-------|------|-------|----|
| Route 5 South of Abbe Road |                                    |                      |                      |               |               |                                   |               |                 |           |         |       |                 |      |       |       |      |       |    |
| Parcel                     | Use                                | Square Footage (min) | Square Footage (max) | Acreage (min) | Acreage (max) | Acres Available                   | Existing Zone | Remove Existing | Employees | ITE LUC | Daily | AM              |      |       | PM    |      |       |    |
|                            |                                    |                      |                      |               |               |                                   |               |                 |           |         |       | Enter           | Exit | Total | Enter | Exit | Total |    |
| 1                          | Agricultural Distribution Facility | 40000                | 40000                | 3             | 5             | 17.24 (Assumes Combining Parcels) | B-2           | Yes             | 55        | 150     | 109   | 23              | 7    | 30    | 9     | 24   | 33    |    |
| Total                      |                                    | 40000                | 40000                | 3             | 5             |                                   |               |                 |           |         |       |                 |      |       |       |      |       |    |
| Average                    |                                    | 40000                | square feet          | 4             | acres         |                                   |               |                 |           |         | TOTAL | 109             | 23   | 7     | 30    | 9    | 24    | 33 |
|                            |                                    |                      |                      |               |               |                                   |               |                 |           |         |       |                 |      |       |       |      |       |    |
|                            |                                    |                      |                      |               |               |                                   |               |                 |           |         |       |                 |      |       |       |      |       |    |

## Appendix 3 – Traffic Operational Analysis

Lanes, Volumes, Timings  
3: N Rd. (CT-140)

07/07/2020

|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↑↑↑          |       |      | ↑↑                     |      | ↗     |
| Traffic Volume (vph)              | 642          | 0     | 0    | 1180                   | 0    | 41    |
| Future Volume (vph)               | 642          | 0     | 0    | 1180                   | 0    | 41    |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Storage Length (ft)               |              | 0     | 0    |                        | 0    | 0     |
| Storage Lanes                     |              | 0     | 0    |                        | 0    | 1     |
| Taper Length (ft)                 |              |       | 25   |                        | 25   |       |
| Lane Util. Factor                 | 0.91         | 1.00  | 1.00 | 0.95                   | 1.00 | 1.00  |
| Frt                               |              |       |      |                        |      | 0.865 |
| Flt Protected                     |              |       |      |                        |      |       |
| Satd. Flow (prot)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Flt Permitted                     |              |       |      |                        |      |       |
| Satd. Flow (perm)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Link Speed (mph)                  | 35           |       |      | 35                     | 30   |       |
| Link Distance (ft)                | 323          |       |      | 381                    | 386  |       |
| Travel Time (s)                   | 6.3          |       |      | 7.4                    | 8.8  |       |
| Peak Hour Factor                  | 0.92         | 0.92  | 0.92 | 0.92                   | 0.92 | 0.92  |
| Adj. Flow (vph)                   | 698          | 0     | 0    | 1283                   | 0    | 45    |
| Shared Lane Traffic (%)           |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 698          | 0     | 0    | 1283                   | 0    | 45    |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(ft)                  | 0            |       |      | 0                      | 0    |       |
| Link Offset(ft)                   | 0            |       |      | 0                      | 0    |       |
| Crosswalk Width(ft)               | 16           |       |      | 16                     | 16   |       |
| Two way Left Turn Lane            |              |       |      |                        |      |       |
| Headway Factor                    | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Turning Speed (mph)               |              | 9     | 15   |                        | 15   | 9     |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| <b>Intersection Summary</b>       |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 36.0%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

Lanes, Volumes, Timings  
7: MMCT Casino/Eversource

07/07/2020

| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 110   | 0     | 154   | 20    | 10    | 20    | 44    | 312   | 0     | 10    | 400   | 44    |
| Future Volume (vph)        | 110   | 0     | 154   | 20    | 10    | 20    | 44    | 312   | 0     | 10    | 400   | 44    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 150   |       | 0     | 150   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 0     |       | 0     | 1     |       | 0     | 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 |       |       | 0.946 |       |       |       |       |       |       | 0.985 |
| Flt Protected              | 0.950 |       |       |       | 0.980 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 0     | 0     | 1727  | 0     | 1770  | 1863  | 0     | 1770  | 1835  | 0     |
| Flt Permitted              | 0.822 |       |       |       | 0.623 |       | 0.425 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1531  | 1583  | 0     | 0     | 1098  | 0     | 792   | 1863  | 0     | 1770  | 1835  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 504   |       |       | 22    |       |       |       |       |       |       | 11    |
| Link Speed (mph)           |       | 30    |       |       | 30    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 335   |       |       | 295   |       |       | 682   |       |       |       | 908   |
| Travel Time (s)            |       | 7.6   |       |       | 6.7   |       |       | 10.3  |       |       |       | 13.8  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 120   | 0     | 167   | 22    | 11    | 22    | 48    | 339   | 0     | 11    | 435   | 48    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 120   | 167   | 0     | 0     | 55    | 0     | 48    | 339   | 0     | 11    | 483   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 20    |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       |
| Detector Template          | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       |
| Trailing Detector (ft)     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex |       | 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   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       | 94    |       |       | 94    |       |       | 94    |       |       | 94    |       |
| Detector 2 Size(ft)        |       | 6     |       |       | 6     |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    |       | pm+pt | NA    |       | Prot  | NA    |       |
| Protected Phases           |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4     |       |       | 8     |       |       | 2     |       |       |       | 6     |       |

Lanes, Volumes, Timings  
7: MMCT Casino/Eversource

07/07/2020

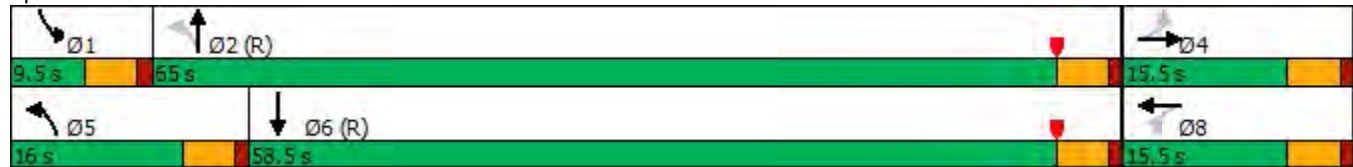


| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase          | 4     | 4     |     | 8     | 8     |     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     |
| Minimum Split (s)       | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 9.5   | 22.5  |     | 9.5   | 22.5  |     |
| Total Split (s)         | 15.5  | 15.5  |     | 15.5  | 15.5  |     | 16.0  | 65.0  |     | 9.5   | 58.5  |     |
| Total Split (%)         | 17.2% | 17.2% |     | 17.2% | 17.2% |     | 17.8% | 72.2% |     | 10.6% | 65.0% |     |
| Maximum Green (s)       | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 11.5  | 60.5  |     | 5.0   | 54.0  |     |
| Yellow Time (s)         | 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   |     |
| 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                |       |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 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 |     | None  | C-Max |     |
| Act Effct Green (s)     | 10.2  | 10.2  |     |       | 10.2  |     | 70.2  | 68.9  |     | 5.2   | 64.3  |     |
| Actuated g/C Ratio      | 0.11  | 0.11  |     |       | 0.11  |     | 0.78  | 0.77  |     | 0.06  | 0.71  |     |
| v/c Ratio               | 0.69  | 0.27  |     |       | 0.38  |     | 0.07  | 0.24  |     | 0.11  | 0.37  |     |
| Control Delay           | 59.3  | 1.0   |     |       | 33.0  |     | 1.0   | 2.0   |     | 47.7  | 2.9   |     |
| Queue Delay             | 0.0   | 0.0   |     |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 59.3  | 1.0   |     |       | 33.0  |     | 1.0   | 2.0   |     | 47.7  | 2.9   |     |
| LOS                     | E     | A     |     |       | C     |     | A     | A     |     | D     | A     |     |
| Approach Delay          |       | 25.4  |     |       | 33.0  |     |       | 1.9   |     |       | 3.9   |     |
| Approach LOS            |       | C     |     |       | C     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.7   | 60.5  |     | 5.0   | 58.8  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   |     | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.3   | 70.0  |     | 0.0   | 59.2  |     |
| 70th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.0   | 70.0  |     | 0.0   | 59.5  |     |
| 50th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 10.6  | 10.6  |     | 10.6  | 10.6  |     | 0.0   | 70.4  |     | 0.0   | 70.4  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 7.6   | 7.6   |     | 7.6   | 7.6   |     | 0.0   | 73.4  |     | 0.0   | 73.4  |     |
| 10th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             | 100   | 0     |     |       | 32    |     | 4     | 43    |     | 12    | 65    |     |
| Fuel Used(gal)          | 2     | 0     |     |       | 1     |     | 0     | 2     |     | 0     | 4     |     |
| CO Emissions (g/hr)     | 152   | 30    |     |       | 44    |     | 18    | 143   |     | 21    | 257   |     |
| NOx Emissions (g/hr)    | 29    | 6     |     |       | 9     |     | 3     | 28    |     | 4     | 50    |     |
| VOC Emissions (g/hr)    | 35    | 7     |     |       | 10    |     | 4     | 33    |     | 5     | 60    |     |
| Dilemma Vehicles (#)    | 0     | 0     |     |       | 0     |     | 0     | 14    |     | 0     | 11    |     |
| Queue Length 50th (ft)  | 66    | 0     |     |       | 17    |     | 3     | 20    |     | 6     | 48    |     |
| Queue Length 95th (ft)  | #140  | 0     |     |       | 54    |     | 1     | 66    |     | m14   | m51   |     |
| Internal Link Dist (ft) |       | 255   |     |       | 215   |     |       | 602   |     |       | 828   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 150   |       |     | 150   |       |     |
| Base Capacity (vph)     | 187   | 635   |     |       | 153   |     | 747   | 1425  |     | 102   | 1313  |     |
| Starvation Cap Reductn  | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.64  | 0.26  |     |       | 0.36  |     | 0.06  | 0.24  |     | 0.11  | 0.37  |     |

Intersection Summary














|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 2 (2%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow   |
| Natural Cycle:                    | 45  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.69  |
| Intersection Signal Delay:        | 9.6   |
| Intersection LOS:                 | A   |
| Intersection Capacity Utilization | 56.6%   |
| ICU Level of Service              | B   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 7: MMCT Casino/Eversource



Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020

|                            |  |  |   |  |  |   | Ø1 | Ø2 |
|----------------------------|---|---|--|---|---|--|----|----|
| Lane Group                 | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |    |    |
| Lane Configurations        |  |  | <br> |   |  | <br> |    |    |
| Traffic Volume (vph)       | 87  | 171   | 796  | 114   | 226   | 1145   |    |    |
| Future Volume (vph)        | 87  | 171   | 796  | 114   | 226   | 1145   |    |    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900   | 1900  | 1900  | 1900   |    |    |
| Storage Length (ft)        | 0   | 100   |  | 0   | 0   |  |    |    |
| Storage Lanes              | 1   | 1   |  | 0   | 1   |  |    |    |
| Taper Length (ft)          | 25  |   |  |   | 25  |  |    |    |
| Lane Util. Factor          | 1.00  | 1.00  | 0.95   | 0.95  | 1.00  | 0.95   |    |    |
| Frt                        |   | 0.850   | 0.981  |   |   |  |    |    |
| Flt Protected              | 0.950   |   |  |   | 0.950   |  |    |    |
| Satd. Flow (prot)          | 1517  | 1495  | 3294   | 0   | 1770  | 3406   |    |    |
| Flt Permitted              | 0.950   |   |  |   | 0.950   |  |    |    |
| Satd. Flow (perm)          | 1517  | 1495  | 3294   | 0   | 1770  | 3406   |    |    |
| Right Turn on Red          |   | Yes   |  | Yes   |   |  |    |    |
| Satd. Flow (RTOR)          |   | 86  | 23   |   |   |  |    |    |
| Link Speed (mph)           | 25  |   | 45   |   |   | 45   |    |    |
| Link Distance (ft)         | 1258  |   | 264  |   |   | 430  |    |    |
| Travel Time (s)            | 34.3  |   | 4.0  |   |   | 6.5  |    |    |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92   |    |    |
| Heavy Vehicles (%)         | 19%   | 8%  | 8%   | 4%  | 2%  | 6%   |    |    |
| Adj. Flow (vph)            | 95  | 186   | 865  | 124   | 246   | 1245   |    |    |
| Shared Lane Traffic (%)    |   |   |  |   |   |  |    |    |
| Lane Group Flow (vph)      | 95  | 186   | 989  | 0   | 246   | 1245   |    |    |
| Enter Blocked Intersection | No  | No  | No   | No  | No  | No   |    |    |
| Lane Alignment             | Left  | Right   | Right  | Right   | Left  | Left   |    |    |
| Median Width(ft)           | 30  |   | 12   |   |   | 20   |    |    |
| 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   | 1   | 2  |   | 1   | 0  |    |    |
| Detector Template          |   |   |  |   |   |  |    |    |
| Leading Detector (ft)      | 34  | 34  | 100  |   | 34  | 0  |    |    |
| Trailing Detector (ft)     | 0   | 0   | 0  |   | 0   | 0  |    |    |
| Detector 1 Position(ft)    | 0   | 0   | 0  |   | 0   | 0  |    |    |
| Detector 1 Size(ft)        | 34  | 34  | 6  |   | 34  | 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   | 8.0   | 0.0  |   | 0.0   | 0.0  |    |    |
| Detector 2 Position(ft)    |   |   | 94   |   |   |  |    |    |
| Detector 2 Size(ft)        |   |   | 6  |   |   |  |    |    |
| Detector 2 Type            |   |   | Cl+Ex  |   |   |  |    |    |
| Detector 2 Channel         |   |   |  |   |   |  |    |    |
| Detector 2 Extend (s)      |   |   | 0.0  |   |   |  |    |    |
| Turn Type                  | Prot  | pm+ov   | NA   |   | Prot  | NA   |    |    |
| Protected Phases           | 4   | 5   | 6  |   | 5   | 1 2 5  | 1  | 2  |

Lanes, Volumes, Timings  
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| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT  | Ø1   | Ø2    |
|-------------------------|-------|-------|-------|-----|-------|------|------|-------|
| Permitted Phases        |       | 4     |       |     | 5     |      |      |       |
| Detector Phase          | 4     | 4     | 6     |     | 5     |      |      |       |
| Switch Phase            |       |       |       |     |       |      |      |       |
| Minimum Initial (s)     | 7.0   | 5.0   | 15.0  |     | 5.0   |      | 5.0  | 15.0  |
| Minimum Split (s)       | 12.6  | 10.2  | 21.2  |     | 10.2  |      | 11.6 | 21.2  |
| Total Split (s)         | 16.8  | 26.2  | 47.0  |     | 26.2  |      | 19.2 | 54.0  |
| Total Split (%)         | 18.7% | 29.1% | 52.2% |     | 29.1% |      | 21%  | 60%   |
| Maximum Green (s)       | 11.2  | 21.0  | 40.8  |     | 21.0  |      | 12.6 | 47.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.8   |     | 3.0   |      | 3.0  | 4.8   |
| All-Red Time (s)        | 2.6   | 2.2   | 1.4   |     | 2.2   |      | 3.6  | 1.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     | 0.0   |      |      |       |
| Total Lost Time (s)     | 5.6   | 5.2   | 6.2   |     | 5.2   |      |      |       |
| Lead/Lag                |       | Lead  | Lag   |     | Lead  |      | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |     |       |      |      |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 2.5   |     | 1.5   |      | 1.5  | 2.5   |
| Recall Mode             | None  | None  | C-Min |     | None  |      | None | C-Min |
| Act Effect Green (s)    | 9.3   | 31.0  | 47.6  |     | 16.0  | 68.3 |      |       |
| Actuated g/C Ratio      | 0.10  | 0.34  | 0.53  |     | 0.18  | 0.76 |      |       |
| v/c Ratio               | 0.61  | 0.33  | 0.56  |     | 0.78  | 0.48 |      |       |
| Control Delay           | 54.6  | 11.9  | 20.9  |     | 64.9  | 1.8  |      |       |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0  |      |       |
| Total Delay             | 54.6  | 11.9  | 20.9  |     | 64.9  | 1.8  |      |       |
| LOS                     | D     | B     | C     |     | E     | A    |      |       |
| Approach Delay          | 26.3  |       | 20.9  |     |       | 12.2 |      |       |
| Approach LOS            | C     |       | C     |     |       | B    |      |       |
| 90th %ile Green (s)     | 11.2  | 21.0  | 40.8  |     | 21.0  |      | 12.2 | 48.2  |
| 90th %ile Term Code     | Max   | Max   | Coord |     | Max   |      | Gap  | Coord |
| 70th %ile Green (s)     | 11.4  | 19.0  | 42.6  |     | 19.0  |      | 9.8  | 50.4  |
| 70th %ile Term Code     | Gap   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| 50th %ile Green (s)     | 9.5   | 16.4  | 47.1  |     | 16.4  |      | 8.2  | 53.9  |
| 50th %ile Term Code     | Gap   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| 30th %ile Green (s)     | 7.6   | 13.8  | 51.6  |     | 13.8  |      | 6.6  | 57.4  |
| 30th %ile Term Code     | Gap   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| 10th %ile Green (s)     | 7.0   | 10.0  | 56.0  |     | 10.0  |      | 0.0  | 71.2  |
| 10th %ile Term Code     | Min   | Gap   | Coord |     | Gap   |      | Skip | Coord |
| Stops (vph)             | 82    | 63    | 621   |     | 223   | 83   |      |       |
| Fuel Used(gal)          | 2     | 2     | 21    |     | 6     | 5    |      |       |
| CO Emissions (g/hr)     | 155   | 174   | 1501  |     | 447   | 324  |      |       |
| NOx Emissions (g/hr)    | 30    | 34    | 292   |     | 87    | 63   |      |       |
| VOC Emissions (g/hr)    | 36    | 40    | 348   |     | 104   | 75   |      |       |
| Dilemma Vehicles (#)    | 0     | 0     | 83    |     | 0     | 59   |      |       |
| Queue Length 50th (ft)  | 52    | 39    | 189   |     | 152   | 26   |      |       |
| Queue Length 95th (ft)  | 101   | 79    | 292   |     | 229   | 40   |      |       |
| Internal Link Dist (ft) | 1178  |       | 184   |     |       | 350  |      |       |
| Turn Bay Length (ft)    |       | 100   |       |     |       |      |      |       |
| Base Capacity (vph)     | 189   | 551   | 1753  |     | 413   | 2584 |      |       |
| Starvation Cap Reductn  | 0     | 0     | 0     |     | 0     | 189  |      |       |
| Spillback Cap Reductn   | 0     | 0     | 0     |     | 0     | 0    |      |       |
| Storage Cap Reductn     | 0     | 0     | 0     |     | 0     | 0    |      |       |

Lanes, Volumes, Timings  
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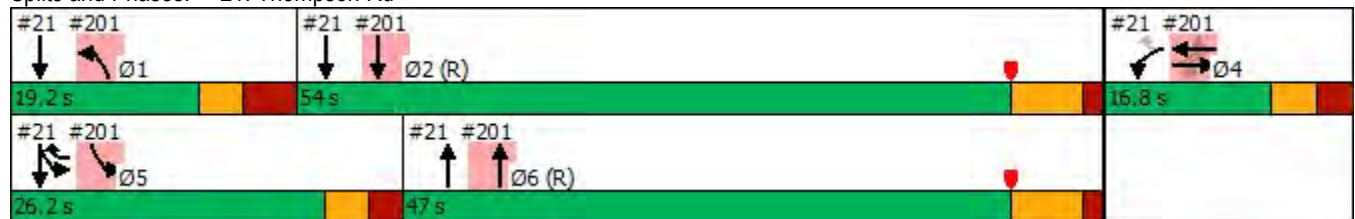


| Lane Group        | WBL  | WBR  | NBT  | NBR | SBL  | SBT  | Ø1 | Ø2 |
|-------------------|------|------|------|-----|------|------|----|----|
| Reduced v/c Ratio | 0.50 | 0.34 | 0.56 |     | 0.60 | 0.52 |    |    |

Intersection Summary

|                                   |  |
|-----------------------------------|--|
| Area Type:                        | Other  |
| Cycle Length:                     | 90   |
| Actuated Cycle Length:            | 90   |
| Offset:                           | 49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow |
| Natural Cycle:                    | 60   |
| Control Type:                     | Actuated-Coordinated   |
| Maximum v/c Ratio:                | 0.78   |
| Intersection Signal Delay:        | 16.8   |
| Intersection LOS:                 | B  |
| Intersection Capacity Utilization | 58.2%  |
| ICU Level of Service              | B  |
| Analysis Period (min)             | 15   |

Splits and Phases: 21: Thompson Rd



Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↔     |       | ↖     | ↕     |       | ↖     | ↕     |       |
| Traffic Volume (vph)       | 29    | 0     | 114   | 1     | 0     | 3     | 67    | 898   | 2     | 5     | 1256  | 0     |
| Future Volume (vph)        | 29    | 0     | 114   | 1     | 0     | 3     | 67    | 898   | 2     | 5     | 1256  | 0     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 100   | 0     |       | 0     | 0     |       | 0     | 700   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.899 |       |       |       |       |       |       |       |
| Flt Protected              |       | 0.950 |       |       | 0.988 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1719  | 1509  | 0     | 1688  | 0     | 1530  | 3374  | 0     | 1805  | 3406  | 0     |
| Flt Permitted              |       | 0.755 |       |       | 0.935 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 0     | 1366  | 1509  | 0     | 1597  | 0     | 1530  | 3374  | 0     | 1804  | 3406  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 182   |       | 182   |       |       |       |       |       |       |       |
| Link Speed (mph)           |       | 30    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 731   |       |       | 393   |       |       | 430   |       |       |       | 1397  |
| Travel Time (s)            |       | 16.6  |       |       | 10.7  |       |       | 6.5   |       |       |       | 21.2  |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 5%    | 0%    | 7%    | 0%    | 0%    | 0%    | 18%   | 7%    | 0%    | 0%    | 6%    | 0%    |
| Adj. Flow (vph)            | 32    | 0     | 124   | 1     | 0     | 3     | 73    | 976   | 2     | 5     | 1365  | 0     |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 32    | 124   | 0     | 4     | 0     | 73    | 978   | 0     | 5     | 1365  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Right | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 24    |       |       | 30    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 0     |       | 1     | 2     |       |
| Detector Template          | Left  |       |       | Left  |       |       | Left  |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 29    | 29    | 20    | 29    |       | 34    | 0     |       | 29    | 306   |       |
| Trailing Detector (ft)     | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Position(ft)    | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Size(ft)        | 20    | 34    | 34    | 20    | 34    |       | 34    | 6     |       | 34    | 6     |       |
| 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   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       |       |       |       |       | 300   |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       |       |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       |       |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       |       |       |       |       | 0.0   |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

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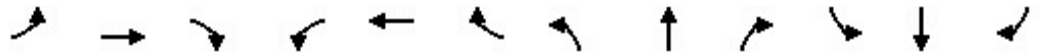


| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    |     | Prot  | NA    |     | Prot  | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       |     |       |       |     |       |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     |       |     | 5     | 2     |     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |     | 11.6  | 21.2  |     | 10.2  | 21.2  |     |
| Total Split (s)         | 16.8  | 16.8  | 16.8  | 16.8  | 16.8  |     | 19.2  | 47.0  |     | 26.2  | 54.0  |     |
| Total Split (%)         | 18.7% | 18.7% | 18.7% | 18.7% | 18.7% |     | 21.3% | 52.2% |     | 29.1% | 60.0% |     |
| Maximum Green (s)       | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |     | 12.6  | 40.8  |     | 21.0  | 47.8  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 2.6   | 2.6   | 2.6   | 2.6   | 2.6   |     | 3.6   | 1.4   |     | 2.2   | 1.4   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.6   | 5.6   |       | 5.6   |     | 6.6   | 6.2   |     | 5.2   | 6.2   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min |     |
| Act Effct Green (s)     |       | 9.3   | 9.3   |       | 9.3   |     | 8.4   | 47.6  |     | 16.0  | 56.2  |     |
| Actuated g/C Ratio      |       | 0.10  | 0.10  |       | 0.10  |     | 0.09  | 0.53  |     | 0.18  | 0.62  |     |
| v/c Ratio               |       | 0.23  | 0.39  |       | 0.01  |     | 0.51  | 0.55  |     | 0.02  | 0.64  |     |
| Control Delay           |       | 40.1  | 5.4   |       | 0.0   |     | 53.3  | 8.4   |     | 30.2  | 12.8  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.1   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 40.1  | 5.4   |       | 0.0   |     | 53.3  | 8.5   |     | 30.2  | 12.8  |     |
| LOS                     |       | D     | A     |       | A     |     | D     | A     |     | C     | B     |     |
| Approach Delay          |       | 12.5  |       |       |       |     |       | 11.6  |     |       | 12.9  |     |
| Approach LOS            |       | B     |       |       |       |     |       | B     |     |       | B     |     |
| 90th %ile Green (s)     | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |     | 12.2  | 40.8  |     | 21.0  | 48.2  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 11.4  | 11.4  | 11.4  | 11.4  | 11.4  |     | 9.8   | 42.6  |     | 19.0  | 50.4  |     |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   | Coord |     | Gap   | Coord |     |
| 50th %ile Green (s)     | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   |     | 8.2   | 47.1  |     | 16.4  | 53.9  |     |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   | Coord |     | Gap   | Coord |     |
| 30th %ile Green (s)     | 7.6   | 7.6   | 7.6   | 7.6   | 7.6   |     | 6.6   | 51.6  |     | 13.8  | 57.4  |     |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 0.0   | 56.0  |     | 10.0  | 71.2  |     |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   |     | Skip  | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 28    | 6     |       | 0     |     | 66    | 212   |     | 6     | 824   |     |
| Fuel Used(gal)          |       | 1     | 1     |       | 0     |     | 2     | 7     |     | 0     | 25    |     |
| CO Emissions (g/hr)     |       | 39    | 56    |       | 1     |     | 121   | 468   |     | 11    | 1742  |     |
| NOx Emissions (g/hr)    |       | 8     | 11    |       | 0     |     | 24    | 91    |     | 2     | 339   |     |
| VOC Emissions (g/hr)    |       | 9     | 13    |       | 0     |     | 28    | 108   |     | 2     | 404   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 55    |     | 0     | 45    |     |
| Queue Length 50th (ft)  |       | 17    | 0     |       | 0     |     | 44    | 79    |     | 3     | 177   |     |
| Queue Length 95th (ft)  |       | 44    | 18    |       | 0     |     | m81   | 94    |     | m3    | m460  |     |
| Internal Link Dist (ft) |       | 651   |       |       | 313   |     |       | 350   |     |       | 1317  |     |
| Turn Bay Length (ft)    |       |       | 100   |       |       |     |       |       |     | 700   |       |     |
| Base Capacity (vph)     |       | 170   | 348   |       | 359   |     | 214   | 1785  |     | 421   | 2127  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 107   |     | 0     | 0     |     |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



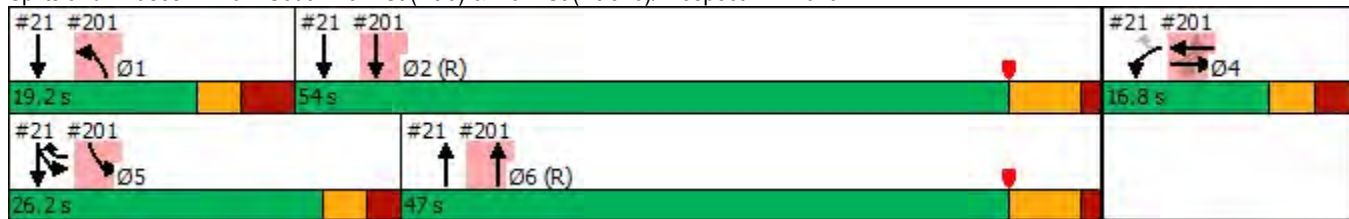
| Lane Group            | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|-----------------------|-----|------|------|-----|------|-----|------|------|-----|------|------|-----|
| Spillback Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn   |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio     |     | 0.19 | 0.36 |     | 0.01 |     | 0.34 | 0.58 |     | 0.01 | 0.64 |     |

Intersection Summary

|                                   |  |
|-----------------------------------|--|
| Area Type:                        | Other  |
| Cycle Length:                     | 90   |
| Actuated Cycle Length:            | 90   |
| Offset:                           | 49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow |
| Natural Cycle:                    | 60   |
| Control Type:                     | Actuated-Coordinated   |
| Maximum v/c Ratio:                | 0.78   |
| Intersection Signal Delay:        | 12.3   |
| Intersection LOS:                 | B  |
| Intersection Capacity Utilization | 62.1%  |
| ICU Level of Service              | B  |
| Analysis Period (min)             | 15   |












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

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020

|                            |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations        |  |   |  |  |  |  |
| Traffic Volume (vph)       | 30  | 33  | 770   | 108   | 164   | 1131  |
| Future Volume (vph)        | 30  | 33  | 770   | 108   | 164   | 1131  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 8   | 12  |
| Storage Length (ft)        | 0   | 0   |   | 250   | 75  |   |
| 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                        | 0.930   |   |   | 0.850   |   |   |
| Flt Protected              | 0.977   |   |   |   | 0.950   |   |
| Satd. Flow (prot)          | 1652  | 0   | 1743  | 1615  | 1564  | 1776  |
| Flt Permitted              | 0.977   |   |   |   | 0.222   |   |
| Satd. Flow (perm)          | 1652  | 0   | 1743  | 1615  | 366   | 1776  |
| Right Turn on Red          |   | Yes   |   | Yes   |   |   |
| Satd. Flow (RTOR)          | 36  |   |   | 117   |   |   |
| Link Speed (mph)           | 30  |   | 45  |   |   | 45  |
| Link Distance (ft)         | 1378  |   | 1115  |   |   | 1349  |
| Travel Time (s)            | 31.3  |   | 16.9  |   |   | 20.4  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 4%  | 5%  | 9%  | 0%  | 0%  | 7%  |
| Adj. Flow (vph)            | 33  | 36  | 837   | 117   | 178   | 1229  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 69  | 0   | 837   | 117   | 178   | 1229  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Right   | Left  | Right   | Left  | Left  |
| Median Width(ft)           | 12  |   | 0   |   |   | 8   |
| 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  | 1.20  | 1.00  |
| Turning Speed (mph)        | 15  | 9   |   | 9   | 15  |   |
| Number of Detectors        | 1   |   | 0   | 0   | 0   | 0   |
| Detector Template          |   |   |   |   |   |   |
| Leading Detector (ft)      | 25  |   | 0   | 0   | 0   | 0   |
| Trailing Detector (ft)     | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 30  |   | 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   |
| Turn Type                  | Prot  |   | NA  | pm+ov   | D.P+P   | NA  |
| Protected Phases           | 4   |   | 2   | 4   | 1   | 12  |
| Permitted Phases           |   |   |   | 2   | 2   |   |
| Detector Phase             | 4   |   |   |   |   |   |
| Switch Phase               |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   |   | 15.0  | 5.0   | 5.0   |   |

Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020



| Lane Group              | WBL   | WBR | NBT   | NBR   | SBL   | SBT  |
|-------------------------|-------|-----|-------|-------|-------|------|
| Minimum Split (s)       | 9.4   |     | 22.8  | 9.4   | 9.0   |      |
| Total Split (s)         | 9.4   |     | 65.6  | 9.4   | 15.0  |      |
| Total Split (%)         | 10.4% |     | 72.9% | 10.4% | 16.7% |      |
| Maximum Green (s)       | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| Yellow Time (s)         | 3.0   |     | 4.8   | 3.0   | 3.0   |      |
| All-Red Time (s)        | 1.4   |     | 3.0   | 1.4   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0   |     | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.4   |     | 7.8   | 4.4   | 4.0   |      |
| Lead/Lag                |       |     | Lag   |       | Lead  |      |
| Lead-Lag Optimize?      |       |     |       |       |       |      |
| Vehicle Extension (s)   | 1.5   |     | 3.0   | 1.5   | 3.0   |      |
| Recall Mode             | None  |     | C-Max | None  | Max   |      |
| Act Effect Green (s)    | 5.0   |     | 57.8  | 68.7  | 74.5  | 79.3 |
| Actuated g/C Ratio      | 0.06  |     | 0.64  | 0.76  | 0.83  | 0.88 |
| v/c Ratio               | 0.55  |     | 0.75  | 0.09  | 0.38  | 0.79 |
| Control Delay           | 41.1  |     | 14.1  | 0.5   | 5.2   | 6.2  |
| Queue Delay             | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Delay             | 41.1  |     | 14.1  | 0.5   | 5.2   | 6.2  |
| LOS                     | D     |     | B     | A     | A     | A    |
| Approach Delay          | 41.1  |     | 12.4  |       |       | 6.1  |
| Approach LOS            | D     |     | B     |       |       | A    |
| 90th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 90th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 70th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 70th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 50th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 50th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 30th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 30th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 10th %ile Green (s)     | 0.0   |     | 57.8  | 0.0   | 20.4  |      |
| 10th %ile Term Code     | Skip  |     | Coord | Skip  | MaxR  |      |
| Stops (vph)             | 34    |     | 478   | 5     | 37    | 389  |
| Fuel Used(gal)          | 1     |     | 17    | 1     | 4     | 33   |
| CO Emissions (g/hr)     | 97    |     | 1154  | 87    | 310   | 2273 |
| NOx Emissions (g/hr)    | 19    |     | 225   | 17    | 60    | 442  |
| VOC Emissions (g/hr)    | 23    |     | 267   | 20    | 72    | 527  |
| Dilemma Vehicles (#)    | 0     |     | 64    | 0     | 0     | 7    |
| Queue Length 50th (ft)  | 18    |     | 280   | 2     | 2     | 110  |
| Queue Length 95th (ft)  | #71   |     | 419   | 4     | m0    | m156 |
| Internal Link Dist (ft) | 1298  |     | 1035  |       |       | 1269 |
| Turn Bay Length (ft)    |       |     |       | 250   | 75    |      |
| Base Capacity (vph)     | 125   |     | 1119  | 1261  | 474   | 1564 |
| 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  |     | 0.75  | 0.09  | 0.38  | 0.79 |

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020

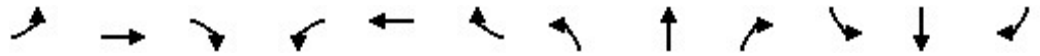
Cycle Length: 90  
Actuated Cycle Length: 90  
Offset: 55 (61%), Referenced to phase 2:NBSB, Start of Yellow  
Natural Cycle: 90  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.79  
Intersection Signal Delay: 9.6 Intersection LOS: A  
Intersection Capacity Utilization 70.7% ICU Level of Service C  
Analysis Period (min) 15  
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.  
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        | ↖     | ↖     | ↖↖    |       | ↖↖    |       | ↖↖    | ↖↖    |       | ↖     | ↖↖    | ↖     |
| Traffic Volume (vph)       | 148   | 307   | 942   | 35    | 352   | 35    | 628   | 245   | 57    | 60    | 284   | 331   |
| Future Volume (vph)        | 148   | 307   | 942   | 35    | 352   | 35    | 628   | 245   | 57    | 60    | 284   | 331   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 350   |       | 290   | 0     |       | 200   | 400   |       | 0     | 205   |       | 130   |
| Storage Lanes              | 1     |       | 2     | 0     |       | 1     | 2     |       | 0     | 2     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 0.95  | 0.95  | 0.88  | 0.95  | 0.95  | 0.95  | 0.97  | 0.95  | 0.95  | 1.00  | 0.95  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 0.99  |       |       |
| Frt                        |       |       | 0.850 |       | 0.988 |       |       | 0.972 |       |       |       | 0.850 |
| Flt Protected              | 0.950 | 0.998 |       |       | 0.996 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1603  | 1762  | 2733  | 0     | 3242  | 0     | 3273  | 3249  | 0     | 1703  | 3374  | 1583  |
| Flt Permitted              | 0.950 | 0.998 |       |       | 0.996 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1603  | 1762  | 2733  | 0     | 3242  | 0     | 3273  | 3249  | 0     | 1693  | 3374  | 1583  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 697   |       | 9     |       |       | 34    |       |       |       | 177   |
| Link Speed (mph)           |       | 45    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 734   |       |       | 813   |       |       | 1397  |       |       |       | 571   |
| Travel Time (s)            |       | 11.1  |       |       | 15.8  |       |       | 21.2  |       |       |       | 8.7   |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 2%    | 4%    | 0%    | 10%   | 15%   | 7%    | 7%    | 10%   | 6%    | 7%    | 2%    |
| Adj. Flow (vph)            | 161   | 334   | 1024  | 38    | 383   | 38    | 683   | 266   | 62    | 65    | 309   | 360   |
| Shared Lane Traffic (%)    | 10%   |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 145   | 350   | 1024  | 0     | 459   | 0     | 683   | 328   | 0     | 65    | 309   | 360   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 33    |       |       | 12    |       |       | 32    |       |       |       | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 2     |       | 1     | 2     | 0     |
| Detector Template          |       |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 34    | 29    | 20    | 48    |       | 34    | 326   |       | 39    | 326   | 0     |
| Trailing Detector (ft)     | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Position(ft)    | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Size(ft)        | 34    | 34    | 39    | 20    | 48    |       | 34    | 6     |       | 34    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 320   |       |       | 320   |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       | 0.0   |       |       | 0.0   |       |

Lanes, Volumes, Timings  
209: I-91 Access/Egress/Newberry Rd

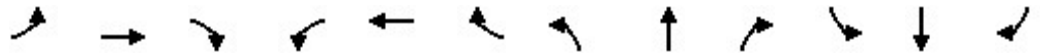
07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Turn Type               | Split | NA    | pm+ov | Split | NA    |     | Prot  | NA    |     | Prot  | NA    | pm+ov |
| Protected Phases        | 4     | 4     | 1     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 4     |
| Permitted Phases        |       |       | 4     |       |       |     |       |       |     |       | 2     | 2     |
| Detector Phase          | 4     | 4     | 4     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 9.0   | 9.0   | 5.0   | 9.0   | 9.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  | 9.0   |
| Minimum Split (s)       | 15.5  | 15.5  | 10.9  | 15.7  | 15.7  |     | 10.9  | 21.0  |     | 10.0  | 21.0  | 15.5  |
| Total Split (s)         | 25.0  | 25.0  | 25.0  | 19.0  | 19.0  |     | 25.0  | 36.0  |     | 10.0  | 21.0  | 25.0  |
| Total Split (%)         | 27.8% | 27.8% | 27.8% | 21.1% | 21.1% |     | 27.8% | 40.0% |     | 11.1% | 23.3% | 27.8% |
| Maximum Green (s)       | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.5  |
| Yellow Time (s)         | 3.3   | 3.3   | 3.0   | 4.1   | 4.1   |     | 3.0   | 4.8   |     | 3.0   | 4.8   | 3.3   |
| All-Red Time (s)        | 3.2   | 3.2   | 2.9   | 2.6   | 2.6   |     | 2.9   | 1.2   |     | 2.0   | 1.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.5   | 6.5   | 5.9   |       | 6.7   |     | 5.9   | 6.0   |     | 5.0   | 6.0   | 6.5   |
| Lead/Lag                |       |       | Lead  |       |       |     | Lead  | Lag   |     | Lead  | Lag   |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.5   |     | 2.0   | 2.5   | 3.0   |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min | None  |
| Act Effct Green (s)     | 18.5  | 18.5  | 38.2  |       | 12.3  |     | 19.1  | 32.0  |     | 5.0   | 15.0  | 39.5  |
| Actuated g/C Ratio      | 0.21  | 0.21  | 0.42  |       | 0.14  |     | 0.21  | 0.36  |     | 0.06  | 0.17  | 0.44  |
| v/c Ratio               | 0.44  | 0.97  | 0.66  |       | 1.02  |     | 0.98  | 0.28  |     | 0.69  | 0.55  | 0.45  |
| Control Delay           | 36.2  | 77.2  | 5.2   |       | 87.0  |     | 56.5  | 19.4  |     | 78.1  | 36.6  | 11.6  |
| Queue Delay             | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Delay             | 36.2  | 77.2  | 5.2   |       | 87.0  |     | 56.5  | 19.4  |     | 78.1  | 36.6  | 11.6  |
| LOS                     | D     | E     | A     |       | F     |     | E     | B     |     | E     | D     | B     |
| Approach Delay          |       | 24.8  |       |       | 87.0  |     |       | 44.5  |     |       | 28.0  |       |
| Approach LOS            |       | C     |       |       | F     |     |       | D     |     |       | C     |       |
| 90th %ile Green (s)     | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.5  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 70th %ile Green (s)     | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.5  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 50th %ile Green (s)     | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.5  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 30th %ile Green (s)     | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.5  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 10th %ile Green (s)     | 18.5  | 18.5  | 19.1  | 12.3  | 12.3  |     | 19.1  | 40.0  |     | 0.0   | 15.0  | 18.5  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord | Max   |
| Stops (vph)             | 114   | 276   | 218   |       | 357   |     | 552   | 320   |     | 53    | 256   | 149   |
| Fuel Used(gal)          | 3     | 10    | 8     |       | 13    |     | 20    | 8     |     | 2     | 6     | 4     |
| CO Emissions (g/hr)     | 212   | 701   | 573   |       | 883   |     | 1383  | 553   |     | 128   | 444   | 270   |
| NOx Emissions (g/hr)    | 41    | 136   | 111   |       | 172   |     | 269   | 108   |     | 25    | 86    | 53    |
| VOC Emissions (g/hr)    | 49    | 162   | 133   |       | 205   |     | 320   | 128   |     | 30    | 103   | 63    |
| Dilemma Vehicles (#)    | 0     | 16    | 0     |       | 21    |     | 0     | 5     |     | 0     | 12    | 0     |
| Queue Length 50th (ft)  | 76    | 209   | 30    |       | ~140  |     | 198   | 87    |     | 38    | 92    | 105   |
| Queue Length 95th (ft)  | 136   | #389  | 53    |       | #244  |     | #304  | 87    |     | #108  | 110   | 18    |
| Internal Link Dist (ft) |       | 654   |       |       | 733   |     |       | 1317  |     |       | 491   |       |
| Turn Bay Length (ft)    | 350   |       | 290   |       |       |     | 400   |       |     | 205   |       | 130   |
| Base Capacity (vph)     | 329   | 362   | 1561  |       | 450   |     | 694   | 1176  |     | 94    | 562   | 794   |
| Starvation Cap Reductn  | 0     | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 0     |

Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020

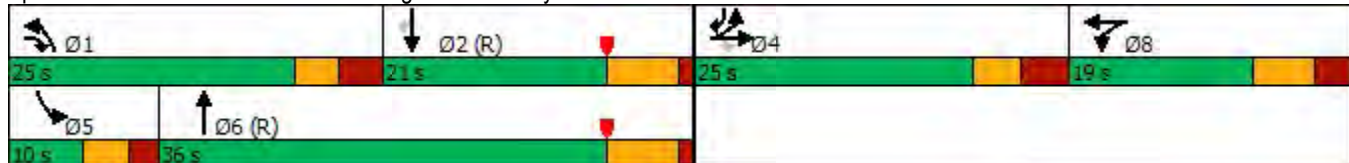


| Lane Group            | EBL  | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|-----------------------|------|------|------|-----|------|-----|------|------|-----|------|------|------|
| Spillback Cap Reductn | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn   | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio     | 0.44 | 0.97 | 0.66 |     | 1.02 |     | 0.98 | 0.28 |     | 0.69 | 0.55 | 0.45 |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 79 (88%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 38.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 216   | 370   | 97    | 127   | 898   | 129   | 207   | 205   | 30    | 52    | 220   | 75    |
| Future Volume (vph)        | 216   | 370   | 97    | 127   | 898   | 129   | 207   | 205   | 30    | 52    | 220   | 75    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11    | 11    | 11    | 11    | 11    | 11    | 10    | 11    | 12    | 11    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 260   |       | 475   | 300   |       | 200   | 200   |       | 0     |
| Storage Lanes              | 1     |       | 1     | 1     |       | 1     | 2     |       | 1     | 1     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 0.97  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       |       | 0.99  | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.981 |       |       |       | 0.850 |       | 0.962 |       |
| Flt Protected              | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1558  | 3172  | 1516  | 1504  | 3276  | 0     | 3083  | 1640  | 1442  | 1517  | 1605  | 0     |
| Flt Permitted              | 0.121 |       |       | 0.511 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 198   | 3172  | 1516  | 809   | 3276  | 0     | 3083  | 1640  | 1423  | 1511  | 1605  | 0     |
| Right Turn on Red          |       |       | No    |       |       | No    |       |       | No    |       |       | No    |
| Satd. Flow (RTOR)          |       |       |       |       |       |       |       |       |       |       |       |       |
| Link Speed (mph)           |       | 35    |       |       | 45    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 381   |       |       | 922   |       |       | 908   |       |       | 783   |       |
| Travel Time (s)            |       | 7.4   |       |       | 14.0  |       |       | 13.8  |       |       | 11.9  |       |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 12%   | 10%   | 3%    | 16%   | 4%    | 8%    | 6%    | 12%   | 12%   | 15%   | 8%    | 31%   |
| Adj. Flow (vph)            | 235   | 402   | 105   | 138   | 976   | 140   | 225   | 223   | 33    | 57    | 239   | 82    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 235   | 402   | 105   | 138   | 1116  | 0     | 225   | 223   | 33    | 57    | 321   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 11    |       |       | 11    |       |       | 20    |       |       | 20    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.09  | 1.04  | 1.00  | 1.04  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 12    | 15    |       | 12    |
| Number of Detectors        | 1     | 1     | 0     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |
| Detector Template          |       |       |       |       |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 256   | 0     | 30    | 315   |       | 29    | 29    | 29    | 29    | 29    |       |
| Trailing Detector (ft)     | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Position(ft)    | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Size(ft)        | 34    | 6     | 20    | 35    | 5     |       | 34    | 34    | 34    | 34    | 34    |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Turn Type                  | pm+pt | NA    | pm+ov | pm+pt | NA    |       | Prot  | NA    | pm+ov | Prot  | NA    |       |
| Protected Phases           | 5     | 2     | 3     | 1     | 6     |       | 3     | 8     | 1     | 7     | 4     |       |
| Permitted Phases           | 2     |       | 2     | 6     |       |       |       |       | 8     |       |       |       |
| Detector Phase             | 5     | 2     | 2     | 1     | 6     |       | 3     | 8     | 8     | 7     | 4     |       |

Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase            |       |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 6.0   | 15.0  | 4.0   | 6.0   | 15.0  |     | 4.0   | 9.0   | 6.0   | 4.0   | 5.0   |     |
| Minimum Split (s)       | 11.8  | 20.5  | 8.0   | 12.6  | 20.5  |     | 8.0   | 15.8  | 12.6  | 8.0   | 11.8  |     |
| Total Split (s)         | 15.7  | 39.3  | 11.0  | 14.5  | 38.1  |     | 11.0  | 27.2  | 14.5  | 9.0   | 25.2  |     |
| Total Split (%)         | 17.4% | 43.7% | 12.2% | 16.1% | 42.3% |     | 12.2% | 30.2% | 16.1% | 10.0% | 28.0% |     |
| Maximum Green (s)       | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| Yellow Time (s)         | 3.0   | 4.5   | 3.0   | 3.0   | 4.5   |     | 3.0   | 4.4   | 3.0   | 3.0   | 4.4   |     |
| All-Red Time (s)        | 2.8   | 1.0   | 1.0   | 3.6   | 1.0   |     | 1.0   | 2.4   | 3.6   | 1.0   | 2.4   |     |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 5.8   | 5.5   | 4.0   | 6.6   | 5.5   |     | 4.0   | 6.8   | 6.6   | 4.0   | 6.8   |     |
| Lead/Lag                | Lead  | Lag   | Lead  | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |       |       |       |     |
| Vehicle Extension (s)   | 1.5   | 4.0   | 1.5   | 1.5   | 4.0   |     | 1.5   | 2.5   | 1.5   | 1.5   | 2.5   |     |
| Recall Mode             | None  | C-Min | None  | None  | C-Min |     | None  | None  | None  | None  | None  |     |
| Act Effct Green (s)     | 43.4  | 33.8  | 46.7  | 38.3  | 32.0  |     | 7.4   | 22.8  | 30.3  | 4.9   | 18.6  |     |
| Actuated g/C Ratio      | 0.48  | 0.38  | 0.52  | 0.43  | 0.36  |     | 0.08  | 0.25  | 0.34  | 0.05  | 0.21  |     |
| v/c Ratio               | 0.96  | 0.34  | 0.13  | 0.34  | 0.96  |     | 0.89  | 0.54  | 0.07  | 0.69  | 0.97  |     |
| Control Delay           | 70.8  | 21.9  | 9.7   | 14.4  | 47.1  |     | 74.6  | 32.5  | 14.2  | 81.7  | 80.1  |     |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 70.8  | 21.9  | 9.7   | 14.4  | 47.1  |     | 74.6  | 32.5  | 14.2  | 81.7  | 80.1  |     |
| LOS                     | E     | C     | A     | B     | D     |     | E     | C     | B     | F     | F     |     |
| Approach Delay          |       | 35.6  |       |       | 43.5  |     |       | 50.9  |       |       | 80.3  |     |
| Approach LOS            |       | D     |       |       | D     |     |       | D     |       |       | F     |     |
| 90th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 90th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 70th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 70th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Hold  | Max   | Max   | Max   |     |
| 50th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 50th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Hold  | Max   | Max   | Max   |     |
| 30th %ile Green (s)     | 9.9   | 34.7  | 7.0   | 7.0   | 32.6  |     | 7.0   | 20.4  | 7.0   | 5.0   | 18.4  |     |
| 30th %ile Term Code     | Max   | Coord | Max   | Gap   | Coord |     | Max   | Hold  | Gap   | Max   | Max   |     |
| 10th %ile Green (s)     | 9.9   | 32.9  | 8.9   | 6.0   | 29.8  |     | 8.9   | 32.2  | 6.0   | 0.0   | 19.3  |     |
| 10th %ile Term Code     | Max   | Coord | Gap   | Min   | Coord |     | Gap   | Hold  | Min   | Skip  | Max   |     |
| Stops (vph)             | 139   | 258   | 44    | 72    | 907   |     | 159   | 166   | 21    | 46    | 250   |     |
| Fuel Used(gal)          | 5     | 5     | 1     | 2     | 27    |     | 6     | 5     | 1     | 2     | 9     |     |
| CO Emissions (g/hr)     | 332   | 322   | 55    | 142   | 1907  |     | 443   | 324   | 37    | 119   | 658   |     |
| NOx Emissions (g/hr)    | 65    | 63    | 11    | 28    | 371   |     | 86    | 63    | 7     | 23    | 128   |     |
| VOC Emissions (g/hr)    | 77    | 75    | 13    | 33    | 442   |     | 103   | 75    | 9     | 28    | 153   |     |
| Dilemma Vehicles (#)    | 0     | 33    | 0     | 0     | 55    |     | 0     | 12    | 0     | 0     | 15    |     |
| Queue Length 50th (ft)  | 91    | 84    | 29    | 39    | 318   |     | 54    | 107   | 10    | 33    | 183   |     |
| Queue Length 95th (ft)  | #240  | 135   | 44    | 71    | #455  |     | #132  | 190   | m21   | #95   | #349  |     |
| Internal Link Dist (ft) |       | 301   |       |       | 842   |     |       | 828   |       |       | 703   |     |
| Turn Bay Length (ft)    |       |       |       | 260   |       |     | 300   |       | 200   | 200   |       |     |
| Base Capacity (vph)     | 245   | 1197  | 775   | 410   | 1186  |     | 252   | 414   | 480   | 84    | 331   |     |
| Starvation Cap Reductn  | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.96  | 0.34  | 0.14  | 0.34  | 0.94  |     | 0.89  | 0.54  | 0.07  | 0.68  | 0.97  |     |

Intersection Summary

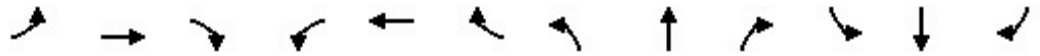
|                                    |   |
|------------------------------------|---|
| Area Type:                         | Other   |
| Cycle Length:                      | 90  |
| Actuated Cycle Length:             | 90  |
| Offset:                            | 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  |
| Natural Cycle:                     | 90  |
| Control Type:                      | Actuated-Coordinated  |
| Maximum v/c Ratio:                 | 0.97  |
| Intersection Signal Delay:         | 47.6  |
| Intersection LOS:                  | D   |
| Intersection Capacity Utilization: | 81.4%   |
| ICU Level of Service:              | D   |
| Analysis Period (min):             | 15  |
| #                                  | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                  | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 210: N Rd. (CT-140)/N Rd. (CT140)



Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

07/07/2020



| Lane Group                 | EBL  | EBT  | EBR    | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|------|--------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations        |      |      | ↗      |       | ↔     |       |      | ↕     |       |       | ↖     |       |
| Traffic Volume (vph)       | 0    | 0    | 3      | 346   | 0     | 14    | 0    | 980   | 44    | 28    | 960   | 3     |
| Future Volume (vph)        | 0    | 0    | 3      | 346   | 0     | 14    | 0    | 980   | 44    | 28    | 960   | 3     |
| Ideal Flow (vphpl)         | 1900 | 1900 | 1900   | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00 | 1.00 | 1.00   | 1.00  | 1.00  | 1.00  | 1.00 | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Fr <sub>t</sub>            |      |      | 0.865  |       | 0.995 |       |      | 0.994 |       |       |       |       |
| Fl <sub>t</sub> Protected  |      |      |        |       | 0.954 |       |      |       |       |       | 0.999 |       |
| Satd. Flow (prot)          | 0    | 0    | 1096   | 0     | 1779  | 0     | 0    | 3333  | 0     | 0     | 3337  | 0     |
| Fl <sub>t</sub> Permitted  |      |      |        |       | 0.954 |       |      |       |       |       | 0.894 |       |
| Satd. Flow (perm)          | 0    | 0    | 1096   | 0     | 1779  | 0     | 0    | 3333  | 0     | 0     | 2987  | 0     |
| Right Turn on Red          |      |      | Yes    |       |       | Yes   |      |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      |      | 130    |       | 33    |       |      | 10    |       |       | 1     |       |
| Link Speed (mph)           |      | 30   |        |       | 30    |       |      | 50    |       |       | 45    |       |
| Link Distance (ft)         |      | 417  |        |       | 1615  |       |      | 1146  |       |       | 576   |       |
| Travel Time (s)            |      | 9.5  |        |       | 36.7  |       |      | 15.6  |       |       | 8.7   |       |
| Peak Hour Factor           | 0.92 | 0.92 | 0.92   | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Growth Factor              | 100% | 100% | 100%   | 100%  | 100%  | 100%  | 50%  | 100%  | 100%  | 100%  | 100%  | 100%  |
| Heavy Vehicles (%)         | 0%   | 0%   | 50%    | 1%    | 0%    | 11%   | 14%  | 8%    | 0%    | 6%    | 8%    | 50%   |
| Adj. Flow (vph)            | 0    | 0    | 3      | 376   | 0     | 15    | 0    | 1065  | 48    | 30    | 1043  | 3     |
| Shared Lane Traffic (%)    |      |      |        |       |       |       |      |       |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 0    | 3      | 0     | 391   | 0     | 0    | 1113  | 0     | 0     | 1076  | 0     |
| Enter Blocked Intersection | No   | No   | No     | No    | No    | No    | No   | No    | No    | No    | No    | No    |
| Lane Alignment             | Left | Left | Right  | Left  | Left  | Right | Left | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0    |        |       | 0     |       |      | 26    |       |       | 26    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        |      |      | 0      | 1     | 1     |       |      | 0     |       | 1     | 0     |       |
| Detector Template          |      |      |        | Left  |       |       |      |       |       | Left  |       |       |
| Leading Detector (ft)      |      |      | 0      | 20    | 25    |       |      | 0     |       | 20    | 0     |       |
| Trailing Detector (ft)     |      |      | 0      | 0     | 0     |       |      | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    |      |      | 0      | 0     | 0     |       |      | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        |      |      | 20     | 20    | 25    |       |      | 0     |       | 20    | 0     |       |
| Detector 1 Type            |      |      | Extend | 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   |       |
| Detector 1 Queue (s)       |      |      | 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   |       |
| Turn Type                  |      |      | Perm   | Perm  | NA    |       |      | NA    |       | Perm  | NA    |       |
| Protected Phases           |      |      |        |       | 4     |       |      | 2     |       |       | 2     |       |
| Permitted Phases           |      |      | 4      | 4     |       |       |      |       |       | 2     |       |       |
| Detector Phase             |      |      | 4      | 4     | 4     |       |      |       |       |       |       |       |
| Switch Phase               |      |      |        |       |       |       |      |       |       |       |       |       |
| Minimum Initial (s)        |      |      | 9.0    | 9.0   | 9.0   |       |      | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          |      |      | 13.0   | 13.0  | 13.0  |       |      | 20.7  |       | 20.7  | 20.7  |       |
| Total Split (s)            |      |      | 26.0   | 26.0  | 26.0  |       |      | 64.0  |       | 64.0  | 64.0  |       |
| Total Split (%)            |      |      | 28.9%  | 28.9% | 28.9% |       |      | 71.1% |       | 71.1% | 71.1% |       |

Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

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| Lane Group                  | EBL   | EBT | EBR  | WBL  | WBT  | WBR | NBL | NBT   | NBR | SBL   | SBT   | SBR |
|-----------------------------|---|-----|------|------|------|-----|-----|-------|-----|-------|-------|-----|
| Maximum Green (s)           |   |     | 22.0 | 22.0 | 22.0 |     |     | 58.3  |     | 58.3  | 58.3  |     |
| Yellow Time (s)             |   |     | 3.0  | 3.0  | 3.0  |     |     | 4.7   |     | 4.7   | 4.7   |     |
| 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   |     |
| Total Lost Time (s)         |   |     | 4.0  |      | 4.0  |     |     | 5.7   |     |       | 5.7   |     |
| Lead/Lag                    |   |     |      |      |      |     |     |       |     |       |       |     |
| Lead-Lag Optimize?          |   |     |      |      |      |     |     |       |     |       |       |     |
| Vehicle Extension (s)       |   |     | 3.0  | 3.0  | 3.0  |     |     | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode                 |   |     | None | None | None |     |     | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)         |   |     | 20.9 |      | 20.9 |     |     | 59.4  |     |       | 59.4  |     |
| Actuated g/C Ratio          |   |     | 0.23 |      | 0.23 |     |     | 0.66  |     |       | 0.66  |     |
| v/c Ratio                   |   |     | 0.01 |      | 0.89 |     |     | 0.51  |     |       | 0.55  |     |
| Control Delay               |   |     | 0.0  |      | 54.6 |     |     | 8.9   |     |       | 6.1   |     |
| Queue Delay                 |   |     | 0.0  |      | 0.0  |     |     | 0.0   |     |       | 0.0   |     |
| Total Delay                 |   |     | 0.0  |      | 54.6 |     |     | 8.9   |     |       | 6.1   |     |
| LOS                         |   |     | A    |      | D    |     |     | A     |     |       | A     |     |
| Approach Delay              |   |     |      |      | 54.6 |     |     | 8.9   |     |       | 6.1   |     |
| Approach LOS                |   |     |      |      | D    |     |     | A     |     |       | A     |     |
| 90th %ile Green (s)         |   |     | 22.0 | 22.0 | 22.0 |     |     | 58.3  |     | 58.3  | 58.3  |     |
| 90th %ile Term Code         |   |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)         |   |     | 22.0 | 22.0 | 22.0 |     |     | 58.3  |     | 58.3  | 58.3  |     |
| 70th %ile Term Code         |   |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)         |   |     | 22.0 | 22.0 | 22.0 |     |     | 58.3  |     | 58.3  | 58.3  |     |
| 50th %ile Term Code         |   |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)         |   |     | 21.6 | 21.6 | 21.6 |     |     | 58.7  |     | 58.7  | 58.7  |     |
| 30th %ile Term Code         |   |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)         |   |     | 17.0 | 17.0 | 17.0 |     |     | 63.3  |     | 63.3  | 63.3  |     |
| 10th %ile Term Code         |   |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| Stops (vph)                 |   |     | 0    |      | 297  |     |     | 485   |     |       | 245   |     |
| Fuel Used(gal)              |   |     | 0    |      | 10   |     |     | 17    |     |       | 34    |     |
| CO Emissions (g/hr)         |   |     | 1    |      | 711  |     |     | 1171  |     |       | 2388  |     |
| NOx Emissions (g/hr)        |   |     | 0    |      | 138  |     |     | 228   |     |       | 465   |     |
| VOC Emissions (g/hr)        |   |     | 0    |      | 165  |     |     | 271   |     |       | 553   |     |
| Dilemma Vehicles (#)        |   |     | 0    |      | 0    |     |     | 57    |     |       | 55    |     |
| Queue Length 50th (ft)      |   |     | 0    |      | 196  |     |     | 155   |     |       | 65    |     |
| Queue Length 95th (ft)      |   |     | 0    |      | #354 |     |     | 202   |     |       | 104   |     |
| Internal Link Dist (ft)     |   | 337 |      |      | 1535 |     |     | 1066  |     |       | 496   |     |
| Turn Bay Length (ft)        |   |     |      |      |      |     |     |       |     |       |       |     |
| Base Capacity (vph)         |   |     | 366  |      | 459  |     |     | 2202  |     |       | 1971  |     |
| Starvation Cap Reductn      |   |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Spillback Cap Reductn       |   |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Storage Cap Reductn         |   |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Reduced v/c Ratio           |   |     | 0.01 |      | 0.85 |     |     | 0.51  |     |       | 0.55  |     |
| <b>Intersection Summary</b> |   |     |      |      |      |     |     |       |     |       |       |     |
| Area Type:                  | Other   |     |      |      |      |     |     |       |     |       |       |     |
| Cycle Length:               | 90  |     |      |      |      |     |     |       |     |       |       |     |
| Actuated Cycle Length:      | 90  |     |      |      |      |     |     |       |     |       |       |     |
| Offset:                     | 0 (0%), Referenced to phase 2:NBSB, Start of Yellow |     |      |      |      |     |     |       |     |       |       |     |

Lanes, Volumes, Timings  
 211: Crow Park Rd / Scantic Rd

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Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 14.6 Intersection LOS: B  
 Intersection Capacity Utilization 74.9% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 211: Crow Park Rd / Scantic Rd



Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↖     | ↗     | ↖     | ↗     |       | ↖     | ↗     |       |
| Traffic Volume (vph)       | 25    | 13    | 14    | 14    | 53    | 177   | 17    | 776   | 10    | 41    | 1267  | 30    |
| Future Volume (vph)        | 25    | 13    | 14    | 14    | 53    | 177   | 17    | 776   | 10    | 41    | 1267  | 30    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 80    | 0     |       | 30    | 120   |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 1.00  | 0.97  |       | 1.00  |       |       |       |       |       |       |       |
| Frt                        |       |       | 0.850 |       |       | 0.850 |       | 0.998 |       |       | 0.996 |       |
| Flt Protected              |       | 0.968 |       |       | 0.990 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1758  | 1313  | 0     | 1881  | 1400  | 1703  | 1736  | 0     | 1687  | 1801  | 0     |
| Flt Permitted              |       | 0.757 |       |       | 0.918 |       | 0.069 |       |       | 0.211 |       |       |
| Satd. Flow (perm)          | 0     | 1368  | 1276  | 0     | 1741  | 1400  | 124   | 1736  | 0     | 375   | 1801  | 0     |
| Right Turn on Red          |       |       | No    |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       |       |       |       | 192   |       | 1     |       |       |       | 2     |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 551   |       |       | 1467  |       |       | 2227  |       |       |       | 2334  |
| Travel Time (s)            |       | 15.0  |       |       | 28.6  |       |       | 33.7  |       |       |       | 35.4  |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 0%    | 23%   | 0%    | 0%    | 0%    | 6%    | 9%    | 25%   | 7%    | 5%    | 7%    |
| Adj. Flow (vph)            | 27    | 14    | 15    | 15    | 58    | 192   | 18    | 843   | 11    | 45    | 1377  | 33    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 41    | 15    | 0     | 73    | 192   | 18    | 854   | 0     | 45    | 1410  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 12    |       |       | 12    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3     |       | 1     | 3     |       |
| Detector Template          | Left  |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 20    | 15    | 20    | 25    | 20    | 33    | 326   |       | 33    | 326   |       |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Size(ft)        | 20    | 20    | 15    | 20    | 25    | 20    | 38    | 6     |       | 38    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 2.0   | 8.0   | 0.0   | 8.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 144   |       |       | 94    |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

|                            |    |
|----------------------------|----|
| Lane Group                 | Ø3 |
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Lane Width (ft)            |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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         |    |

Lanes, Volumes, Timings  
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Detector 3 Position(ft) |       |       |       |       |       |       |       | 320   |     |       | 320   |     |
| Detector 3 Size(ft)     |       |       |       |       |       |       |       | 6     |     |       | 6     |     |
| Detector 3 Type         |       |       |       |       |       |       |       | Cl+Ex |     |       | Cl+Ex |     |
| Detector 3 Channel      |       |       |       |       |       |       |       |       |     |       |       |     |
| Detector 3 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    |     | pm+pt | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     |     | 1     | 6     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |       |     | 6     |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |       |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 4.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 8.0   | 22.8  |     | 9.0   | 22.8  |     |
| Total Split (s)         | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 8.0   | 49.0  |     | 9.0   | 50.0  |     |
| Total Split (%)         | 11.1% | 11.1% | 11.1% | 11.1% | 11.1% | 11.1% | 8.9%  | 54.4% |     | 10.0% | 55.6% |     |
| Maximum Green (s)       | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 41.2  |     | 5.0   | 42.2  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.0   | 3.0   |     | 1.0   | 3.0   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.5   | 4.5   |       | 4.5   | 4.5   | 3.0   | 7.8   |     | 4.0   | 7.8   |     |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |       |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 5.4   | 5.4   |       | 5.4   | 5.4   | 70.1  | 62.6  |     | 71.2  | 65.2  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  | 0.06  | 0.78  | 0.70  |     | 0.79  | 0.72  |     |
| v/c Ratio               |       | 0.50  | 0.20  |       | 0.70  | 0.73  | 0.10  | 0.71  |     | 0.12  | 1.08  |     |
| Control Delay           |       | 62.4  | 46.4  |       | 75.5  | 23.6  | 5.1   | 14.5  |     | 4.4   | 56.2  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 62.4  | 46.4  |       | 75.5  | 23.6  | 5.1   | 14.5  |     | 4.4   | 56.2  |     |
| LOS                     |       | E     | D     |       | E     | C     | A     | B     |     | A     | E     |     |
| Approach Delay          |       | 58.1  |       |       | 37.9  |       |       | 14.3  |     |       | 54.6  |     |
| Approach LOS            |       | E     |       |       | D     |       |       | B     |     |       | D     |     |
| 90th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.1   | 42.0  |     | 6.2   | 44.1  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Gap   | Coord |     |
| 70th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 4.3   | 63.2  |     | 5.0   | 64.9  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Min   | Coord |     |
| 50th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 63.2  |     | 5.0   | 72.2  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Min   | Coord |     |
| 30th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 72.2  |     | 0.0   | 72.2  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 5.2   | 5.2   | 5.2   | 5.2   | 5.2   | 5.2   | 0.0   | 72.5  |     | 0.0   | 72.5  |     |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             |       | 37    | 16    |       | 59    | 24    | 6     | 341   |     | 11    | 504   |     |
| Fuel Used(gal)          |       | 1     | 0     |       | 2     | 3     | 0     | 25    |     | 1     | 41    |     |
| CO Emissions (g/hr)     |       | 56    | 18    |       | 153   | 203   | 34    | 1734  |     | 56    | 2848  |     |

Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020

|                         |      |
|-------------------------|------|
| Lane Group              | Ø3   |
| Detector 2 Extend (s)   |      |
| Detector 3 Position(ft) |      |
| Detector 3 Size(ft)     |      |
| Detector 3 Type         |      |
| Detector 3 Channel      |      |
| Detector 3 Extend (s)   |      |
| Turn Type               |      |
| Protected Phases        | 3    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 7.0  |
| Minimum Split (s)       | 22.0 |
| Total Split (s)         | 22.0 |
| Total Split (%)         | 24%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 4.0  |
| All-Red Time (s)        | 0.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                | Lag  |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 9.0  |
| Pedestrian Calls (#/hr) | 10   |
| 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)     | 16.0 |
| 90th %ile Term Code     | Ped  |
| 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)     |      |

Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020

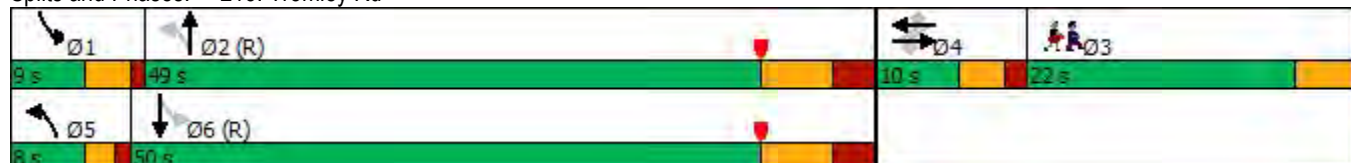


| Lane Group              | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT    | SBR |
|-------------------------|-----|------|------|-----|------|------|------|------|-----|------|--------|-----|
| NOx Emissions (g/hr)    |     | 11   | 4    |     | 30   | 40   | 7    | 337  |     | 11   | 554    |     |
| VOC Emissions (g/hr)    |     | 13   | 4    |     | 35   | 47   | 8    | 402  |     | 13   | 660    |     |
| Dilemma Vehicles (#)    |     | 0    | 0    |     | 3    | 0    | 0    | 28   |     | 0    | 78     |     |
| Queue Length 50th (ft)  |     | 23   | 8    |     | 42   | 0    | 1    | 215  |     | 4    | 380    |     |
| Queue Length 95th (ft)  |     | #66  | 28   |     | #111 | #90  | m5   | #751 |     | m9   | m#1133 |     |
| Internal Link Dist (ft) |     | 471  |      |     | 1387 |      |      | 2147 |     |      | 2254   |     |
| Turn Bay Length (ft)    |     |      | 80   |     |      | 30   | 120  |      |     | 200  |        |     |
| Base Capacity (vph)     |     | 83   | 77   |     | 106  | 265  | 185  | 1208 |     | 372  | 1305   |     |
| Starvation Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0      |     |
| Spillback Cap Reductn   |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0      |     |
| Storage Cap Reductn     |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0      |     |
| Reduced v/c Ratio       |     | 0.49 | 0.19 |     | 0.69 | 0.72 | 0.10 | 0.71 |     | 0.12 | 1.08   |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 83 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 39.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 90.8%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 213: Tromley Rd



---

|                         |    |
|-------------------------|----|
| Lane Group              | Ø3 |
| 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)     |    |
| Starvation Cap Reductn  |    |
| Spillback Cap Reductn   |    |
| Storage Cap Reductn     |    |
| Reduced v/c Ratio       |    |
| Intersection Summary    |    |

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Lanes, Volumes, Timings  
214: DD/Abbe Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     | ↗     |       | ↔     |       | ↖     | ↗     |       |       | ↕     | ↗     |
| Traffic Volume (vph)       | 64    | 6     | 79    | 7     | 10    | 7     | 49    | 941   | 4     | 7     | 905   | 102   |
| Future Volume (vph)        | 64    | 6     | 79    | 7     | 10    | 7     | 49    | 941   | 4     | 7     | 905   | 102   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 8     | 12    | 12    | 12    | 8     | 12    | 12    | 8     | 12    | 8     |
| Storage Length (ft)        | 0     |       | 30    | 0     |       | 0     | 50    |       | 0     | 0     |       | 50    |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 0     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |       |       | 0.850 |       | 0.960 |       |       | 0.999 |       |       |       | 0.850 |
| Flt Protected              |       | 0.957 |       |       | 0.985 |       | 0.950 |       |       |       |       |       |
| Satd. Flow (prot)          | 0     | 1667  | 1386  | 0     | 1710  | 0     | 1384  | 1774  | 0     | 0     | 1754  | 1386  |
| Flt Permitted              |       | 0.726 |       |       | 0.894 |       | 0.234 |       |       |       | 0.992 |       |
| Satd. Flow (perm)          | 0     | 1264  | 1386  | 0     | 1552  | 0     | 341   | 1774  | 0     | 0     | 1740  | 1386  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 86    |       | 8     |       |       | 1     |       |       |       | 55    |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 801   |       |       | 1499  |       |       | 4074  |       |       |       | 1892  |
| Travel Time (s)            |       | 21.8  |       |       | 29.2  |       |       | 61.7  |       |       |       | 28.7  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 10%   | 0%    | 1%    | 0%    | 0%    | 17%   | 13%   | 7%    | 0%    | 50%   | 8%    | 1%    |
| Adj. Flow (vph)            | 70    | 7     | 86    | 8     | 11    | 8     | 53    | 1023  | 4     | 8     | 984   | 111   |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 77    | 86    | 0     | 27    | 0     | 53    | 1027  | 0     | 0     | 992   | 111   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 10    |       |       | 0     |       |       | 8     |       |       |       | 8     |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.20  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 0     | 0     |       | 0     | 0     | 1     |
| Detector Template          | Left  |       | Right | Left  |       |       |       |       |       |       |       | Right |
| Leading Detector (ft)      | 20    | 20    | 20    | 20    | 29    |       | 0     | 0     |       | 0     | 0     | 20    |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | -5    |       | 0     | 0     |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | -5    |       | 0     | 0     |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        | 20    | 20    | 20    | 20    | 34    |       | 20    | 6     |       | 20    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Turn Type                  | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       | Perm  | NA    | Perm  |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       |       | 2     |
| Permitted Phases           | 4     |       | 4     | 4     |       |       | 2     |       |       | 2     |       | 2     |
| Detector Phase             | 4     | 4     | 4     | 4     | 4     |       |       |       |       |       |       | 2     |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |       | 15.0  | 15.0  |       | 15.0  | 15.0  | 15.0  |

Lanes, Volumes, Timings  
214: DD/Abbe Rd

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Minimum Split (s)       | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |     | 22.0  | 22.0  |     | 22.0  | 22.0  | 22.0  |
| Total Split (s)         | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |     | 75.0  | 75.0  |     | 75.0  | 75.0  | 75.0  |
| Total Split (%)         | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |     | 83.3% | 83.3% |     | 83.3% | 83.3% | 83.3% |
| Maximum Green (s)       | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  |     | 68.0  | 68.0  |     | 68.0  | 68.0  | 68.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 4.8   | 4.8   |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.3   | 1.3   | 1.3   | 1.3   | 1.3   |     | 2.2   | 2.2   |     | 2.2   | 2.2   | 2.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.3   | 4.3   |       | 4.3   |     | 7.0   | 7.0   |     |       | 7.0   | 7.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lag   | Lag   |     | Lead  | Lead  |     | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 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 | C-Max |
| Act Effct Green (s)     |       | 8.6   | 8.6   |       | 8.6   |     | 73.3  | 73.3  |     |       | 73.3  | 73.3  |
| Actuated g/C Ratio      |       | 0.10  | 0.10  |       | 0.10  |     | 0.81  | 0.81  |     |       | 0.81  | 0.81  |
| v/c Ratio               |       | 0.64  | 0.41  |       | 0.17  |     | 0.19  | 0.71  |     |       | 0.70  | 0.10  |
| Control Delay           |       | 61.8  | 14.8  |       | 30.9  |     | 4.7   | 17.5  |     |       | 3.5   | 0.6   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             |       | 61.8  | 14.8  |       | 30.9  |     | 4.7   | 17.5  |     |       | 3.5   | 0.6   |
| LOS                     |       | E     | B     |       | C     |     | A     | B     |     |       | A     | A     |
| Approach Delay          |       | 37.0  |       |       | 30.9  |     |       | 16.8  |     |       | 3.2   |       |
| Approach LOS            |       | D     |       |       | C     |     |       | B     |     |       | A     |       |
| 90th %ile Green (s)     | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  |     | 68.0  | 68.0  |     | 68.0  | 68.0  | 68.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  |     | 68.0  | 68.0  |     | 68.0  | 68.0  | 68.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 9.4   | 9.4   | 9.4   | 9.4   | 9.4   |     | 69.3  | 69.3  |     | 69.3  | 69.3  | 69.3  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Coord | Coord |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 7.4   | 7.4   | 7.4   | 7.4   | 7.4   |     | 71.3  | 71.3  |     | 71.3  | 71.3  | 71.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Coord | Coord |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 83.0  | 83.0  |     | 83.0  | 83.0  | 83.0  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  |     | Coord | Coord |     | Coord | Coord | Coord |
| Stops (vph)             |       | 67    | 17    |       | 19    |     | 13    | 610   |     |       | 136   | 5     |
| Fuel Used(gal)          |       | 2     | 1     |       | 1     |     | 2     | 39    |     |       | 14    | 1     |
| CO Emissions (g/hr)     |       | 114   | 59    |       | 40    |     | 118   | 2759  |     |       | 948   | 93    |
| NOx Emissions (g/hr)    |       | 22    | 11    |       | 8     |     | 23    | 537   |     |       | 184   | 18    |
| VOC Emissions (g/hr)    |       | 26    | 14    |       | 9     |     | 27    | 640   |     |       | 220   | 22    |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 1     |     | 0     | 46    |     |       | 19    | 0     |
| Queue Length 50th (ft)  |       | 43    | 0     |       | 10    |     | 6     | 339   |     |       | 47    | 0     |
| Queue Length 95th (ft)  |       | #88   | 42    |       | 35    |     | m16   | m396  |     |       | 106   | m2    |
| Internal Link Dist (ft) |       | 721   |       |       | 1419  |     |       | 3994  |     |       | 1812  |       |
| Turn Bay Length (ft)    |       |       | 30    |       |       |     | 50    |       |     |       |       | 50    |
| Base Capacity (vph)     |       | 150   | 240   |       | 191   |     | 277   | 1445  |     |       | 1417  | 1139  |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Reduced v/c Ratio       |       | 0.51  | 0.36  |       | 0.14  |     | 0.19  | 0.71  |     |       | 0.70  | 0.10  |

Intersection Summary

Area Type: Other

# Lanes, Volumes, Timings

## 214: DD/Abbe Rd

07/07/2020




















Cycle Length: 90  
Actuated Cycle Length: 90  
Offset: 36 (40%), Referenced to phase 2:NBSB, Start of Yellow  
Natural Cycle: 60  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.71  
Intersection Signal Delay: 12.1 Intersection LOS: B  
Intersection Capacity Utilization 81.7% ICU Level of Service D  
Analysis Period (min) 15  
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.  
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 214: DD/Abbe Rd



Lanes, Volumes, Timings  
215: S Water St

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|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)       | 30  | 5   | 129   | 5   | 5   | 5   | 91  | 885   | 2   | 5   | 1204  | 13  |
| Future Volume (vph)        | 30  | 5   | 129   | 5   | 5   | 5   | 91  | 885   | 2   | 5   | 1204  | 13  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 300   | 0   |   | 0   | 150   |   | 0   | 320   |   | 0   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 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   |   | 0.955   |   |   |   |   |   |   | 0.998   |
| Flt Protected              |   | 0.958   |   |   | 0.984   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1820  | 1599  | 0   | 1785  | 0   | 1719  | 1760  | 0   | 1805  | 1773  | 0   |
| Flt Permitted              |   | 0.743   |   |   | 0.874   |   | 0.060   |   |   | 0.233   |   |   |
| Satd. Flow (perm)          | 0   | 1412  | 1599  | 0   | 1586  | 0   | 109   | 1760  | 0   | 443   | 1773  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 140   |   | 5   |   |   |   |   |   |   | 1   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |   | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 1143  |   |   | 286   |   |   | 2334  |   |   | 1410  |   |
| Travel Time (s)            |   | 26.0  |   |   | 6.5   |   |   | 35.4  |   |   | 21.4  |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 1%  | 0%  | 0%  | 0%  | 5%  | 8%  | 0%  | 0%  | 7%  | 0%  |
| Adj. Flow (vph)            | 33  | 5   | 140   | 5   | 5   | 5   | 99  | 962   | 2   | 5   | 1309  | 14  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 38  | 140   | 0   | 15  | 0   | 99  | 964   | 0   | 5   | 1323  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |   | 12  |   |   | 12  |   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   | 0   |   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   | 16  |   |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   |   | 1   | 0   |   | 1   | 0   |   |
| Detector Template          | Left  |   | Right   | Left  |   |   |   |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 45  | 20  | 20  | 45  |   | 15  | 0   |   | 15  | 0   |   |
| Trailing Detector (ft)     | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Position(ft)    | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Size(ft)        | 20  | 50  | 20  | 20  | 50  |   | 20  | 6   |   | 20  | 6   |   |
| 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   |   |
| Turn Type                  | Perm  | NA  | Perm  | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases           |   | 4   |   |   | 4   |   | 1   | 6   |   | 5   | 2   |   |
| Permitted Phases           | 4   |   | 4   | 4   |   |   | 6   |   |   | 2   |   |   |
| Detector Phase             | 4   | 4   | 4   | 4   | 4   |   | 1   |   |   | 5   |   |   |
| Switch Phase               |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   | 5.0   | 15.0  |   | 5.0   | 15.0  |   |
| Minimum Split (s)          | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |   | 9.0   | 22.3  |   | 9.0   | 22.3  |   |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  |     | 9.0   | 70.1  |     | 9.0   | 70.1  |     |
| Total Split (%)         | 12.1% | 12.1% | 12.1% | 12.1% | 12.1% |     | 10.0% | 77.9% |     | 10.0% | 77.9% |     |
| Maximum Green (s)       | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 62.8  |     | 5.0   | 62.8  |     |
| Yellow Time (s)         | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |     | 1.0   | 2.5   |     | 1.0   | 2.5   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.1   | 5.1   |       | 5.1   |     | 4.0   | 7.3   |     | 4.0   | 7.3   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 3.0   |     | 1.5   | 3.0   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Max |     | None  | C-Max |     |
| Act Effct Green (s)     |       | 5.5   | 5.5   |       | 5.5   |     | 74.6  | 70.3  |     | 72.2  | 64.9  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  |     | 0.83  | 0.78  |     | 0.80  | 0.72  |     |
| v/c Ratio               |       | 0.44  | 0.61  |       | 0.15  |     | 0.55  | 0.70  |     | 0.01  | 1.04  |     |
| Control Delay           |       | 57.0  | 19.6  |       | 35.7  |     | 21.6  | 11.6  |     | 0.4   | 49.4  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 57.0  | 19.6  |       | 35.7  |     | 21.6  | 11.6  |     | 0.4   | 49.4  |     |
| LOS                     |       | E     | B     |       | D     |     | C     | B     |     | A     | D     |     |
| Approach Delay          |       | 27.6  |       |       | 35.7  |     |       | 12.6  |     |       | 49.2  |     |
| Approach LOS            |       | C     |       |       | D     |     |       | B     |     |       | D     |     |
| 90th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 62.8  |     | 5.0   | 62.8  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 71.8  |     | 0.0   | 62.8  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 71.8  |     | 0.0   | 62.8  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 5.2   | 5.2   | 5.2   | 5.2   | 5.2   |     | 5.0   | 72.4  |     | 0.0   | 63.4  |     |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Min   | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 0.0   | 72.6  |     | 0.0   | 72.6  |     |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             |       | 35    | 25    |       | 13    |     | 56    | 549   |     | 0     | 862   |     |
| Fuel Used(gal)          |       | 1     | 2     |       | 0     |     | 2     | 22    |     | 0     | 36    |     |
| CO Emissions (g/hr)     |       | 64    | 126   |       | 14    |     | 173   | 1563  |     | 4     | 2530  |     |
| NOx Emissions (g/hr)    |       | 12    | 25    |       | 3     |     | 34    | 304   |     | 1     | 492   |     |
| VOC Emissions (g/hr)    |       | 15    | 29    |       | 3     |     | 40    | 362   |     | 1     | 586   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 40    |     | 0     | 46    |     |
| Queue Length 50th (ft)  |       | 21    | 0     |       | 5     |     | 8     | 355   |     | 0     | ~862  |     |
| Queue Length 95th (ft)  |       | #54   | #58   |       | 25    |     | m24   | 713   |     | m0    | #330  |     |
| Internal Link Dist (ft) |       | 1063  |       |       | 206   |     |       | 2254  |     |       | 1330  |     |
| Turn Bay Length (ft)    |       |       | 300   |       |       |     | 150   |       |     | 320   |       |     |
| Base Capacity (vph)     |       | 90    | 234   |       | 106   |     | 179   | 1374  |     | 430   | 1278  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 0.42  | 0.60  |       | 0.14  |     | 0.55  | 0.70  |     | 0.01  | 1.04  |     |

Intersection Summary

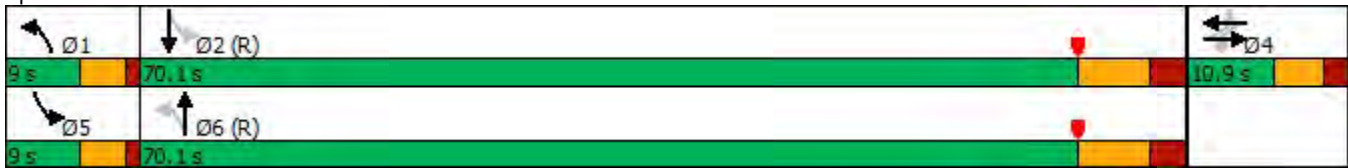
Area Type: Other  
Cycle Length: 90

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

















Actuated Cycle Length: 90  
 Offset: 71 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 32.6 Intersection LOS: C  
 Intersection Capacity Utilization 90.9% ICU Level of Service E  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

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|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |   |   |  |  |  |  |   |  |  |   |
| Traffic Volume (vph)       | 4   | 2   | 2   | 63  | 0   | 28  | 5   | 950   | 57  | 14  | 949   | 1   |
| Future Volume (vph)        | 4   | 2   | 2   | 63  | 0   | 28  | 5   | 950   | 57  | 14  | 949   | 1   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 12  | 8   | 8   | 12  | 12  | 8   | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 50  |   | 0   | 50  |   | 0   |
| Storage Lanes              | 0   |   | 0   | 0   |   | 1   | 1   |   | 0   | 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  |
| Ped Bike Factor            |   | 0.99  |   |   | 1.00  | 0.98  |   |   |   |   |   |   |
| Frt                        |   | 0.966   |   |   |   | 0.850   |   | 0.992   |   |   |   |   |
| Flt Protected              |   | 0.976   |   |   | 0.950   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1780  | 0   | 0   | 1612  | 1400  | 1564  | 1744  | 0   | 1448  | 1776  | 0   |
| Flt Permitted              |   | 0.851   |   |   | 0.752   |   | 0.225   |   |   | 0.199   |   |   |
| Satd. Flow (perm)          | 0   | 1549  | 0   | 0   | 1269  | 1365  | 371   | 1744  | 0   | 303   | 1776  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   | 2   |   |   |   | 41  |   | 11  |   |   |   |   |
| Link Speed (mph)           |   | 30  |   |   | 35  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 411   |   |   | 816   |   |   | 1892  |   |   |   | 693   |
| Travel Time (s)            |   | 9.3   |   |   | 15.9  |   |   | 28.7  |   |   |   | 10.5  |
| Confl. Peds. (#/hr)        | 1   |   | 1   | 1   |   | 1   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 0%  | 12%   | 0%  | 0%  | 0%  | 8%  | 9%  | 8%  | 7%  | 0%  |
| Adj. Flow (vph)            | 4   | 2   | 2   | 68  | 0   | 30  | 5   | 1033  | 62  | 15  | 1032  | 1   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 8   | 0   | 0   | 68  | 30  | 5   | 1095  | 0   | 15  | 1033  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |   | 8   |   |   | 8   |   |
| 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  | 1.20  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15  |   | 9   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   |   | 1   | 1   | 1   | 0   | 0   |   | 0   | 0   |   |
| Detector Template          | Left  |   |   | Left  |   | Right   |   |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 12  |   | 20  | 36  | 20  | 0   | 0   |   | 0   | 0   |   |
| 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  | 12  |   | 20  | 36  | 20  | 20  | 36  |   | 20  | 6   |   |
| 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   |   |
| Turn Type                  | Perm  | NA  |   | Perm  | NA  | Perm  | Perm  | NA  |   | Perm  | NA  |   |
| Protected Phases           |   | 4   |   |   | 4   |   |   | 2   |   |   | 2   |   |
| Permitted Phases           | 4   |   |   | 4   |   | 4   | 2   |   |   | 2   |   |   |
| Detector Phase             | 4   | 4   |   | 4   | 4   | 4   |   |   |   |   |   |   |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Switch Phase            |       |       |     |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Minimum Split (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 21.4  | 21.4  |     | 21.4  | 21.4  |     |
| Total Split (s)         | 13.0  | 13.0  |     | 13.0  | 13.0  | 13.0  | 77.0  | 77.0  |     | 77.0  | 77.0  |     |
| Total Split (%)         | 14.4% | 14.4% |     | 14.4% | 14.4% | 14.4% | 85.6% | 85.6% |     | 85.6% | 85.6% |     |
| Maximum Green (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.6   | 1.6   |     | 1.6   | 1.6   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.0   |     |       | 4.0   | 4.0   | 6.4   | 6.4   |     | 6.4   | 6.4   |     |
| Lead/Lag                | Lag   | Lag   |     | Lag   | Lag   | Lag   | Lead  | Lead  |     | Lead  | Lead  |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   |     | 1.5   | 1.5   | 1.5   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 7.8   |     |       | 7.8   | 7.8   | 74.9  | 74.9  |     | 74.9  | 74.9  |     |
| Actuated g/C Ratio      |       | 0.09  |     |       | 0.09  | 0.09  | 0.83  | 0.83  |     | 0.83  | 0.83  |     |
| v/c Ratio               |       | 0.06  |     |       | 0.62  | 0.19  | 0.02  | 0.75  |     | 0.06  | 0.70  |     |
| Control Delay           |       | 33.9  |     |       | 64.2  | 11.9  | 3.2   | 8.9   |     | 0.5   | 2.0   |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 33.9  |     |       | 64.2  | 11.9  | 3.2   | 8.9   |     | 0.5   | 2.0   |     |
| LOS                     |       | C     |     |       | E     | B     | A     | A     |     | A     | A     |     |
| Approach Delay          |       | 33.9  |     |       | 48.2  |       |       | 8.9   |     |       | 2.0   |     |
| Approach LOS            |       | C     |     |       | D     |       |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 8.9   | 8.9   |     | 8.9   | 8.9   | 8.9   | 70.7  | 70.7  |     | 70.7  | 70.7  |     |
| 50th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 72.6  | 72.6  |     | 72.6  | 72.6  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.6  | 83.6  |     | 83.6  | 83.6  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 8     |     |       | 58    | 7     | 2     | 434   |     | 0     | 14    |     |
| Fuel Used(gal)          |       | 0     |     |       | 2     | 0     | 0     | 20    |     | 0     | 9     |     |
| CO Emissions (g/hr)     |       | 8     |     |       | 114   | 20    | 6     | 1369  |     | 8     | 604   |     |
| NOx Emissions (g/hr)    |       | 2     |     |       | 22    | 4     | 1     | 266   |     | 2     | 118   |     |
| VOC Emissions (g/hr)    |       | 2     |     |       | 26    | 5     | 1     | 317   |     | 2     | 140   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 3     | 0     | 0     | 66    |     | 0     | 22    |     |
| Queue Length 50th (ft)  |       | 3     |     |       | 38    | 0     | 0     | 119   |     | 0     | 5     |     |
| Queue Length 95th (ft)  |       | 17    |     |       | #90   | 20    | m1    | 567   |     | m0    | 16    |     |
| Internal Link Dist (ft) |       | 331   |     |       | 736   |       |       | 1812  |     |       | 613   |     |
| Turn Bay Length (ft)    |       |       |     |       |       | 50    | 50    |       |     | 50    |       |     |
| Base Capacity (vph)     |       | 156   |     |       | 126   | 173   | 309   | 1453  |     | 252   | 1478  |     |
| Starvation Cap Reductn  |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 0.05  |     |       | 0.54  | 0.17  | 0.02  | 0.75  |     | 0.06  | 0.70  |     |

Lanes, Volumes, Timings  
 216: Stoughton Rd

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Intersection Summary

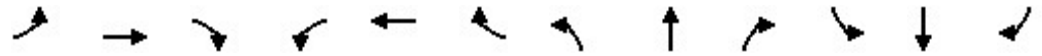
|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 14 (16%), Referenced to phase 2:NBSB, Start of Yellow   |
| Natural Cycle:                    | 60  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.75  |
| Intersection Signal Delay:        | 7.5   |
| Intersection LOS:                 | A   |
| Intersection Capacity Utilization | 73.8%   |
| ICU Level of Service              | D   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 216: Stoughton Rd



Lanes, Volumes, Timings  
219: Bridge St (CT-140)

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| Lane Group                 | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT  | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations        |      | ↗     |       | ↖     | ↖     |       |      |      |       |       | ↗     | ↗     |
| Traffic Volume (vph)       | 0    | 247   | 310   | 386   | 672   | 0     | 0    | 0    | 0     | 191   | 0     | 206   |
| Future Volume (vph)        | 0    | 247   | 310   | 386   | 672   | 0     | 0    | 0    | 0     | 191   | 0     | 206   |
| Ideal Flow (vphp)          | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0    |       | 0     | 0     |       | 0     | 0    |      | 0     | 0     |       | 50    |
| Storage Lanes              | 0    |       | 0     | 1     |       | 0     | 0    |      | 0     | 0     |       | 1     |
| 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                        |      | 0.925 |       |       |       |       |      |      |       |       |       | 0.850 |
| Flt Protected              |      |       |       | 0.950 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (prot)          | 0    | 1723  | 0     | 1770  | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Flt Permitted              |      |       |       | 0.250 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (perm)          | 0    | 1723  | 0     | 466   | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Right Turn on Red          |      |       | Yes   |       |       | Yes   |      |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      | 86    |       |       |       |       |      |      |       |       |       | 154   |
| Link Speed (mph)           |      | 30    |       |       | 35    |       |      | 30   |       |       |       | 30    |
| Link Distance (ft)         |      | 684   |       |       | 478   |       |      | 428  |       |       |       | 360   |
| Travel Time (s)            |      | 15.5  |       |       | 9.3   |       |      | 9.7  |       |       |       | 8.2   |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 0    | 268   | 337   | 420   | 730   | 0     | 0    | 0    | 0     | 208   | 0     | 224   |
| Shared Lane Traffic (%)    |      |       |       |       |       |       |      |      |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 605   | 0     | 420   | 730   | 0     | 0    | 0    | 0     | 0     | 208   | 224   |
| Enter Blocked Intersection | No   | No    | No    | No    | No    | No    | No   | No   | No    | No    | No    | No    |
| Lane Alignment             | Left | Left  | Right | Left  | Left  | Right | Left | Left | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0     |       |       | 12    |       |      | 0    |       |       |       | 0     |
| Link Offset(ft)            |      | 0     |       |       | 0     |       |      | 0    |       |       |       | 0     |
| Crosswalk Width(ft)        |      | 16    |       |       | 16    |       |      | 16   |       |       |       | 16    |
| Two way Left Turn Lane     |      |       |       |       |       |       |      |      |       |       |       |       |
| Headway Factor             | 1.00 | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        |      | 0     |       | 1     | 0     |       |      |      |       | 1     | 1     | 1     |
| Detector Template          |      |       |       |       |       |       |      |      |       | Left  |       |       |
| Leading Detector (ft)      |      | 0     |       | 36    | 0     |       |      |      |       | 20    | 15    | 15    |
| Trailing Detector (ft)     |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        |      | 6     |       | 36    | 6     |       |      |      |       | 20    | 15    | 15    |
| Detector 1 Type            |      | 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   |
| Detector 1 Queue (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 6.0   | 6.0   |
| Turn Type                  |      | NA    |       | D,P+P | NA    |       |      |      |       | Split | NA    | Prot  |
| Protected Phases           |      | 2     |       | 3     | 3 2   |       |      |      |       | 4     | 4     | 4     |
| Permitted Phases           |      |       |       | 2     |       |       |      |      |       |       |       |       |
| Detector Phase             |      |       |       | 3     |       |       |      |      |       | 4     | 4     | 4     |
| Switch Phase               |      |       |       |       |       |       |      |      |       |       |       |       |
| Minimum Initial (s)        |      | 20.0  |       | 5.0   |       |       |      |      |       | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)          |      | 25.5  |       | 9.9   |       |       |      |      |       | 10.3  | 10.3  | 10.3  |
| Total Split (s)            |      | 43.0  |       | 27.0  |       |       |      |      |       | 20.0  | 20.0  | 20.0  |

Lanes, Volumes, Timings  
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| Lane Group              | EBL | EBT   | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR   |
|-------------------------|-----|-------|-----|-------|------|-----|-----|-----|-----|-------|-------|-------|
| Total Split (%)         |     | 47.8% |     | 30.0% |      |     |     |     |     | 22.2% | 22.2% | 22.2% |
| Maximum Green (s)       |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| Yellow Time (s)         |     | 4.5   |     | 3.9   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        |     | 1.0   |     | 1.0   |      |     |     |     |     | 2.3   | 2.3   | 2.3   |
| Lost Time Adjust (s)    |     | 0.0   |     | 0.0   |      |     |     |     |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |     | 5.5   |     | 4.9   |      |     |     |     |     |       | 5.3   | 5.3   |
| Lead/Lag                |     | Lead  |     | Lag   |      |     |     |     |     |       |       |       |
| Lead-Lag Optimize?      |     |       |     |       |      |     |     |     |     |       |       |       |
| Vehicle Extension (s)   |     | 3.0   |     | 2.0   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             |     | C-Max |     | None  |      |     |     |     |     | None  | None  | None  |
| Act Effect Green (s)    |     | 43.0  |     | 60.8  | 65.7 |     |     |     |     |       | 14.1  | 14.1  |
| Actuated g/C Ratio      |     | 0.48  |     | 0.68  | 0.73 |     |     |     |     |       | 0.16  | 0.16  |
| v/c Ratio               |     | 0.70  |     | 0.75  | 0.54 |     |     |     |     |       | 0.75  | 0.59  |
| Control Delay           |     | 22.6  |     | 16.8  | 7.1  |     |     |     |     |       | 53.9  | 19.1  |
| Queue Delay             |     | 0.0   |     | 0.2   | 0.1  |     |     |     |     |       | 0.0   | 0.0   |
| Total Delay             |     | 22.6  |     | 17.0  | 7.1  |     |     |     |     |       | 53.9  | 19.1  |
| LOS                     |     | C     |     | B     | A    |     |     |     |     |       | D     | B     |
| Approach Delay          |     | 22.6  |     |       | 10.7 |     |     |     |     |       | 35.8  |       |
| Approach LOS            |     | C     |     |       | B    |     |     |     |     |       | D     |       |
| 90th %ile Green (s)     |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| 90th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 70th %ile Green (s)     |     | 37.5  |     | 21.2  |      |     |     |     |     | 15.6  | 15.6  | 15.6  |
| 70th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Max   | Max   | Max   |
| 50th %ile Green (s)     |     | 40.1  |     | 18.1  |      |     |     |     |     | 16.1  | 16.1  | 16.1  |
| 50th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     |     | 45.7  |     | 14.8  |      |     |     |     |     | 13.8  | 13.8  | 13.8  |
| 30th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     |     | 54.1  |     | 9.8   |      |     |     |     |     | 10.4  | 10.4  | 10.4  |
| 10th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| Stops (vph)             |     | 382   |     | 220   | 177  |     |     |     |     |       | 173   | 70    |
| Fuel Used(gal)          |     | 8     |     | 4     | 5    |     |     |     |     |       | 4     | 2     |
| CO Emissions (g/hr)     |     | 534   |     | 301   | 323  |     |     |     |     |       | 251   | 123   |
| NOx Emissions (g/hr)    |     | 104   |     | 59    | 63   |     |     |     |     |       | 49    | 24    |
| VOC Emissions (g/hr)    |     | 124   |     | 70    | 75   |     |     |     |     |       | 58    | 29    |
| Dilemma Vehicles (#)    |     | 0     |     | 0     | 77   |     |     |     |     |       | 0     | 0     |
| Queue Length 50th (ft)  |     | 238   |     | 68    | 118  |     |     |     |     |       | 111   | 35    |
| Queue Length 95th (ft)  |     | #406  |     | 71    | 114  |     |     |     |     |       | #212  | 107   |
| Internal Link Dist (ft) |     | 604   |     |       | 398  |     |     | 348 |     |       | 280   |       |
| Turn Bay Length (ft)    |     |       |     |       |      |     |     |     |     |       |       | 50    |
| Base Capacity (vph)     |     | 868   |     | 660   | 1359 |     |     |     |     |       | 298   | 394   |
| Starvation Cap Reductn  |     | 0     |     | 23    | 63   |     |     |     |     |       | 0     | 0     |
| Spillback Cap Reductn   |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Storage Cap Reductn     |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Reduced v/c Ratio       |     | 0.70  |     | 0.66  | 0.56 |     |     |     |     |       | 0.70  | 0.57  |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Lanes, Volumes, Timings  
 219: Bridge St (CT-140)

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Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 19.0 Intersection LOS: B  
 Intersection Capacity Utilization 77.0% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings  
220: Bridge St (CT-140)

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| Lane Group                 | EBL    | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR    | SBL  | SBT  | SBR   |
|----------------------------|--------|-------|-------|------|-------|-------|-------|-------|--------|------|------|-------|
| Lane Configurations        |        | ↕↕    |       |      | ↕↕    |       |       | ↕     | ↕↕     |      |      |       |
| Traffic Volume (vph)       | 164    | 274   | 0     | 0    | 946   | 234   | 112   | 0     | 368    | 0    | 0    | 0     |
| Future Volume (vph)        | 164    | 274   | 0     | 0    | 946   | 234   | 112   | 0     | 368    | 0    | 0    | 0     |
| Ideal Flow (vphpl)         | 1900   | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900   | 1900 | 1900 | 1900  |
| Storage Length (ft)        | 0      |       | 0     | 0    |       | 0     | 250   |       | 300    | 0    |      | 0     |
| Storage Lanes              | 0      |       | 0     | 0    |       | 0     | 1     |       | 1      | 0    |      | 0     |
| Taper Length (ft)          | 25     |       |       | 25   |       |       | 25    |       |        | 25   |      |       |
| Lane Util. Factor          | 0.95   | 0.95  | 1.00  | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 0.88   | 1.00 | 1.00 | 1.00  |
| Frt                        |        |       |       |      | 0.970 |       |       |       | 0.850  |      |      |       |
| Flt Protected              |        | 0.982 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (prot)          | 0      | 3476  | 0     | 0    | 3433  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Flt Permitted              |        | 0.535 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (perm)          | 0      | 1893  | 0     | 0    | 3433  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Right Turn on Red          |        |       | Yes   |      |       | Yes   |       |       | Yes    |      |      | Yes   |
| Satd. Flow (RTOR)          |        |       |       |      | 53    |       |       |       | 400    |      |      |       |
| Link Speed (mph)           |        | 35    |       |      | 35    |       |       | 30    |        |      | 30   |       |
| Link Distance (ft)         |        | 478   |       |      | 323   |       |       | 585   |        |      | 321  |       |
| Travel Time (s)            |        | 9.3   |       |      | 6.3   |       |       | 13.3  |        |      | 7.3  |       |
| Peak Hour Factor           | 0.92   | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92 | 0.92 | 0.92  |
| Adj. Flow (vph)            | 178    | 298   | 0     | 0    | 1028  | 254   | 122   | 0     | 400    | 0    | 0    | 0     |
| Shared Lane Traffic (%)    |        |       |       |      |       |       |       |       |        |      |      |       |
| Lane Group Flow (vph)      | 0      | 476   | 0     | 0    | 1282  | 0     | 0     | 122   | 400    | 0    | 0    | 0     |
| Enter Blocked Intersection | No     | No    | No    | No   | No    | No    | No    | No    | No     | No   | No   | No    |
| Lane Alignment             | Left   | Left  | Right | Left | Left  | Right | Left  | Left  | Right  | Left | Left | Right |
| Median Width(ft)           |        | 0     |       |      | 6     |       |       | 0     |        |      | 0    |       |
| Link Offset(ft)            |        | 0     |       |      | 0     |       |       | 0     |        |      | 0    |       |
| Crosswalk Width(ft)        |        | 16    |       |      | 16    |       |       | 16    |        |      | 16   |       |
| Two way Left Turn Lane     |        |       |       |      |       |       |       |       |        |      |      |       |
| Headway Factor             | 1.00   | 1.00  | 1.00  | 1.00 | 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      | 15   |      | 9     |
| Number of Detectors        | 1      | 2     |       |      | 0     |       | 1     | 1     | 1      |      |      |       |
| Detector Template          | Left   | Thru  |       |      |       |       | Left  |       |        |      |      |       |
| Leading Detector (ft)      | 20     | 100   |       |      | 0     |       | 20    | 6     | 21     |      |      |       |
| Trailing Detector (ft)     | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Position(ft)    | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Size(ft)        | 20     | 6     |       |      | 6     |       | 20    | 6     | 24     |      |      |       |
| Detector 1 Type            | 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    |      |      |       |
| Detector 1 Queue (s)       | 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   | 9.0    |      |      |       |
| Detector 2 Position(ft)    |        | 94    |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Size(ft)        |        | 6     |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Type            |        | Cl+Ex |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Channel         |        |       |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Extend (s)      |        | 0.0   |       |      |       |       |       |       |        |      |      |       |
| Turn Type                  | custom | NA    |       |      | NA    |       | Split | NA    | custom |      |      |       |
| Protected Phases           | 3      | 2 3   |       |      | 2 5   |       | 4     | 4     | 4 5    |      |      |       |
| Permitted Phases           | 2      |       |       |      |       |       |       |       |        |      |      |       |

| Lane Group                 | Ø2 | Ø5 |
|----------------------------|----|----|
| 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           |    |    |
| 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           | 2  | 5  |
| Permitted Phases           |    |    |

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| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-----|-----|
| Detector Phase          | 3     | 3    |     |     |      |     | 4     | 4     | 5    |     |     |     |
| Switch Phase            |       |      |     |     |      |     |       |       |      |     |     |     |
| Minimum Initial (s)     | 5.0   |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| Minimum Split (s)       | 10.4  |      |     |     |      |     | 12.1  | 12.1  |      |     |     |     |
| Total Split (s)         | 16.4  |      |     |     |      |     | 18.4  | 18.4  |      |     |     |     |
| Total Split (%)         | 18.2% |      |     |     |      |     | 20.4% | 20.4% |      |     |     |     |
| Maximum Green (s)       | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| Yellow Time (s)         | 4.1   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| All-Red Time (s)        | 1.3   |      |     |     |      |     | 2.1   | 2.1   |      |     |     |     |
| Lost Time Adjust (s)    |       |      |     |     |      |     |       | 0.0   |      |     |     |     |
| Total Lost Time (s)     |       |      |     |     |      |     |       | 5.1   |      |     |     |     |
| Lead/Lag                | Lag   |      |     |     |      |     | Lead  | Lead  |      |     |     |     |
| Lead-Lag Optimize?      |       |      |     |     |      |     |       |       |      |     |     |     |
| Vehicle Extension (s)   | 2.5   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| Recall Mode             | Max   |      |     |     |      |     | None  | None  |      |     |     |     |
| Act Effct Green (s)     |       | 50.3 |     |     | 51.1 |     |       | 10.9  | 21.6 |     |     |     |
| Actuated g/C Ratio      |       | 0.56 |     |     | 0.57 |     |       | 0.12  | 0.24 |     |     |     |
| v/c Ratio               |       | 0.39 |     |     | 0.65 |     |       | 0.57  | 0.41 |     |     |     |
| Control Delay           |       | 13.9 |     |     | 8.2  |     |       | 47.4  | 4.2  |     |     |     |
| Queue Delay             |       | 0.0  |     |     | 0.0  |     |       | 0.0   | 0.0  |     |     |     |
| Total Delay             |       | 13.9 |     |     | 8.2  |     |       | 47.4  | 4.2  |     |     |     |
| LOS                     |       | B    |     |     | A    |     |       | D     | A    |     |     |     |
| Approach Delay          |       | 13.9 |     |     | 8.2  |     |       | 14.3  |      |     |     |     |
| Approach LOS            |       | B    |     |     | A    |     |       | B     |      |     |     |     |
| 90th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 90th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 70th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 70th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 50th %ile Green (s)     | 11.0  |      |     |     |      |     | 11.5  | 11.5  |      |     |     |     |
| 50th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| 30th %ile Green (s)     | 11.0  |      |     |     |      |     | 9.6   | 9.6   |      |     |     |     |
| 30th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| 10th %ile Green (s)     | 11.0  |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| 10th %ile Term Code     | MaxR  |      |     |     |      |     | Min   | Min   |      |     |     |     |
| Stops (vph)             |       | 263  |     |     | 440  |     |       | 103   | 33   |     |     |     |
| Fuel Used(gal)          |       | 5    |     |     | 8    |     |       | 2     | 2    |     |     |     |
| CO Emissions (g/hr)     |       | 330  |     |     | 561  |     |       | 151   | 152  |     |     |     |
| NOx Emissions (g/hr)    |       | 64   |     |     | 109  |     |       | 29    | 30   |     |     |     |
| VOC Emissions (g/hr)    |       | 77   |     |     | 130  |     |       | 35    | 35   |     |     |     |
| Dilemma Vehicles (#)    |       | 75   |     |     | 78   |     |       | 0     | 0    |     |     |     |
| Queue Length 50th (ft)  |       | 67   |     |     | 95   |     |       | 66    | 0    |     |     |     |
| Queue Length 95th (ft)  |       | 128  |     |     | m102 |     |       | 119   | 36   |     |     |     |
| Internal Link Dist (ft) |       | 398  |     |     | 243  |     |       | 505   |      |     | 241 |     |
| Turn Bay Length (ft)    |       |      |     |     |      |     |       |       | 300  |     |     |     |
| Base Capacity (vph)     |       | 1231 |     |     | 1970 |     |       | 261   | 1018 |     |     |     |
| Starvation Cap Reductn  |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Spillback Cap Reductn   |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Storage Cap Reductn     |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Reduced v/c Ratio       |       | 0.39 |     |     | 0.65 |     |       | 0.47  | 0.39 |     |     |     |

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| Lane Group              | Ø2    | Ø5   |
|-------------------------|-------|------|
| Detector Phase          |       |      |
| Switch Phase            |       |      |
| Minimum Initial (s)     | 15.0  | 5.0  |
| Minimum Split (s)       | 21.5  | 10.7 |
| Total Split (s)         | 42.8  | 12.4 |
| Total Split (%)         | 48%   | 14%  |
| Maximum Green (s)       | 36.3  | 6.7  |
| Yellow Time (s)         | 4.5   | 4.5  |
| All-Red Time (s)        | 2.0   | 1.2  |
| Lost Time Adjust (s)    |       |      |
| Total Lost Time (s)     |       |      |
| Lead/Lag                | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |
| Vehicle Extension (s)   | 3.0   | 1.5  |
| Recall Mode             | C-Max | None |
| 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)     | 38.0  | 5.0  |
| 90th %ile Term Code     | Coord | Min  |
| 70th %ile Green (s)     | 38.0  | 5.0  |
| 70th %ile Term Code     | Coord | Min  |
| 50th %ile Green (s)     | 39.8  | 5.0  |
| 50th %ile Term Code     | Coord | Min  |
| 30th %ile Green (s)     | 41.7  | 5.0  |
| 30th %ile Term Code     | Coord | Min  |
| 10th %ile Green (s)     | 44.3  | 5.0  |
| 10th %ile Term Code     | Coord | Min  |
| 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)     |       |      |
| Starvation Cap Reductn  |       |      |
| Spillback Cap Reductn   |       |      |
| Storage Cap Reductn     |       |      |
| Reduced v/c Ratio       |       |      |

Lanes, Volumes, Timings  
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Intersection Summary

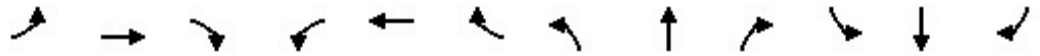
|   |   |
|---|---|
| Area Type:  | Other   |
| Cycle Length:   | 90  |
| Actuated Cycle Length:  | 90  |
| Offset:   | 32 (36%), Referenced to phase 2:EBWB, Start of Yellow |
| Natural Cycle:  | 60  |
| Control Type:   | Actuated-Coordinated                                  |
| Maximum v/c Ratio:  | 0.65  |
| Intersection Signal Delay:  | 10.8  |
| Intersection LOS:   | B   |
| Intersection Capacity Utilization:                                | 67.4%   |
| ICU Level of Service:   | C   |
| Analysis Period (min):  | 15  |
| m Volume for 95th percentile queue is metered by upstream signal. |   |

Splits and Phases: 220: Bridge St (CT-140)



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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↕     |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 6     | 41    | 4     | 6     | 47    | 10    | 16    | 862   | 104   | 184   | 954   | 23    |
| Future Volume (vph)        | 6     | 41    | 4     | 6     | 47    | 10    | 16    | 862   | 104   | 184   | 954   | 23    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 0     |       | 0     | 0     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Frt                        |       | 0.990 |       |       |       | 0.850 |       | 0.984 |       |       | 0.997 |       |
| Flt Protected              |       | 0.994 |       |       | 0.994 |       |       | 0.999 |       |       | 0.992 |       |
| Satd. Flow (prot)          | 0     | 1572  | 0     | 0     | 1774  | 1482  | 0     | 3278  | 0     | 0     | 3278  | 0     |
| Flt Permitted              |       | 0.945 |       |       | 0.969 |       |       | 0.922 |       |       | 0.607 |       |
| Satd. Flow (perm)          | 0     | 1495  | 0     | 0     | 1729  | 1482  | 0     | 3026  | 0     | 0     | 2006  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 3     |       |       |       | 46    |       | 48    |       |       | 7     |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 484   |       |       | 1094  |       |       | 527   |       |       | 557   |       |
| Travel Time (s)            |       | 13.2  |       |       | 29.8  |       |       | 8.0   |       |       | 8.4   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 100%  | 8%    | 0%    | 10%   | 6%    | 9%    | 8%    | 9%    | 2%    | 3%    | 10%   | 11%   |
| Adj. Flow (vph)            | 7     | 45    | 4     | 7     | 51    | 11    | 17    | 937   | 113   | 200   | 1037  | 25    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 56    | 0     | 0     | 58    | 11    | 0     | 1067  | 0     | 0     | 1262  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 1     | 0     |       | 1     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right | Left  |       |       | Left  |       |       |
| Leading Detector (ft)      | 20    | 15    |       | 20    | 20    | 20    | 20    | 0     |       | 20    | 0     |       |
| 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    | 15    |       | 20    | 20    | 20    | 20    | 6     |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       |       | 2     |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          | 11.7  | 11.7  |       | 11.7  | 11.7  | 11.7  | 21.8  | 21.8  |       | 21.8  | 21.8  |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 12.0  | 12.0  |     | 12.0  | 12.0  | 12.0  | 78.0  | 78.0  |     | 78.0  | 78.0  |     |
| Total Split (%)         | 13.3% | 13.3% |     | 13.3% | 13.3% | 13.3% | 86.7% | 86.7% |     | 86.7% | 86.7% |     |
| Maximum Green (s)       | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.7   | 1.7   |     | 1.7   | 1.7   | 1.7   | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |       | 4.7   |     |       | 4.7   | 4.7   |       | 6.8   |     |       | 6.8   |     |
| Lead/Lag                |       |       |     |       |       |       |       |       |     |       |       |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effect Green (s)    |       | 7.2   |     |       | 7.2   | 7.2   |       | 75.0  |     |       | 75.0  |     |
| Actuated g/C Ratio      |       | 0.08  |     |       | 0.08  | 0.08  |       | 0.83  |     |       | 0.83  |     |
| v/c Ratio               |       | 0.46  |     |       | 0.42  | 0.07  |       | 0.42  |     |       | 0.75  |     |
| Control Delay           |       | 50.5  |     |       | 49.2  | 0.8   |       | 2.9   |     |       | 3.9   |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |       | 50.5  |     |       | 49.2  | 0.8   |       | 2.9   |     |       | 3.9   |     |
| LOS                     |       | D     |     |       | D     | A     |       | A     |     |       | A     |     |
| Approach Delay          |       | 50.5  |     |       | 41.5  |       |       | 2.9   |     |       | 3.9   |     |
| Approach LOS            |       | D     |     |       | D     |       |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| 30th %ile Term Code     | Min   | Min   |     | Min   | Min   | Min   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.2  | 83.2  |     | 83.2  | 83.2  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 48    |     |       | 50    | 0     |       | 204   |     |       | 380   |     |
| Fuel Used(gal)          |       | 1     |     |       | 1     | 0     |       | 11    |     |       | 18    |     |
| CO Emissions (g/hr)     |       | 65    |     |       | 85    | 7     |       | 762   |     |       | 1275  |     |
| NOx Emissions (g/hr)    |       | 13    |     |       | 17    | 1     |       | 148   |     |       | 248   |     |
| VOC Emissions (g/hr)    |       | 15    |     |       | 20    | 2     |       | 176   |     |       | 295   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 0     | 0     |       | 60    |     |       | 20    |     |
| Queue Length 50th (ft)  |       | 29    |     |       | 32    | 0     |       | 38    |     |       | 6     |     |
| Queue Length 95th (ft)  |       | 68    |     |       | 71    | 0     |       | 146   |     |       | 36    |     |
| Internal Link Dist (ft) |       | 404   |     |       | 1014  |       |       | 447   |     |       | 477   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |       |       |       |     |       |       |     |
| Base Capacity (vph)     |       | 124   |     |       | 140   | 162   |       | 2530  |     |       | 1673  |     |
| 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       |       | 0.45  |     |       | 0.41  | 0.07  |       | 0.42  |     |       | 0.75  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90

Lanes, Volumes, Timings  
 222: Southern Auto Auction

07/07/2020





















|   |                        |
|---|------------------------|
| Actuated Cycle Length: 90                                     |                        |
| Offset: 83 (92%), Referenced to phase 2:NBSB, Start of Yellow |                        |
| Natural Cycle: 65   |                        |
| Control Type: Actuated-Coordinated                            |                        |
| Maximum v/c Ratio: 0.75                                       |                        |
| Intersection Signal Delay: 5.6                                | Intersection LOS: A    |
| Intersection Capacity Utilization 82.8%                       | ICU Level of Service E |
| Analysis Period (min) 15                                      |                        |

Splits and Phases: 222: Southern Auto Auction















Lanes, Volumes, Timings  
225: MMCT Casino

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |  |  |  |
| Traffic Volume (vph)       | 53  | 0   | 111   | 10  | 5   | 10  | 24  | 303   | 0   | 10  | 538   | 36  |
| Future Volume (vph)        | 53  | 0   | 111   | 10  | 5   | 10  | 24  | 303   | 0   | 10  | 538   | 36  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 0   |   | 400   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 1   |   | 1   |
| 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  | 0.95  | 0.95  | 1.00  |
| Ped Bike Factor            |   |   |   |   |   |   | 1.00  |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   | 0.945   |   |   |   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.980   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1399  | 1615  | 0   | 1725  | 0   | 1203  | 1759  | 0   | 1681  | 1656  | 1272  |
| Flt Permitted              |   | 0.740   |   |   | 0.887   |   | 0.377   |   |   | 0.562   |   |   |
| Satd. Flow (perm)          | 0   | 1090  | 1615  | 0   | 1561  | 0   | 477   | 1759  | 0   | 995   | 1656  | 1272  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 121   |   | 11  |   |   |   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 30  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 532   |   |   | 223   |   |   | 1555  |   |   |   | 682   |
| Travel Time (s)            |   | 14.5  |   |   | 5.1   |   |   | 23.6  |   |   |   | 10.3  |
| Confl. Peds. (#/hr)        |   |   |   |   |   |   | 1   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 29%   | 2%  | 0%  | 2%  | 2%  | 2%  | 50%   | 8%  | 2%  | 2%  | 9%  | 27%   |
| Adj. Flow (vph)            | 58  | 0   | 121   | 11  | 5   | 11  | 26  | 329   | 0   | 11  | 585   | 39  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   | 10%   |   |   |
| Lane Group Flow (vph)      | 0   | 58  | 121   | 0   | 27  | 0   | 26  | 329   | 0   | 10  | 586   | 39  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 24  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 2   | 1   | 1   | 2   |   | 1   | 2   |   | 1   | 2   | 1   |
| Detector Template          | Left  | Thru  | Right   | Left  | Thru  |   | Left  |   |   | Left  |   | Right   |
| Leading Detector (ft)      | 20  | 100   | 20  | 20  | 100   |   | 20  | 293   |   | 20  | 283   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Size(ft)        | 20  | 6   | 20  | 20  | 6   |   | 20  | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   | 94  |   |   | 94  |   |   | 287   |   |   |   | 277   |
| Detector 2 Size(ft)        |   | 6   |   |   | 6   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   | Cl+Ex   |   |   | Cl+Ex   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 2 Extend (s)      |   | 0.0   |   |   | 0.0   |   |   | 0.0   |   |   |   | 0.0   |

Lanes, Volumes, Timings  
225: MMCT Casino

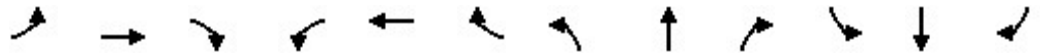
07/07/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Turn Type               | Perm  | NA  | Prot  | Perm  | NA  |   | D.P+P  | NA  |   | Perm  | NA  | Perm  |
| Protected Phases        |   | 4   | 4   |   | 4   |   | 1  | 1 2   |   |   | 2   |   |
| Permitted Phases        | 4   |   |   | 4   |   |   | 2  |   |   | 2   |   | 2   |
| Detector Phase          | 4   | 4   | 4   | 4   | 4   |   | 1  | 2   |   | 2   | 2   | 2   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |   | 4.5  |   |   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |   | 9.0  |   |   | 21.0  | 21.0  | 21.0  |
| Total Split (s)         | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |   | 11.0   |   |   | 62.0  | 62.0  | 62.0  |
| Total Split (%)         | 18.9%   | 18.9%   | 18.9%   | 18.9%   | 18.9%   |   | 12.2%  |   |   | 68.9%   | 68.9%   | 68.9%   |
| Maximum Green (s)       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |   | 7.0  |   |   | 56.0  | 56.0  | 56.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |   | 3.0  |   |   | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |   | 1.0  |   |   | 1.2   | 1.2   | 1.2   |
| Lost Time Adjust (s)    |   | 0.0   | 0.0   |   | 0.0   |   | 0.0  |   |   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     |   | 4.0   | 4.0   |   | 4.0   |   | 4.0  |   |   | 6.0   | 6.0   | 6.0   |
| Lead/Lag                |   |   |   |   |   |   | Lead   |   |   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |  |   |   |   |   |   |
| 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  |   | None   |   |   | C-Min   | C-Min   | C-Min   |
| Act Effct Green (s)     |   | 10.2  | 10.2  |   | 10.2  |   | 70.2   | 71.8  |   | 65.6  | 65.6  | 65.6  |
| Actuated g/C Ratio      |   | 0.11  | 0.11  |   | 0.11  |   | 0.78   | 0.80  |   | 0.73  | 0.73  | 0.73  |
| v/c Ratio               |   | 0.47  | 0.42  |   | 0.15  |   | 0.06   | 0.23  |   | 0.01  | 0.49  | 0.04  |
| Control Delay           |   | 48.8  | 11.4  |   | 25.6  |   | 1.4  | 1.1   |   | 9.8   | 12.4  | 4.2   |
| Queue Delay             |   | 0.0   | 0.0   |   | 0.0   |   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Total Delay             |   | 48.8  | 11.4  |   | 25.6  |   | 1.4  | 1.1   |   | 9.8   | 12.4  | 4.2   |
| LOS                     |   | D   | B   |   | C   |   | A  | A   |   | A   | B   | A   |
| Approach Delay          |   | 23.5  |   |   | 25.6  |   |  | 1.1   |   |   | 11.9  |   |
| Approach LOS            |   | C   |   |   | C   |   |  | A   |   |   | B   |   |
| 90th %ile Green (s)     | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |   | 6.8  |   |   | 54.2  | 54.2  | 54.2  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |   | Gap  |   |   | Coord   | Coord   | Coord   |
| 70th %ile Green (s)     | 12.1  | 12.1  | 12.1  | 12.1  | 12.1  |   | 6.2  |   |   | 57.7  | 57.7  | 57.7  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |   | Gap  |   |   | Coord   | Coord   | Coord   |
| 50th %ile Green (s)     | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |   | 0.0  |   |   | 69.9  | 69.9  | 69.9  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |   | Skip   |   |   | Coord   | Coord   | Coord   |
| 30th %ile Green (s)     | 8.1   | 8.1   | 8.1   | 8.1   | 8.1   |   | 0.0  |   |   | 71.9  | 71.9  | 71.9  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |   | Skip   |   |   | Coord   | Coord   | Coord   |
| 10th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |   | 0.0  |   |   | 74.5  | 74.5  | 74.5  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |   | Skip   |   |   | Coord   | Coord   | Coord   |
| Stops (vph)             |   | 48  | 20  |   | 18  |   | 2  | 13  |   | 5   | 274   | 11  |
| Fuel Used(gal)          |   | 1   | 1   |   | 0   |   | 0  | 3   |   | 0   | 7   | 0   |
| CO Emissions (g/hr)     |   | 66  | 59  |   | 19  |   | 19   | 230   |   | 8   | 500   | 23  |
| NOx Emissions (g/hr)    |   | 13  | 11  |   | 4   |   | 4  | 45  |   | 2   | 97  | 4   |
| VOC Emissions (g/hr)    |   | 15  | 14  |   | 4   |   | 4  | 53  |   | 2   | 116   | 5   |
| Dilemma Vehicles (#)    |   | 0   | 0   |   | 0   |   | 0  | 11  |   | 0   | 23  | 0   |
| Queue Length 50th (ft)  |   | 31  | 0   |   | 8   |   | 0  | 4   |   | 1   | 72  | 0   |
| Queue Length 95th (ft)  |   | 67  | 46  |   | 31  |   | 4  | 26  |   | m10   | 389   | 12  |
| Internal Link Dist (ft) |   | 452   |   |   | 143   |   |  | 1475  |   |   | 602   |   |
| Turn Bay Length (ft)    |   |   |   |   |   |   | 300  |   |   |   |   | 400   |
| Base Capacity (vph)     |   | 162   | 343   |   | 241   |   | 429  | 1411  |   | 729   | 1214  | 949   |
| Starvation Cap Reductn  |   | 0   | 0   |   | 0   |   | 0  | 0   |   | 0   | 0   | 0   |

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



| Lane Group            | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|-----------------------|-----|------|------|-----|------|-----|------|------|-----|------|------|------|
| Spillback Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn   |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio     |     | 0.36 | 0.35 |     | 0.11 |     | 0.06 | 0.23 |     | 0.01 | 0.48 | 0.04 |

Intersection Summary

|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 68 (76%), Referenced to phase 2:NBSB, Start of Yellow |
| Natural Cycle:                    | 55  |
| Control Type:                     | Actuated-Coordinated                                  |
| Maximum v/c Ratio:                | 0.49  |
| Intersection Signal Delay:        | 10.7  |
| Intersection LOS:                 | B   |
| Intersection Capacity Utilization | 43.9%   |
| ICU Level of Service              | A   |
| Analysis Period (min)             | 15  |






















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

Splits and Phases: 225: MMCT Casino



Lanes, Volumes, Timings  
226: Big Y/Ethos

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |  |  |  |   |  |  |  |
| Traffic Volume (vph)       | 8   | 0   | 32  | 7   | 0   | 8   | 22  | 311   | 43  | 11  | 611   | 27  |
| Future Volume (vph)        | 8   | 0   | 32  | 7   | 0   | 8   | 22  | 311   | 43  | 11  | 611   | 27  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 360   |   | 0   | 0   |   | 370   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 1   | 1   |   | 0   | 1   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   | 0.98  |   |   |   |   |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   |   | 0.850   |   | 0.982   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.950   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1543  | 1615  | 0   | 1583  | 1615  | 1583  | 1737  | 0   | 1805  | 1792  | 1482  |
| Flt Permitted              |   |   |   |   |   |   | 0.387   |   |   | 0.534   |   |   |
| Satd. Flow (perm)          | 0   | 1624  | 1577  | 0   | 1667  | 1615  | 645   | 1737  | 0   | 1015  | 1792  | 1482  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 63  |   |   | 112   |   | 39  |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 626   |   |   | 337   |   |   | 1217  |   |   |   | 1555  |
| Travel Time (s)            |   | 17.1  |   |   | 9.2   |   |   | 18.4  |   |   |   | 23.6  |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 17%   | 0%  | 0%  | 14%   | 0%  | 0%  | 14%   | 8%  | 3%  | 0%  | 6%  | 9%  |
| Adj. Flow (vph)            | 9   | 0   | 35  | 8   | 0   | 9   | 24  | 338   | 47  | 12  | 664   | 29  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 9   | 35  | 0   | 8   | 9   | 24  | 385   | 0   | 12  | 664   | 29  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 24  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 6   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   |   | 1   | 2   | 2   |
| Detector Template          | Left  |   |   | Left  |   |   |   |   |   | Left  |   |   |
| Leading Detector (ft)      | 20  | 29  | 29  | 20  | 14  | 14  | 24  | 366   |   | 20  | 366   | 366   |
| Trailing Detector (ft)     | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Position(ft)    | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Size(ft)        | 20  | 34  | 34  | 20  | 24  | 24  | 34  | 6   |   | 20  | 6   | 6   |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   |   |   |   |   |   |   | 360   |   |   | 360   | 360   |
| Detector 2 Size(ft)        |   |   |   |   |   |   |   | 6   |   |   | 6   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |   | Cl+Ex   |   |   | Cl+Ex   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |

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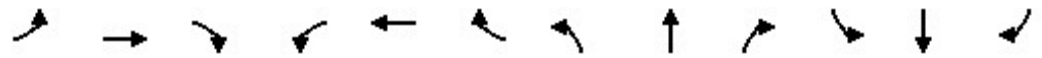
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT  | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|------|-----|-------|-------|-------|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0  |     |       | 0.0   | 0.0   |
| Turn Type               | Perm  | NA    | pm+ov | Perm  | NA    | Perm  | D.P+P | NA   |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 4     | 1     |       | 4     |       | 1     | 1 2  |     |       | 2     |       |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |      |     | 2     |       | 2     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 2    |     | 2     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |       |       |      |     |       |       |       |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |     | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |      |     | 23.4  | 23.4  | 23.4  |
| Total Split (s)         | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |      |     | 72.0  | 72.0  | 72.0  |
| Total Split (%)         | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |      |     | 80.0% | 80.0% | 80.0% |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |     | 63.8  | 63.8  | 63.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |      |     | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   |      |     | 8.2   | 8.2   | 8.2   |
| Lead/Lag                |       |       | Lead  |       |       |       | Lead  |      |     | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |      |     |       |       |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |      |     | 2.5   | 2.5   | 2.5   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  |      |     | C-Min | C-Min | C-Min |
| Act Effct Green (s)     |       | 5.1   | 6.9   |       | 5.1   | 5.1   | 78.7  | 81.9 |     | 76.0  | 76.0  | 76.0  |
| Actuated g/C Ratio      |       | 0.06  | 0.08  |       | 0.06  | 0.06  | 0.87  | 0.91 |     | 0.84  | 0.84  | 0.84  |
| v/c Ratio               |       | 0.10  | 0.20  |       | 0.09  | 0.05  | 0.04  | 0.24 |     | 0.01  | 0.44  | 0.02  |
| Control Delay           |       | 42.2  | 5.8   |       | 41.7  | 0.5   | 2.0   | 2.8  |     | 1.6   | 1.9   | 0.1   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0  |     | 0.0   | 0.0   | 0.0   |
| Total Delay             |       | 42.2  | 5.8   |       | 41.7  | 0.5   | 2.0   | 2.8  |     | 1.6   | 1.9   | 0.1   |
| LOS                     |       | D     | A     |       | D     | A     | A     | A    |     | A     | A     | A     |
| Approach Delay          |       | 13.2  |       |       | 19.9  |       |       | 2.8  |     |       | 1.8   |       |
| Approach LOS            |       | B     |       |       | B     |       |       | A    |     |       | A     |       |
| 90th %ile Green (s)     | 6.3   | 6.3   | 4.7   | 6.3   | 6.3   | 6.3   | 4.7   |      |     | 62.8  | 62.8  | 62.8  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |      |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 5.3   | 5.3   | 4.5   | 5.3   | 5.3   | 5.3   | 4.5   |      |     | 64.0  | 64.0  | 64.0  |
| 70th %ile Term Code     | Gap   | Gap   | Min   | Gap   | Gap   | Gap   | Min   |      |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 4.7   | 4.7   | 0.0   | 4.7   | 4.7   | 4.7   | 0.0   |      |     | 73.1  | 73.1  | 73.1  |
| 50th %ile Term Code     | Gap   | Gap   | Skip  | Gap   | Gap   | Gap   | Skip  |      |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |     | 81.8  | 81.8  | 81.8  |
| 30th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  |      |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |     | 81.8  | 81.8  | 81.8  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  |      |     | Coord | Coord | Coord |
| Stops (vph)             |       | 10    | 3     |       | 9     | 0     | 6     | 90   |     | 1     | 39    | 0     |
| Fuel Used(gal)          |       | 0     | 0     |       | 0     | 0     | 0     | 5    |     | 0     | 7     | 0     |
| CO Emissions (g/hr)     |       | 10    | 15    |       | 8     | 2     | 22    | 352  |     | 9     | 481   | 19    |
| NOx Emissions (g/hr)    |       | 2     | 3     |       | 2     | 0     | 4     | 69   |     | 2     | 94    | 4     |
| VOC Emissions (g/hr)    |       | 2     | 4     |       | 2     | 0     | 5     | 82   |     | 2     | 112   | 4     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     | 0     | 0     | 7    |     | 0     | 8     | 0     |
| Queue Length 50th (ft)  |       | 5     | 0     |       | 4     | 0     | 1     | 12   |     | 0     | 15    | 0     |
| Queue Length 95th (ft)  |       | 20    | 12    |       | 18    | 0     | 12    | 170  |     | m2    | 63    | m0    |
| Internal Link Dist (ft) |       | 546   |       |       | 257   |       |       | 1137 |     |       | 1475  |       |
| Turn Bay Length (ft)    |       |       |       |       |       | 50    | 360   |      |     |       |       | 370   |
| Base Capacity (vph)     |       | 96    | 184   |       | 98    | 200   | 617   | 1589 |     | 859   | 1517  | 1264  |

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| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|------------------------|-----|------|------|-----|------|------|------|------|-----|------|------|------|
| Starvation Cap Reductn |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio      |     | 0.09 | 0.19 |     | 0.08 | 0.04 | 0.04 | 0.24 |     | 0.01 | 0.44 | 0.02 |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 6 (7%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 2.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 53.2%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 226: Big Y/Ethos



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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 0     | 0     | 5     | 74    | 0     | 42    | 17    | 334   | 77    | 47    | 596   | 7     |
| Future Volume (vph)        | 0     | 0     | 5     | 74    | 0     | 42    | 17    | 334   | 77    | 47    | 596   | 7     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 110   |       | 140   | 250   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 1     |       | 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  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.97  |       |       |       |       |       |       |       |       |       |       |
| Frt                        |       | 0.850 |       |       | 0.850 |       |       |       | 0.850 |       | 0.998 |       |
| Flt Protected              |       |       |       | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1837  | 1573  | 0     | 1736  | 1568  | 0     | 1805  | 3312  | 1524  | 1770  | 1774  | 0     |
| Flt Permitted              |       |       |       | 0.976 |       |       | 0.361 |       |       | 0.525 |       |       |
| Satd. Flow (perm)          | 1837  | 1573  | 0     | 1783  | 1568  | 0     | 686   | 3312  | 1524  | 978   | 1774  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 366   |       |       | 600   |       |       |       | 96    |       |       | 1     |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 349   |       |       | 546   |       |       | 571   |       |       |       | 400   |
| Travel Time (s)            |       | 9.5   |       |       | 14.9  |       |       | 8.7   |       |       |       | 6.1   |
| Confl. Bikes (#/hr)        |       |       | 1     |       |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%    | 0%    | 0%    | 4%    | 0%    | 3%    | 0%    | 9%    | 6%    | 2%    | 7%    | 0%    |
| Adj. Flow (vph)            | 0     | 0     | 5     | 80    | 0     | 46    | 18    | 363   | 84    | 51    | 648   | 8     |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 5     | 0     | 80    | 46    | 0     | 18    | 363   | 84    | 51    | 656   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 12    |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       |       | 0     |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       |       | 16    |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.04  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     |       | 1     | 2     | 1     | 1     |       | 2     |
| Detector Template          |       |       |       |       |       |       |       |       | Right |       |       | Thru  |
| Leading Detector (ft)      | 30    | 30    |       | 33    | 46    |       | 48    | 356   | 20    | 38    |       | 100   |
| Trailing Detector (ft)     | -5    | -5    |       | -5    | 0     |       | 0     | 165   | 0     | 0     |       | 0     |
| Detector 1 Position(ft)    | -5    | -5    |       | -5    | 0     |       | 0     | 165   | 0     | 0     |       | 0     |
| Detector 1 Size(ft)        | 35    | 35    |       | 38    | 46    |       | 48    | 6     | 20    | 38    |       | 6     |
| 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)    |       |       |       |       |       |       |       | 350   |       |       |       | 94    |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-----|-------|
| Detector 2 Extend (s)   |       |       |     |       |       |     |       | 0.0   |       |       |     | 0.0   |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | pm+pt | NA    | Perm  | pm+pt | NA  |       |
| Protected Phases        | 7     | 4     |     | 3     | 8     |     | 5     | 2     |       | 1     |     | 6     |
| Permitted Phases        | 4     |       |     | 8     |       |     | 2     |       | 2     | 6     |     |       |
| Detector Phase          | 7     | 4     |     | 3     | 8     |     | 5     | 2     | 2     | 1     |     | 6     |
| Switch Phase            |       |       |     |       |       |     |       |       |       |       |     |       |
| Minimum Initial (s)     | 3.6   | 5.0   |     | 3.6   | 5.0   |     | 3.6   | 13.1  | 13.1  | 4.1   |     | 13.1  |
| Minimum Split (s)       | 8.1   | 9.7   |     | 8.1   | 9.7   |     | 8.1   | 24.3  | 24.3  | 8.1   |     | 21.3  |
| Total Split (s)         | 8.1   | 10.0  |     | 10.0  | 11.9  |     | 8.1   | 61.8  | 61.8  | 8.2   |     | 61.9  |
| Total Split (%)         | 9.0%  | 11.1% |     | 11.1% | 13.2% |     | 9.0%  | 68.7% | 68.7% | 9.1%  |     | 68.8% |
| Maximum Green (s)       | 5.0   | 5.3   |     | 6.9   | 7.2   |     | 5.0   | 55.5  | 55.5  | 5.1   |     | 55.6  |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 4.5   | 4.5   | 3.0   |     | 4.5   |
| All-Red Time (s)        | 0.1   | 1.7   |     | 0.1   | 1.7   |     | 0.1   | 1.8   | 1.8   | 0.1   |     | 1.8   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Lost Time (s)     | 3.1   | 4.7   |     | 3.1   | 4.7   |     | 3.1   | 6.3   | 6.3   | 3.1   |     | 6.3   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  |     | Lag   |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |       |       |     |       |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.5   | 2.5   | 2.0   |     | 2.5   |
| Recall Mode             | None  | None  |     | None  | None  |     | None  | C-Min | C-Min | None  |     | C-Min |
| Act Effct Green (s)     |       | 5.0   |     | 9.8   | 8.5   |     | 73.4  | 68.5  | 68.5  | 74.6  |     | 70.4  |
| Actuated g/C Ratio      |       | 0.06  |     | 0.11  | 0.09  |     | 0.82  | 0.76  | 0.76  | 0.83  |     | 0.78  |
| v/c Ratio               |       | 0.01  |     | 0.41  | 0.07  |     | 0.03  | 0.14  | 0.07  | 0.06  |     | 0.47  |
| Control Delay           |       | 0.0   |     | 41.9  | 0.2   |     | 1.6   | 3.5   | 1.6   | 0.6   |     | 3.0   |
| Queue Delay             |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Delay             |       | 0.0   |     | 41.9  | 0.2   |     | 1.6   | 3.5   | 1.6   | 0.6   |     | 3.0   |
| LOS                     |       | A     |     | D     | A     |     | A     | A     | A     | A     |     | A     |
| Approach Delay          |       |       |     |       | 26.7  |     |       | 3.1   |       |       |     | 2.8   |
| Approach LOS            |       |       |     |       | C     |     |       | A     |       |       |     | A     |
| 90th %ile Green (s)     | 0.0   | 5.0   |     | 9.8   | 17.9  |     | 5.2   | 51.9  | 51.9  | 6.1   |     | 52.8  |
| 90th %ile Term Code     | Skip  | Min   |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 70th %ile Green (s)     | 0.0   | 0.0   |     | 9.6   | 8.0   |     | 4.7   | 62.8  | 62.8  | 5.1   |     | 63.2  |
| 70th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 50th %ile Green (s)     | 0.0   | 0.0   |     | 8.1   | 6.5   |     | 0.0   | 64.5  | 64.5  | 4.9   |     | 72.5  |
| 50th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Skip  | Coord | Coord | Gap   |     | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   |     | 7.1   | 0.0   |     | 0.0   | 73.5  | 73.5  | 0.0   |     | 73.5  |
| 30th %ile Term Code     | Skip  | Skip  |     | Gap   | Skip  |     | Skip  | Coord | Coord | Skip  |     | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 83.7  | 83.7  | 0.0   |     | 83.7  |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  |     | Skip  | Coord | Coord | Skip  |     | Coord |
| Stops (vph)             |       | 0     |     | 65    | 0     |     | 3     | 64    | 6     | 1     |     | 126   |
| Fuel Used(gal)          |       | 0     |     | 1     | 0     |     | 0     | 2     | 0     | 1     |     | 8     |
| CO Emissions (g/hr)     |       | 1     |     | 86    | 14    |     | 7     | 159   | 27    | 36    |     | 578   |
| NOx Emissions (g/hr)    |       | 0     |     | 17    | 3     |     | 1     | 31    | 5     | 7     |     | 113   |
| VOC Emissions (g/hr)    |       | 0     |     | 20    | 3     |     | 2     | 37    | 6     | 8     |     | 134   |
| Dilemma Vehicles (#)    |       | 0     |     | 0     | 0     |     | 0     | 15    | 0     | 0     |     | 10    |
| Queue Length 50th (ft)  |       | 0     |     | 44    | 0     |     | 0     | 2     | 0     | 1     |     | 14    |
| Queue Length 95th (ft)  |       | 0     |     | 77    | 0     |     | m4    | m40   | m0    | 2     |     | 144   |
| Internal Link Dist (ft) |       | 269   |     |       | 466   |     |       | 491   |       |       |     | 320   |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 110   |       | 140   | 250   |     |       |
| Base Capacity (vph)     |       | 437   |     | 201   | 702   |     | 623   | 2548  | 1195  | 857   |     | 1399  |

Lanes, Volumes, Timings

228: Walmart

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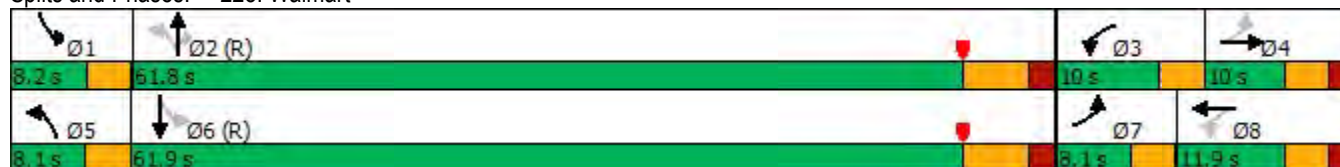


| Lane Group             | EBL | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Starvation Cap Reductn |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Spillback Cap Reductn  |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Storage Cap Reductn    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Reduced v/c Ratio      |     | 0.01 |     | 0.40 | 0.07 |     | 0.03 | 0.14 | 0.07 | 0.06 | 0.47 |     |

Intersection Summary

|   |  |
|---|--|
| Area Type:  | Other  |
| Cycle Length:   | 90   |
| Actuated Cycle Length:  | 90   |
| Offset:   | 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow |
| Natural Cycle:  | 60   |
| Control Type:   | Actuated-Coordinated   |
| Maximum v/c Ratio:  | 0.47   |
| Intersection Signal Delay:  | 5.2  |
| Intersection LOS:   | A  |
| Intersection Capacity Utilization                                 | 58.4%  |
| ICU Level of Service  | B  |
| Analysis Period (min)   | 15   |
| m Volume for 95th percentile queue is metered by upstream signal. |  |

Splits and Phases: 228: Walmart



Lanes, Volumes, Timings  
3: N Rd. (CT-140)

07/07/2020

|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↑↑↑          |       |      | ↑↑                     |      | ↗     |
| Traffic Volume (vph)              | 1331         | 0     | 0    | 927                    | 0    | 97    |
| Future Volume (vph)               | 1331         | 0     | 0    | 927                    | 0    | 97    |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Storage Length (ft)               |              | 0     | 0    |                        | 0    | 0     |
| Storage Lanes                     |              | 0     | 0    |                        | 0    | 1     |
| Taper Length (ft)                 |              |       | 25   |                        | 25   |       |
| Lane Util. Factor                 | 0.91         | 1.00  | 1.00 | 0.95                   | 1.00 | 1.00  |
| Frt                               |              |       |      |                        |      | 0.865 |
| Flt Protected                     |              |       |      |                        |      |       |
| Satd. Flow (prot)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Flt Permitted                     |              |       |      |                        |      |       |
| Satd. Flow (perm)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Link Speed (mph)                  | 35           |       |      | 35                     | 30   |       |
| Link Distance (ft)                | 323          |       |      | 381                    | 386  |       |
| Travel Time (s)                   | 6.3          |       |      | 7.4                    | 8.8  |       |
| Peak Hour Factor                  | 0.92         | 0.92  | 0.92 | 0.92                   | 0.92 | 0.92  |
| Adj. Flow (vph)                   | 1447         | 0     | 0    | 1008                   | 0    | 105   |
| Shared Lane Traffic (%)           |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 1447         | 0     | 0    | 1008                   | 0    | 105   |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(ft)                  | 0            |       |      | 0                      | 0    |       |
| Link Offset(ft)                   | 0            |       |      | 0                      | 0    |       |
| Crosswalk Width(ft)               | 16           |       |      | 16                     | 16   |       |
| Two way Left Turn Lane            |              |       |      |                        |      |       |
| Headway Factor                    | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Turning Speed (mph)               |              | 9     | 15   |                        | 15   | 9     |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| <b>Intersection Summary</b>       |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 38.4%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

Lanes, Volumes, Timings  
7: MMCT Casino/Eversource

07/07/2020

| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 110   | 0     | 140   | 5     | 10    | 20    | 44    | 777   | 10    | 10    | 495   | 44    |
| Future Volume (vph)        | 110   | 0     | 140   | 5     | 10    | 20    | 44    | 777   | 10    | 10    | 495   | 44    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 150   |       | 0     | 150   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 0     |       | 0     | 1     |       | 0     | 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 |       |       | 0.922 |       |       | 0.998 |       |       | 0.988 |       |
| Flt Protected              | 0.950 |       |       |       | 0.993 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 0     | 0     | 1705  | 0     | 1770  | 1859  | 0     | 1770  | 1840  | 0     |
| Flt Permitted              | 0.732 |       |       |       | 0.952 |       | 0.364 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1364  | 1583  | 0     | 0     | 1635  | 0     | 678   | 1859  | 0     | 1770  | 1840  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 427   |       |       | 22    |       |       | 2     |       |       | 9     |       |
| Link Speed (mph)           |       | 30    |       |       | 30    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 335   |       |       | 295   |       |       | 682   |       |       | 908   |       |
| Travel Time (s)            |       | 7.6   |       |       | 6.7   |       |       | 10.3  |       |       | 13.8  |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 120   | 0     | 152   | 5     | 11    | 22    | 48    | 845   | 11    | 11    | 538   | 48    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 120   | 152   | 0     | 0     | 38    | 0     | 48    | 856   | 0     | 11    | 586   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       | 20    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       |
| Detector Template          | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       |
| Trailing Detector (ft)     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex |       | 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   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       | 94    |       |       | 94    |       |       | 94    |       |       | 94    |       |
| Detector 2 Size(ft)        |       | 6     |       |       | 6     |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    |       | pm+pt | NA    |       | Prot  | NA    |       |
| Protected Phases           |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4     |       |       | 8     |       |       | 2     |       |       |       | 6     |       |

Lanes, Volumes, Timings  
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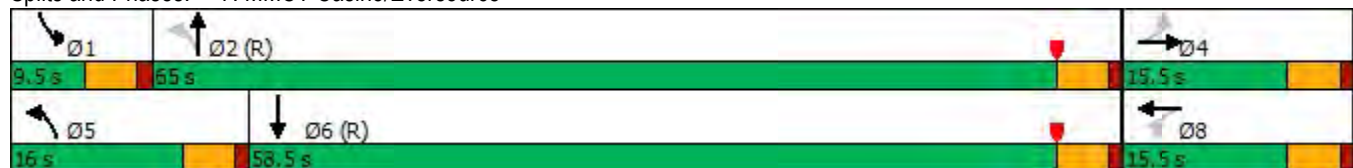


| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase          | 4     | 4     |     | 8     | 8     |     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     |
| Minimum Split (s)       | 10.0  | 10.0  |     | 10.0  | 10.0  |     | 9.5   | 22.5  |     | 9.5   | 22.5  |     |
| Total Split (s)         | 15.5  | 15.5  |     | 15.5  | 15.5  |     | 16.0  | 65.0  |     | 9.5   | 58.5  |     |
| Total Split (%)         | 17.2% | 17.2% |     | 17.2% | 17.2% |     | 17.8% | 72.2% |     | 10.6% | 65.0% |     |
| Maximum Green (s)       | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 11.5  | 60.5  |     | 5.0   | 54.0  |     |
| Yellow Time (s)         | 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   |     |
| 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                |       |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 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 |     | None  | C-Max |     |
| Act Effct Green (s)     | 10.4  | 10.4  |     |       | 10.4  |     | 70.0  | 68.7  |     | 5.1   | 64.1  |     |
| Actuated g/C Ratio      | 0.12  | 0.12  |     |       | 0.12  |     | 0.78  | 0.76  |     | 0.06  | 0.71  |     |
| v/c Ratio               | 0.76  | 0.27  |     |       | 0.18  |     | 0.08  | 0.60  |     | 0.11  | 0.45  |     |
| Control Delay           | 68.9  | 1.2   |     |       | 22.8  |     | 2.5   | 7.0   |     | 41.5  | 4.8   |     |
| Queue Delay             | 0.0   | 0.0   |     |       | 0.0   |     | 0.0   | 0.4   |     | 0.0   | 0.0   |     |
| Total Delay             | 68.9  | 1.2   |     |       | 22.8  |     | 2.5   | 7.3   |     | 41.5  | 4.8   |     |
| LOS                     | E     | A     |     |       | C     |     | A     | A     |     | D     | A     |     |
| Approach Delay          |       | 31.1  |     |       | 22.8  |     |       | 7.1   |     |       | 5.4   |     |
| Approach LOS            |       | C     |     |       | C     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.7   | 60.5  |     | 5.0   | 58.8  |     |
| 90th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.3   | 70.0  |     | 0.0   | 59.2  |     |
| 70th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 6.0   | 70.0  |     | 0.0   | 59.5  |     |
| 50th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 11.0  | 11.0  |     | 11.0  | 11.0  |     | 0.0   | 70.0  |     | 0.0   | 70.0  |     |
| 30th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 8.2   | 8.2   |     | 8.2   | 8.2   |     | 0.0   | 72.8  |     | 0.0   | 72.8  |     |
| 10th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             | 98    | 0     |     |       | 19    |     | 9     | 289   |     | 12    | 112   |     |
| Fuel Used(gal)          | 2     | 0     |     |       | 0     |     | 0     | 8     |     | 0     | 5     |     |
| CO Emissions (g/hr)     | 166   | 28    |     |       | 24    |     | 23    | 574   |     | 20    | 356   |     |
| NOx Emissions (g/hr)    | 32    | 5     |     |       | 5     |     | 4     | 112   |     | 4     | 69    |     |
| VOC Emissions (g/hr)    | 38    | 6     |     |       | 6     |     | 5     | 133   |     | 5     | 82    |     |
| Dilemma Vehicles (#)    | 0     | 0     |     |       | 0     |     | 0     | 32    |     | 0     | 44    |     |
| Queue Length 50th (ft)  | 67    | 0     |     |       | 8     |     | 2     | 43    |     | 6     | 73    |     |
| Queue Length 95th (ft)  | #153  | 0     |     |       | 37    |     | m7    | 384   |     | m12   | m108  |     |
| Internal Link Dist (ft) |       | 255   |     |       | 215   |     |       | 602   |     |       | 828   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 150   |       |     | 150   |       |     |
| Base Capacity (vph)     | 166   | 568   |     |       | 219   |     | 670   | 1418  |     | 100   | 1312  |     |
| Starvation Cap Reductn  | 0     | 0     |     |       | 0     |     | 0     | 167   |     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.72  | 0.27  |     |       | 0.17  |     | 0.07  | 0.68  |     | 0.11  | 0.45  |     |

Intersection Summary














|                                   |   |                      |   |
|-----------------------------------|---|----------------------|---|
| Area Type:                        | Other   |                      |   |
| Cycle Length:                     | 90  |                      |   |
| Actuated Cycle Length:            | 90  |                      |   |
| Offset:                           | 2 (2%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow   |                      |   |
| Natural Cycle:                    | 60  |                      |   |
| Control Type:                     | Actuated-Coordinated  |                      |   |
| Maximum v/c Ratio:                | 0.76  |                      |   |
| Intersection Signal Delay:        | 10.5  | Intersection LOS:    | B |
| Intersection Capacity Utilization | 61.8%   | ICU Level of Service | B |
| Analysis Period (min)             | 15  |                      |   |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |                      |   |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |                      |   |

Splits and Phases: 7: MMCT Casino/Eversource



Lanes, Volumes, Timings  
21: Thompson Rd

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|                            |  |   |  |   |  |   |  |    |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|----|---|--|---|--|--|--|
| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   | Ø1  | Ø2 |   |  |   |  |  |  |
| Lane Configurations        |  |  |  |  |  |  |   |    |   |  |   |  |  |  |
| Traffic Volume (vph)       | 121   | 165   | 1032  | 35  | 125   | 1252  |   |    |   |  |   |  |  |  |
| Future Volume (vph)        | 121   | 165   | 1032  | 35  | 125   | 1252  |   |    |   |  |   |  |  |  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |   |    |   |  |   |  |  |  |
| Storage Length (ft)        | 0   | 100   |   | 0   | 0   |   |   |    |   |  |   |  |  |  |
| Storage Lanes              | 1   | 1   |   | 0   | 1   |   |   |    |   |  |   |  |  |  |
| Taper Length (ft)          | 25  |   |   |   | 25  |   |   |    |   |  |   |  |  |  |
| Lane Util. Factor          | 1.00  | 1.00  | 0.95  | 0.95  | 1.00  | 0.95  |   |    |   |  |   |  |  |  |
| Frt                        |   | 0.850   | 0.995   |   |   |   |   |    |   |  |   |  |  |  |
| Flt Protected              | 0.950   |   |   |   | 0.950   |   |   |    |   |  |   |  |  |  |
| Satd. Flow (prot)          | 1517  | 1495  | 3330  | 0   | 1770  | 3406  |   |    |   |  |   |  |  |  |
| Flt Permitted              | 0.950   |   |   |   | 0.950   |   |   |    |   |  |   |  |  |  |
| Satd. Flow (perm)          | 1517  | 1495  | 3330  | 0   | 1770  | 3406  |   |    |   |  |   |  |  |  |
| Right Turn on Red          |   | Yes   |   | Yes   |   |   |   |    |   |  |   |  |  |  |
| Satd. Flow (RTOR)          |   | 39  | 5   |   |   |   |   |    |   |  |   |  |  |  |
| Link Speed (mph)           | 25  |   | 45  |   |   | 45  |   |    |   |  |   |  |  |  |
| Link Distance (ft)         | 1258  |   | 264   |   |   | 430   |   |    |   |  |   |  |  |  |
| Travel Time (s)            | 34.3  |   | 4.0   |   |   | 6.5   |   |    |   |  |   |  |  |  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |   |    |   |  |   |  |  |  |
| Heavy Vehicles (%)         | 19%   | 8%  | 8%  | 4%  | 2%  | 6%  |   |    |   |  |   |  |  |  |
| Adj. Flow (vph)            | 132   | 179   | 1122  | 38  | 136   | 1361  |   |    |   |  |   |  |  |  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |    |   |  |   |  |  |  |
| Lane Group Flow (vph)      | 132   | 179   | 1160  | 0   | 136   | 1361  |   |    |   |  |   |  |  |  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  |   |    |   |  |   |  |  |  |
| Lane Alignment             | Left  | Right   | Right   | Right   | Left  | Left  |   |    |   |  |   |  |  |  |
| Median Width(ft)           | 30  |   | 12  |   |   | 20  |   |    |   |  |   |  |  |  |
| 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   | 1   | 2   |   | 1   | 0   |   |    |   |  |   |  |  |  |
| Detector Template          |   |   |   |   |   |   |   |    |   |  |   |  |  |  |
| Leading Detector (ft)      | 34  | 34  | 100   |   | 34  | 0   |   |    |   |  |   |  |  |  |
| Trailing Detector (ft)     | 0   | 0   | 0   |   | 0   | 0   |   |    |   |  |   |  |  |  |
| Detector 1 Position(ft)    | 0   | 0   | 0   |   | 0   | 0   |   |    |   |  |   |  |  |  |
| Detector 1 Size(ft)        | 34  | 34  | 6   |   | 34  | 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   | 8.0   | 0.0   |   | 0.0   | 0.0   |   |    |   |  |   |  |  |  |
| Detector 2 Position(ft)    |   |   | 94  |   |   |   |   |    |   |  |   |  |  |  |
| Detector 2 Size(ft)        |   |   | 6   |   |   |   |   |    |   |  |   |  |  |  |
| Detector 2 Type            |   |   | Cl+Ex   |   |   |   |   |    |   |  |   |  |  |  |
| Detector 2 Channel         |   |   |   |   |   |   |   |    |   |  |   |  |  |  |
| Detector 2 Extend (s)      |   |   | 0.0   |   |   |   |   |    |   |  |   |  |  |  |
| Turn Type                  | Prot  | pm+ov   | NA  |   | Prot  | NA  |   |    |   |  |   |  |  |  |
| Protected Phases           | 4   | 5   | 6   |   | 5   | 1 2 5   | 1   | 2  |   |  |   |  |  |  |

Lanes, Volumes, Timings  
21: Thompson Rd

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| Lane Group              | WBL   | WBR   | NBT   | NBR | SBL   | SBT  | Ø1   | Ø2    |
|-------------------------|-------|-------|-------|-----|-------|------|------|-------|
| Permitted Phases        |       | 4     |       |     | 5     |      |      |       |
| Detector Phase          | 4     | 4     | 6     |     | 5     |      |      |       |
| Switch Phase            |       |       |       |     |       |      |      |       |
| Minimum Initial (s)     | 7.0   | 5.0   | 15.0  |     | 5.0   |      | 5.0  | 15.0  |
| Minimum Split (s)       | 12.6  | 10.2  | 21.2  |     | 10.2  |      | 11.6 | 21.2  |
| Total Split (s)         | 16.8  | 26.2  | 47.0  |     | 26.2  |      | 19.2 | 54.0  |
| Total Split (%)         | 18.7% | 29.1% | 52.2% |     | 29.1% |      | 21%  | 60%   |
| Maximum Green (s)       | 11.2  | 21.0  | 40.8  |     | 21.0  |      | 12.6 | 47.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.8   |     | 3.0   |      | 3.0  | 4.8   |
| All-Red Time (s)        | 2.6   | 2.2   | 1.4   |     | 2.2   |      | 3.6  | 1.4   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |     | 0.0   |      |      |       |
| Total Lost Time (s)     | 5.6   | 5.2   | 6.2   |     | 5.2   |      |      |       |
| Lead/Lag                |       | Lead  | Lag   |     | Lead  |      | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |     |       |      |      |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 2.5   |     | 1.5   |      | 1.5  | 2.5   |
| Recall Mode             | None  | None  | C-Min |     | None  |      | None | C-Min |
| Act Effct Green (s)     | 10.3  | 26.7  | 51.9  |     | 10.8  | 66.5 |      |       |
| Actuated g/C Ratio      | 0.11  | 0.30  | 0.58  |     | 0.12  | 0.74 |      |       |
| v/c Ratio               | 0.76  | 0.38  | 0.60  |     | 0.64  | 0.54 |      |       |
| Control Delay           | 66.3  | 20.7  | 19.3  |     | 58.3  | 2.0  |      |       |
| Queue Delay             | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0  |      |       |
| Total Delay             | 66.3  | 20.7  | 19.3  |     | 58.3  | 2.0  |      |       |
| LOS                     | E     | C     | B     |     | E     | A    |      |       |
| Approach Delay          | 40.0  |       | 19.3  |     |       | 7.1  |      |       |
| Approach LOS            | D     |       | B     |     |       | A    |      |       |
| 90th %ile Green (s)     | 11.2  | 15.6  | 46.2  |     | 15.6  |      | 12.6 | 47.8  |
| 90th %ile Term Code     | Max   | Gap   | Coord |     | Gap   |      | Max  | Coord |
| 70th %ile Green (s)     | 11.2  | 12.8  | 49.0  |     | 12.8  |      | 12.6 | 47.8  |
| 70th %ile Term Code     | Max   | Gap   | Coord |     | Gap   |      | Max  | Coord |
| 50th %ile Green (s)     | 12.2  | 10.8  | 50.0  |     | 10.8  |      | 11.1 | 48.3  |
| 50th %ile Term Code     | Gap   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| 30th %ile Green (s)     | 10.0  | 8.8   | 54.2  |     | 8.8   |      | 8.9  | 52.7  |
| 30th %ile Term Code     | Gap   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| 10th %ile Green (s)     | 7.0   | 6.0   | 60.0  |     | 6.0   |      | 5.9  | 58.7  |
| 10th %ile Term Code     | Min   | Gap   | Coord |     | Gap   |      | Gap  | Coord |
| Stops (vph)             | 108   | 95    | 718   |     | 125   | 97   |      |       |
| Fuel Used(gal)          | 3     | 3     | 25    |     | 3     | 5    |      |       |
| CO Emissions (g/hr)     | 234   | 198   | 1728  |     | 237   | 364  |      |       |
| NOx Emissions (g/hr)    | 45    | 38    | 336   |     | 46    | 71   |      |       |
| VOC Emissions (g/hr)    | 54    | 46    | 401   |     | 55    | 84   |      |       |
| Dilemma Vehicles (#)    | 0     | 0     | 90    |     | 0     | 71   |      |       |
| Queue Length 50th (ft)  | 72    | 60    | 210   |     | 84    | 22   |      |       |
| Queue Length 95th (ft)  | #159  | 107   | m335  |     | m120  | 52   |      |       |
| Internal Link Dist (ft) | 1178  |       | 184   |     |       | 350  |      |       |
| Turn Bay Length (ft)    |       | 100   |       |     |       |      |      |       |
| Base Capacity (vph)     | 191   | 455   | 1921  |     | 413   | 2515 |      |       |
| Starvation Cap Reductn  | 0     | 0     | 0     |     | 0     | 74   |      |       |
| Spillback Cap Reductn   | 0     | 0     | 0     |     | 0     | 0    |      |       |
| Storage Cap Reductn     | 0     | 0     | 0     |     | 0     | 0    |      |       |

Lanes, Volumes, Timings  
 21: Thompson Rd

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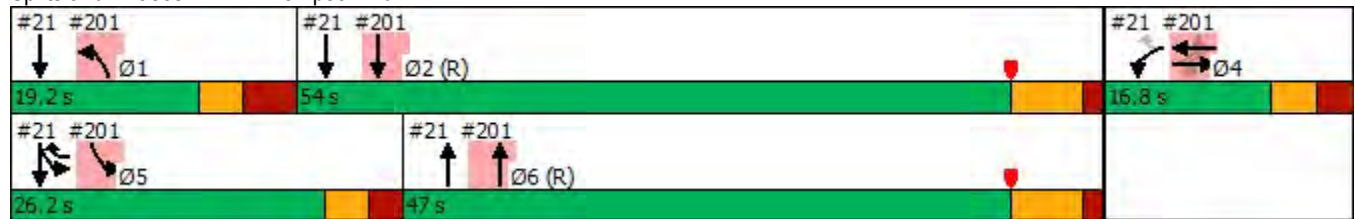


| Lane Group        | WBL  | WBR  | NBT  | NBR | SBL  | SBT  | Ø1 | Ø2 |
|-------------------|------|------|------|-----|------|------|----|----|
| Reduced v/c Ratio | 0.69 | 0.39 | 0.60 |     | 0.33 | 0.56 |    |    |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 15.4 Intersection LOS: B  
 Intersection Capacity Utilization 57.4% 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.

Splits and Phases: 21: Thompson Rd



Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↔     |       | ↖     | ↕     |       | ↖     | ↕     | ↗     |
| Traffic Volume (vph)       | 58    | 5     | 116   | 5     | 2     | 18    | 113   | 1071  | 13    | 26    | 1256  | 11    |
| Future Volume (vph)        | 58    | 5     | 116   | 5     | 2     | 18    | 113   | 1071  | 13    | 26    | 1256  | 11    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 100   | 0     |       | 0     | 0     |       | 0     | 700   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.900 |       |       | 0.998 |       |       |       | 0.999 |
| Flt Protected              |       | 0.956 |       |       | 0.991 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1736  | 1509  | 0     | 1695  | 0     | 1530  | 3369  | 0     | 1805  | 3404  | 0     |
| Flt Permitted              |       | 0.722 |       |       | 0.939 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 0     | 1311  | 1509  | 0     | 1606  | 0     | 1530  | 3369  | 0     | 1804  | 3404  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 182   |       | 20    |       |       | 2     |       |       |       | 1     |
| Link Speed (mph)           |       | 30    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 731   |       |       | 393   |       |       | 430   |       |       |       | 1397  |
| Travel Time (s)            |       | 16.6  |       |       | 10.7  |       |       | 6.5   |       |       |       | 21.2  |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 5%    | 0%    | 7%    | 0%    | 0%    | 0%    | 18%   | 7%    | 0%    | 0%    | 6%    | 0%    |
| Adj. Flow (vph)            | 63    | 5     | 126   | 5     | 2     | 20    | 123   | 1164  | 14    | 28    | 1365  | 12    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 68    | 126   | 0     | 27    | 0     | 123   | 1178  | 0     | 28    | 1377  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Right | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 24    |       |       | 30    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 0     |       | 1     | 2     |       |
| Detector Template          | Left  |       |       | Left  |       |       | Left  |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 29    | 29    | 20    | 29    |       | 34    | 0     |       | 29    | 306   |       |
| Trailing Detector (ft)     | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Position(ft)    | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Size(ft)        | 20    | 34    | 34    | 20    | 34    |       | 34    | 6     |       | 34    | 6     |       |
| 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   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       |       |       |       |       | 300   |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       |       |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       |       |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       |       |       |       |       | 0.0   |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    |     | Prot  | NA    |     | Prot  | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       |     |       |       |     |       |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     |       |     | 5     | 2     |     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |     | 11.6  | 21.2  |     | 10.2  | 21.2  |     |
| Total Split (s)         | 16.8  | 16.8  | 16.8  | 16.8  | 16.8  |     | 19.2  | 47.0  |     | 26.2  | 54.0  |     |
| Total Split (%)         | 18.7% | 18.7% | 18.7% | 18.7% | 18.7% |     | 21.3% | 52.2% |     | 29.1% | 60.0% |     |
| Maximum Green (s)       | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |     | 12.6  | 40.8  |     | 21.0  | 47.8  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 2.6   | 2.6   | 2.6   | 2.6   | 2.6   |     | 3.6   | 1.4   |     | 2.2   | 1.4   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.6   | 5.6   |       | 5.6   |     | 6.6   | 6.2   |     | 5.2   | 6.2   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min |     |
| Act Effct Green (s)     |       | 10.3  | 10.3  |       | 10.3  |     | 10.2  | 51.9  |     | 10.8  | 51.1  |     |
| Actuated g/C Ratio      |       | 0.11  | 0.11  |       | 0.11  |     | 0.11  | 0.58  |     | 0.12  | 0.57  |     |
| v/c Ratio               |       | 0.45  | 0.38  |       | 0.13  |     | 0.71  | 0.61  |     | 0.13  | 0.71  |     |
| Control Delay           |       | 46.9  | 5.2   |       | 20.2  |     | 64.5  | 7.2   |     | 39.0  | 16.3  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.1   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 46.9  | 5.2   |       | 20.2  |     | 64.5  | 7.3   |     | 39.0  | 16.3  |     |
| LOS                     |       | D     | A     |       | C     |     | E     | A     |     | D     | B     |     |
| Approach Delay          |       | 19.8  |       |       | 20.2  |     |       | 12.7  |     |       | 16.8  |     |
| Approach LOS            |       | B     |       |       | C     |     |       | B     |     |       | B     |     |
| 90th %ile Green (s)     | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |     | 12.6  | 46.2  |     | 15.6  | 47.8  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Gap   | Coord |     |
| 70th %ile Green (s)     | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  |     | 12.6  | 49.0  |     | 12.8  | 47.8  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Gap   | Coord |     |
| 50th %ile Green (s)     | 12.2  | 12.2  | 12.2  | 12.2  | 12.2  |     | 11.1  | 50.0  |     | 10.8  | 48.3  |     |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   | Coord |     | Gap   | Coord |     |
| 30th %ile Green (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 8.9   | 54.2  |     | 8.8   | 52.7  |     |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 5.9   | 60.0  |     | 6.0   | 58.7  |     |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   |     | Gap   | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 57    | 6     |       | 13    |     | 113   | 236   |     | 25    | 927   |     |
| Fuel Used(gal)          |       | 1     | 1     |       | 0     |     | 3     | 8     |     | 1     | 27    |     |
| CO Emissions (g/hr)     |       | 89    | 57    |       | 17    |     | 224   | 528   |     | 53    | 1903  |     |
| NOx Emissions (g/hr)    |       | 17    | 11    |       | 3     |     | 44    | 103   |     | 10    | 370   |     |
| VOC Emissions (g/hr)    |       | 21    | 13    |       | 4     |     | 52    | 122   |     | 12    | 441   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 65    |     | 0     | 49    |     |
| Queue Length 50th (ft)  |       | 36    | 0     |       | 4     |     | 76    | 83    |     | 14    | 313   |     |
| Queue Length 95th (ft)  |       | 79    | 19    |       | 28    |     | m127  | 94    |     | m20   | m463  |     |
| Internal Link Dist (ft) |       | 651   |       |       | 313   |     |       | 350   |     |       | 1317  |     |
| Turn Bay Length (ft)    |       |       | 100   |       |       |     |       |       |     | 700   |       |     |
| Base Capacity (vph)     |       | 166   | 350   |       | 220   |     | 214   | 1942  |     | 421   | 1931  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 90    |     | 0     | 0     |     |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



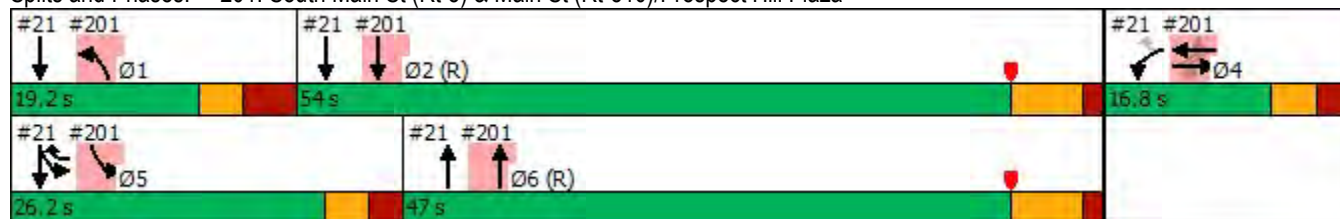
| Lane Group            | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|-----------------------|-----|------|------|-----|------|-----|------|------|-----|------|------|-----|
| Spillback Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn   |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio     |     | 0.41 | 0.36 |     | 0.12 |     | 0.57 | 0.64 |     | 0.07 | 0.71 |     |

Intersection Summary

|                                   |  |
|-----------------------------------|--|
| Area Type:                        | Other  |
| Cycle Length:                     | 90   |
| Actuated Cycle Length:            | 90   |
| Offset:                           | 49 (54%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow |
| Natural Cycle:                    | 65   |
| Control Type:                     | Actuated-Coordinated   |
| Maximum v/c Ratio:                | 0.76   |
| Intersection Signal Delay:        | 15.2   |
| Intersection LOS:                 | B  |
| Intersection Capacity Utilization | 66.8%  |
| ICU Level of Service              | C  |
| Analysis Period (min)             | 15   |












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

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza



Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020

|                            |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations        |  |   |  |  |  |  |
| Traffic Volume (vph)       | 28  | 27  | 1011  | 56  | 58  | 1239  |
| Future Volume (vph)        | 28  | 27  | 1011  | 56  | 58  | 1239  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 8   | 12  |
| Storage Length (ft)        | 0   | 0   |   | 250   | 75  |   |
| 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  |
| Fr <sub>t</sub>            | 0.934   |   |   | 0.850   |   |   |
| Fl <sub>t</sub> Protected  | 0.975   |   |   |   | 0.950   |   |
| Satd. Flow (prot)          | 1656  | 0   | 1743  | 1615  | 1564  | 1776  |
| Fl <sub>t</sub> Permitted  | 0.975   |   |   |   | 0.070   |   |
| Satd. Flow (perm)          | 1656  | 0   | 1743  | 1615  | 115   | 1776  |
| Right Turn on Red          |   | Yes   |   | Yes   |   |   |
| Satd. Flow (RTOR)          | 29  |   |   | 61  |   |   |
| Link Speed (mph)           | 30  |   | 45  |   |   | 45  |
| Link Distance (ft)         | 1378  |   | 1115  |   |   | 1349  |
| Travel Time (s)            | 31.3  |   | 16.9  |   |   | 20.4  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 4%  | 5%  | 9%  | 0%  | 0%  | 7%  |
| Adj. Flow (vph)            | 30  | 29  | 1099  | 61  | 63  | 1347  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 59  | 0   | 1099  | 61  | 63  | 1347  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Right   | Left  | Right   | Left  | Left  |
| Median Width(ft)           | 12  |   | 0   |   |   | 8   |
| 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  | 1.20  | 1.00  |
| Turning Speed (mph)        | 15  | 9   |   | 9   | 15  |   |
| Number of Detectors        | 1   |   | 0   | 0   | 0   | 0   |
| Detector Template          |   |   |   |   |   |   |
| Leading Detector (ft)      | 25  |   | 0   | 0   | 0   | 0   |
| Trailing Detector (ft)     | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 30  |   | 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   |
| Turn Type                  | Prot  |   | NA  | pm+ov   | D.P+P   | NA  |
| Protected Phases           | 4   |   | 2   | 4   | 1   | 12  |
| Permitted Phases           |   |   |   | 2   | 2   |   |
| Detector Phase             | 4   |   |   |   |   |   |
| Switch Phase               |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   |   | 15.0  | 5.0   | 5.0   |   |

Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020



| Lane Group              | WBL   | WBR | NBT   | NBR   | SBL   | SBT  |
|-------------------------|-------|-----|-------|-------|-------|------|
| Minimum Split (s)       | 9.4   |     | 22.8  | 9.4   | 9.0   |      |
| Total Split (s)         | 9.4   |     | 65.6  | 9.4   | 15.0  |      |
| Total Split (%)         | 10.4% |     | 72.9% | 10.4% | 16.7% |      |
| Maximum Green (s)       | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| Yellow Time (s)         | 3.0   |     | 4.8   | 3.0   | 3.0   |      |
| All-Red Time (s)        | 1.4   |     | 3.0   | 1.4   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0   |     | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.4   |     | 7.8   | 4.4   | 4.0   |      |
| Lead/Lag                |       |     | Lag   |       | Lead  |      |
| Lead-Lag Optimize?      |       |     |       |       |       |      |
| Vehicle Extension (s)   | 1.5   |     | 3.0   | 1.5   | 3.0   |      |
| Recall Mode             | None  |     | C-Max | None  | Max   |      |
| Act Effect Green (s)    | 5.0   |     | 57.8  | 68.7  | 74.5  | 79.3 |
| Actuated g/C Ratio      | 0.06  |     | 0.64  | 0.76  | 0.83  | 0.88 |
| v/c Ratio               | 0.50  |     | 0.98  | 0.05  | 0.21  | 0.86 |
| Control Delay           | 39.7  |     | 39.7  | 0.4   | 10.9  | 9.6  |
| Queue Delay             | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Delay             | 39.7  |     | 39.7  | 0.4   | 10.9  | 9.6  |
| LOS                     | D     |     | D     | A     | B     | A    |
| Approach Delay          | 39.7  |     | 37.6  |       |       | 9.6  |
| Approach LOS            | D     |     | D     |       |       | A    |
| 90th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 90th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 70th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 70th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 50th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 50th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 30th %ile Green (s)     | 5.0   |     | 57.8  | 5.0   | 11.0  |      |
| 30th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 10th %ile Green (s)     | 0.0   |     | 57.8  | 0.0   | 20.4  |      |
| 10th %ile Term Code     | Skip  |     | Coord | Skip  | MaxR  |      |
| Stops (vph)             | 33    |     | 798   | 2     | 24    | 727  |
| Fuel Used(gal)          | 1     |     | 29    | 1     | 2     | 40   |
| CO Emissions (g/hr)     | 84    |     | 2032  | 45    | 124   | 2811 |
| NOx Emissions (g/hr)    | 16    |     | 395   | 9     | 24    | 547  |
| VOC Emissions (g/hr)    | 19    |     | 471   | 10    | 29    | 651  |
| Dilemma Vehicles (#)    | 0     |     | 58    | 0     | 0     | 1    |
| Queue Length 50th (ft)  | 17    |     | 467   | 1     | 1     | 382  |
| Queue Length 95th (ft)  | #61   |     | #845  | 3     | m2    | m264 |
| Internal Link Dist (ft) | 1298  |     | 1035  |       |       | 1269 |
| Turn Bay Length (ft)    |       |     |       | 250   | 75    |      |
| Base Capacity (vph)     | 119   |     | 1119  | 1247  | 302   | 1564 |
| 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       | 0.50  |     | 0.98  | 0.05  | 0.21  | 0.86 |

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings  
 205: Phelps Rd (CT-191)

07/07/2020

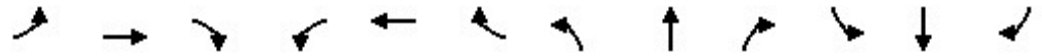
Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 55 (61%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 22.7 Intersection LOS: C  
 Intersection Capacity Utilization 76.4% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 530   | 367   | 938   | 75    | 283   | 116   | 625   | 441   | 81    | 73    | 280   | 511   |
| Future Volume (vph)        | 530   | 367   | 938   | 75    | 283   | 116   | 625   | 441   | 81    | 73    | 280   | 511   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 350   |       | 290   | 0     |       | 200   | 400   |       | 0     | 205   |       | 130   |
| Storage Lanes              | 1     |       | 2     | 0     |       | 1     | 2     |       | 0     | 2     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 0.95  | 0.95  | 0.88  | 0.95  | 0.95  | 0.95  | 0.97  | 0.95  | 0.95  | 1.00  | 0.95  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.963 |       |       | 0.977 |       |       |       | 0.850 |
| Flt Protected              | 0.950 | 0.990 |       |       | 0.992 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1603  | 1735  | 2733  | 0     | 3146  | 0     | 3273  | 3271  | 0     | 1703  | 3374  | 1583  |
| Flt Permitted              | 0.950 | 0.990 |       |       | 0.992 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1603  | 1735  | 2733  | 0     | 3146  | 0     | 3273  | 3271  | 0     | 1696  | 3374  | 1583  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 502   |       | 40    |       |       | 25    |       |       |       | 177   |
| Link Speed (mph)           |       | 45    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 734   |       |       | 813   |       |       | 1397  |       |       |       | 571   |
| Travel Time (s)            |       | 11.1  |       |       | 15.8  |       |       | 21.2  |       |       |       | 8.7   |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 2%    | 4%    | 0%    | 10%   | 15%   | 7%    | 7%    | 10%   | 6%    | 7%    | 2%    |
| Adj. Flow (vph)            | 576   | 399   | 1020  | 82    | 308   | 126   | 679   | 479   | 88    | 79    | 304   | 555   |
| Shared Lane Traffic (%)    | 17%   |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 478   | 497   | 1020  | 0     | 516   | 0     | 679   | 567   | 0     | 79    | 304   | 555   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 33    |       |       | 12    |       |       | 32    |       |       |       | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 2     |       | 1     | 2     | 0     |
| Detector Template          |       |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 34    | 29    | 20    | 48    |       | 34    | 326   |       | 39    | 326   | 0     |
| Trailing Detector (ft)     | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Position(ft)    | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Size(ft)        | 34    | 34    | 39    | 20    | 48    |       | 34    | 6     |       | 34    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 320   |       |       | 320   |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       | 0.0   |       |       | 0.0   |       |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Turn Type               | Split | NA    | pm+ov | Split | NA    |     | Prot  | NA    |     | Prot  | NA    | pm+ov |
| Protected Phases        | 4     | 4     | 1     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 4     |
| Permitted Phases        |       |       | 4     |       |       |     |       |       |     |       | 2     | 2     |
| Detector Phase          | 4     | 4     | 4     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 9.0   | 9.0   | 5.0   | 9.0   | 9.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  | 9.0   |
| Minimum Split (s)       | 15.5  | 15.5  | 10.9  | 15.7  | 15.7  |     | 10.9  | 21.0  |     | 10.0  | 21.0  | 15.5  |
| Total Split (s)         | 24.6  | 24.6  | 25.0  | 19.2  | 19.2  |     | 25.0  | 36.2  |     | 10.0  | 21.2  | 24.6  |
| Total Split (%)         | 27.3% | 27.3% | 27.8% | 21.3% | 21.3% |     | 27.8% | 40.2% |     | 11.1% | 23.6% | 27.3% |
| Maximum Green (s)       | 18.1  | 18.1  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 18.1  |
| Yellow Time (s)         | 3.3   | 3.3   | 3.0   | 4.1   | 4.1   |     | 3.0   | 4.8   |     | 3.0   | 4.8   | 3.3   |
| All-Red Time (s)        | 3.2   | 3.2   | 2.9   | 2.6   | 2.6   |     | 2.9   | 1.2   |     | 2.0   | 1.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.5   | 6.5   | 5.9   |       | 6.7   |     | 5.9   | 6.0   |     | 5.0   | 6.0   | 6.5   |
| Lead/Lag                |       |       | Lead  |       |       |     | Lead  | Lag   |     | Lead  | Lag   |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.5   |     | 2.0   | 2.5   | 3.0   |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min | None  |
| Act Effct Green (s)     | 18.1  | 18.1  | 37.8  |       | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 39.3  |
| Actuated g/C Ratio      | 0.20  | 0.20  | 0.42  |       | 0.14  |     | 0.21  | 0.34  |     | 0.06  | 0.17  | 0.44  |
| v/c Ratio               | 1.48  | 1.42  | 0.71  |       | 1.10  |     | 0.98  | 0.51  |     | 0.84  | 0.54  | 0.70  |
| Control Delay           | 262.4 | 237.6 | 8.2   |       | 105.2 |     | 54.7  | 24.3  |     | 94.4  | 37.3  | 17.1  |
| Queue Delay             | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.3   |
| Total Delay             | 262.4 | 237.6 | 8.2   |       | 105.2 |     | 54.7  | 24.3  |     | 94.4  | 37.3  | 17.3  |
| LOS                     | F     | F     | A     |       | F     |     | D     | C     |     | F     | D     | B     |
| Approach Delay          |       | 126.2 |       |       | 105.2 |     |       | 40.9  |     |       | 30.3  |       |
| Approach LOS            |       | F     |       |       | F     |     |       | D     |     |       | C     |       |
| 90th %ile Green (s)     | 18.1  | 18.1  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 18.1  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 70th %ile Green (s)     | 18.1  | 18.1  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 18.1  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 50th %ile Green (s)     | 18.1  | 18.1  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 18.1  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 30th %ile Green (s)     | 18.1  | 18.1  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.2  |     | 5.0   | 15.2  | 18.1  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 10th %ile Green (s)     | 18.3  | 18.3  | 19.1  | 12.5  | 12.5  |     | 19.1  | 30.0  |     | 5.0   | 15.0  | 18.3  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| Stops (vph)             | 332   | 348   | 371   |       | 369   |     | 560   | 467   |     | 61    | 237   | 296   |
| Fuel Used(gal)          | 30    | 29    | 11    |       | 16    |     | 20    | 13    |     | 2     | 6     | 7     |
| CO Emissions (g/hr)     | 2078  | 2000  | 744   |       | 1100  |     | 1370  | 918   |     | 170   | 427   | 514   |
| NOx Emissions (g/hr)    | 404   | 389   | 145   |       | 214   |     | 267   | 179   |     | 33    | 83    | 100   |
| VOC Emissions (g/hr)    | 482   | 463   | 173   |       | 255   |     | 317   | 213   |     | 39    | 99    | 119   |
| Dilemma Vehicles (#)    | 0     | 17    | 0     |       | 22    |     | 0     | 19    |     | 0     | 19    | 0     |
| Queue Length 50th (ft)  | ~398  | ~406  | 53    |       | ~165  |     | 201   | 152   |     | 47    | 68    | 112   |
| Queue Length 95th (ft)  | #595  | #606  | 86    |       | #269  |     | #304  | 197   |     | m#97  | 118   | 200   |
| Internal Link Dist (ft) |       | 654   |       |       | 733   |     |       | 1317  |     |       | 491   |       |
| Turn Bay Length (ft)    | 350   |       | 290   |       |       |     | 400   |       |     | 205   |       | 130   |
| Base Capacity (vph)     | 323   | 349   | 1440  |       | 471   |     | 694   | 1114  |     | 94    | 569   | 770   |
| Starvation Cap Reductn  | 0     | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 22    |

Lanes, Volumes, Timings  
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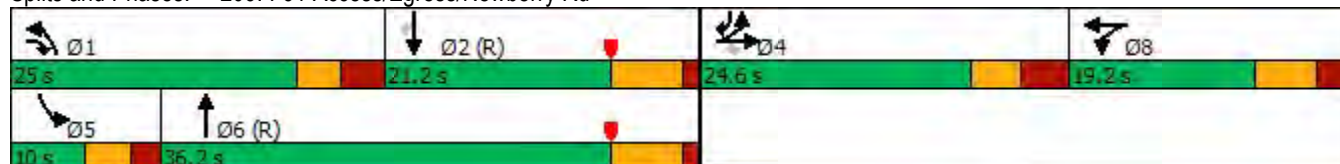


| Lane Group            | EBL  | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|-----------------------|------|------|------|-----|------|-----|------|------|-----|------|------|------|
| Spillback Cap Reductn | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn   | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio     | 1.48 | 1.42 | 0.71 |     | 1.10 |     | 0.98 | 0.51 |     | 0.84 | 0.53 | 0.74 |

Intersection Summary























Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 79 (88%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.48  
 Intersection Signal Delay: 82.1 Intersection LOS: F  
 Intersection Capacity Utilization 89.3% ICU Level of Service E  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings  
 210: N Rd. (CT-140)/N Rd. (CT140)

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|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |  |  |  |  |  |   |  |  |  |  |  |   |
| Traffic Volume (vph)       | 190   | 1035  | 203   | 146   | 445   | 94  | 307  | 402   | 198   | 137   | 200   | 175   |
| Future Volume (vph)        | 190   | 1035  | 203   | 146   | 445   | 94  | 307  | 402   | 198   | 137   | 200   | 175   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 11  | 11  | 11  | 11  | 11  | 10   | 11  | 12  | 11  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 260   |   | 475   | 300  |   | 200   | 200   |   | 0   |
| Storage Lanes              | 1   |   | 1   | 1   |   | 1   | 2  |   | 1   | 1   |   | 0   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25   |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 0.97   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   |   |   |   |   |  |   | 0.99  | 1.00  |   |   |
| Frt                        |   |   | 0.850   |   | 0.974   |   |  |   | 0.850   |   | 0.930   |   |
| Flt Protected              | 0.950   |   |   | 0.950   |   |   | 0.950  |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 1558  | 3172  | 1516  | 1504  | 3246  | 0   | 3083   | 1640  | 1442  | 1517  | 1488  | 0   |
| Flt Permitted              | 0.342   |   |   | 0.122   |   |   | 0.950  |   |   | 0.950   |   |   |
| Satd. Flow (perm)          | 561   | 3172  | 1516  | 193   | 3246  | 0   | 3083   | 1640  | 1423  | 1513  | 1488  | 0   |
| Right Turn on Red          |   |   | No  |   |   | No  |  |   | No  |   |   | No  |
| Satd. Flow (RTOR)          |   |   |   |   |   |   |  |   |   |   |   |   |
| Link Speed (mph)           |   | 35  |   |   | 45  |   |  | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 381   |   |   | 922   |   |  | 908   |   |   | 783   |   |
| Travel Time (s)            |   | 7.4   |   |   | 14.0  |   |  | 13.8  |   |   | 11.9  |   |
| Confl. Peds. (#/hr)        |   |   |   |   |   |   |  |   | 1   | 1   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 12%   | 10%   | 3%  | 16%   | 4%  | 8%  | 6%   | 12%   | 12%   | 15%   | 8%  | 31%   |
| Adj. Flow (vph)            | 207   | 1125  | 221   | 159   | 484   | 102   | 334  | 437   | 215   | 149   | 217   | 190   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 207   | 1125  | 221   | 159   | 586   | 0   | 334  | 437   | 215   | 149   | 407   | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 11  |   |   | 11  |   |  | 20  |   |   | 20  |   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |  | 0   |   |   | 0   |   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |  | 16  |   |   | 16  |   |
| Two way Left Turn Lane     |   |   |   |   |   |   |  |   |   |   |   |   |
| Headway Factor             | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.09   | 1.04  | 1.00  | 1.04  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15   |   | 12  | 15  |   | 12  |
| Number of Detectors        | 1   | 1   | 0   | 1   | 1   |   | 1  | 1   | 1   | 1   | 1   |   |
| Detector Template          |   |   |   |   |   |   |  |   |   |   |   |   |
| Leading Detector (ft)      | 29  | 256   | 0   | 30  | 315   |   | 29   | 29  | 29  | 29  | 29  |   |
| Trailing Detector (ft)     | -5  | 250   | 0   | -5  | 310   |   | -5   | -5  | -5  | -5  | -5  |   |
| Detector 1 Position(ft)    | -5  | 250   | 0   | -5  | 310   |   | -5   | -5  | -5  | -5  | -5  |   |
| Detector 1 Size(ft)        | 34  | 6   | 20  | 35  | 5   |   | 34   | 34  | 34  | 34  | 34  |   |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex  | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   |
| Detector 1 Channel         |   |   |   |   |   |   |  |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Turn Type                  | pm+pt   | NA  | pm+ov   | pm+pt   | NA  |   | Prot   | NA  | pm+ov   | Prot  | NA  |   |
| Protected Phases           | 5   | 2   | 3   | 1   | 6   |   | 3  | 8   | 1   | 7   | 4   |   |
| Permitted Phases           | 2   |   | 2   | 6   |   |   |  |   | 8   |   |   |   |
| Detector Phase             | 5   | 2   | 2   | 1   | 6   |   | 3  | 8   | 8   | 7   | 4   |   |

Lanes, Volumes, Timings  
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase            |       |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 6.0   | 15.0  | 4.0   | 6.0   | 15.0  |     | 4.0   | 9.0   | 6.0   | 4.0   | 5.0   |     |
| Minimum Split (s)       | 11.8  | 20.5  | 8.0   | 12.6  | 20.5  |     | 8.0   | 15.8  | 12.6  | 8.0   | 11.8  |     |
| Total Split (s)         | 15.7  | 39.3  | 11.0  | 14.5  | 38.1  |     | 11.0  | 27.2  | 14.5  | 9.0   | 25.2  |     |
| Total Split (%)         | 17.4% | 43.7% | 12.2% | 16.1% | 42.3% |     | 12.2% | 30.2% | 16.1% | 10.0% | 28.0% |     |
| Maximum Green (s)       | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| Yellow Time (s)         | 3.0   | 4.5   | 3.0   | 3.0   | 4.5   |     | 3.0   | 4.4   | 3.0   | 3.0   | 4.4   |     |
| All-Red Time (s)        | 2.8   | 1.0   | 1.0   | 3.6   | 1.0   |     | 1.0   | 2.4   | 3.6   | 1.0   | 2.4   |     |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 5.8   | 5.5   | 4.0   | 6.6   | 5.5   |     | 4.0   | 6.8   | 6.6   | 4.0   | 6.8   |     |
| Lead/Lag                | Lead  | Lag   | Lead  | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |       |       |       |     |
| Vehicle Extension (s)   | 1.5   | 4.0   | 1.5   | 1.5   | 4.0   |     | 1.5   | 2.5   | 1.5   | 1.5   | 2.5   |     |
| Recall Mode             | None  | C-Min | None  | None  | C-Min |     | None  | None  | None  | None  | None  |     |
| Act Effct Green (s)     | 42.1  | 33.4  | 46.5  | 39.4  | 32.8  |     | 7.6   | 20.4  | 28.3  | 5.6   | 18.4  |     |
| Actuated g/C Ratio      | 0.47  | 0.37  | 0.52  | 0.44  | 0.36  |     | 0.08  | 0.23  | 0.31  | 0.06  | 0.20  |     |
| v/c Ratio               | 0.57  | 0.96  | 0.28  | 0.81  | 0.50  |     | 1.28  | 1.18  | 0.48  | 1.59  | 1.34  |     |
| Control Delay           | 17.6  | 44.5  | 12.2  | 49.2  | 24.0  |     | 186.4 | 135.9 | 23.2  | 336.8 | 204.8 |     |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 17.6  | 44.5  | 12.2  | 49.2  | 24.0  |     | 186.4 | 135.9 | 23.2  | 336.8 | 204.8 |     |
| LOS                     | B     | D     | B     | D     | C     |     | F     | F     | C     | F     | F     |     |
| Approach Delay          |       | 36.3  |       |       | 29.4  |     |       | 128.4 |       |       | 240.1 |     |
| Approach LOS            |       | D     |       |       | C     |     |       | F     |       |       | F     |     |
| 90th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 90th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 70th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 70th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 50th %ile Green (s)     | 9.9   | 33.8  | 7.0   | 7.9   | 32.6  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 50th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 30th %ile Green (s)     | 8.8   | 33.8  | 7.0   | 7.9   | 33.7  |     | 7.0   | 20.4  | 7.9   | 5.0   | 18.4  |     |
| 30th %ile Term Code     | Gap   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 10th %ile Green (s)     | 6.8   | 31.6  | 10.1  | 7.0   | 32.6  |     | 10.1  | 20.4  | 7.0   | 8.1   | 18.4  |     |
| 10th %ile Term Code     | Gap   | Coord | Max   | Gap   | Coord |     | Max   | Max   | Gap   | Max   | Max   |     |
| Stops (vph)             | 99    | 919   | 103   | 81    | 403   |     | 223   | 316   | 134   | 89    | 289   |     |
| Fuel Used(gal)          | 2     | 19    | 2     | 3     | 11    |     | 16    | 17    | 4     | 11    | 21    |     |
| CO Emissions (g/hr)     | 136   | 1338  | 129   | 234   | 760   |     | 1135  | 1218  | 263   | 783   | 1474  |     |
| NOx Emissions (g/hr)    | 26    | 260   | 25    | 45    | 148   |     | 221   | 237   | 51    | 152   | 287   |     |
| VOC Emissions (g/hr)    | 32    | 310   | 30    | 54    | 176   |     | 263   | 282   | 61    | 181   | 342   |     |
| Dilemma Vehicles (#)    | 0     | 70    | 0     | 0     | 30    |     | 0     | 26    | 0     | 0     | 15    |     |
| Queue Length 50th (ft)  | 58    | 333   | 55    | 47    | 134   |     | ~131  | ~313  | 81    | ~128  | ~305  |     |
| Queue Length 95th (ft)  | m83   | #462  | m90   | #152  | 184   |     | m#219 | #483  | m143  | #246  | #482  |     |
| Internal Link Dist (ft) |       | 301   |       |       | 842   |     |       | 828   |       |       | 703   |     |
| Turn Bay Length (ft)    |       |       |       | 260   |       |     | 300   |       | 200   | 200   |       |     |
| Base Capacity (vph)     | 377   | 1191  | 776   | 199   | 1183  |     | 260   | 371   | 449   | 94    | 304   |     |
| Starvation Cap Reductn  | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.55  | 0.94  | 0.28  | 0.80  | 0.50  |     | 1.28  | 1.18  | 0.48  | 1.59  | 1.34  |     |

Lanes, Volumes, Timings  
 210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

Intersection Summary

|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 14 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  |
| Natural Cycle:                    | 130   |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 1.59  |
| Intersection Signal Delay:        | 88.1  |
| Intersection LOS:                 | F   |
| Intersection Capacity Utilization | 85.8%   |
| ICU Level of Service              | E   |
| Analysis Period (min)             | 15  |
| ~                                 | Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 210: N Rd. (CT-140)/N Rd. (CT140)



Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

07/07/2020



| Lane Group                 | EBL  | EBT  | EBR    | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|------|--------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations        |      |      | ↗      |       | ↔     |       |      | ↕     |       |       | ↖     |       |
| Traffic Volume (vph)       | 0    | 0    | 3      | 150   | 0     | 18    | 0    | 1032  | 210   | 9     | 1272  | 0     |
| Future Volume (vph)        | 0    | 0    | 3      | 150   | 0     | 18    | 0    | 1032  | 210   | 9     | 1272  | 0     |
| Ideal Flow (vphpl)         | 1900 | 1900 | 1900   | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00 | 1.00 | 1.00   | 1.00  | 1.00  | 1.00  | 1.00 | 0.95  | 0.95  | 0.95  | 0.95  | 1.00  |
| Fr <sub>t</sub>            |      |      | 0.865  |       | 0.985 |       |      | 0.975 |       |       |       |       |
| Fl <sub>t</sub> Protected  |      |      |        |       | 0.957 |       |      |       |       |       |       |       |
| Satd. Flow (prot)          | 0    | 0    | 1096   | 0     | 1754  | 0     | 0    | 3300  | 0     | 0     | 3343  | 0     |
| Fl <sub>t</sub> Permitted  |      |      |        |       | 0.957 |       |      |       |       |       | 0.942 |       |
| Satd. Flow (perm)          | 0    | 0    | 1096   | 0     | 1754  | 0     | 0    | 3300  | 0     | 0     | 3149  | 0     |
| Right Turn on Red          |      |      | Yes    |       |       | Yes   |      |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      |      | 63     |       | 33    |       |      | 54    |       |       |       |       |
| Link Speed (mph)           |      | 30   |        |       | 30    |       |      | 50    |       |       |       | 45    |
| Link Distance (ft)         |      | 417  |        |       | 1615  |       |      | 1146  |       |       |       | 576   |
| Travel Time (s)            |      | 9.5  |        |       | 36.7  |       |      | 15.6  |       |       |       | 8.7   |
| Peak Hour Factor           | 0.92 | 0.92 | 0.92   | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Growth Factor              | 100% | 100% | 100%   | 100%  | 100%  | 100%  | 50%  | 100%  | 100%  | 100%  | 100%  | 100%  |
| Heavy Vehicles (%)         | 0%   | 0%   | 50%    | 1%    | 0%    | 11%   | 14%  | 8%    | 0%    | 6%    | 8%    | 50%   |
| Adj. Flow (vph)            | 0    | 0    | 3      | 163   | 0     | 20    | 0    | 1122  | 228   | 10    | 1383  | 0     |
| Shared Lane Traffic (%)    |      |      |        |       |       |       |      |       |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 0    | 3      | 0     | 183   | 0     | 0    | 1350  | 0     | 0     | 1393  | 0     |
| Enter Blocked Intersection | No   | No   | No     | No    | No    | No    | No   | No    | No    | No    | No    | No    |
| Lane Alignment             | Left | Left | Right  | Left  | Left  | Right | Left | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0    |        |       | 0     |       |      | 26    |       |       |       | 26    |
| 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     | 15    |       | 9     |
| Number of Detectors        |      |      | 0      | 1     | 1     |       |      | 0     |       | 1     | 0     |       |
| Detector Template          |      |      |        | Left  |       |       |      |       |       | Left  |       |       |
| Leading Detector (ft)      |      |      | 0      | 20    | 25    |       |      | 0     |       | 20    | 0     |       |
| Trailing Detector (ft)     |      |      | 0      | 0     | 0     |       |      | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    |      |      | 0      | 0     | 0     |       |      | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        |      |      | 20     | 20    | 25    |       |      | 0     |       | 20    | 0     |       |
| Detector 1 Type            |      |      | Extend | 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   |       |
| Detector 1 Queue (s)       |      |      | 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   |       |
| Turn Type                  |      |      | Perm   | Perm  | NA    |       |      | NA    |       | Perm  | NA    |       |
| Protected Phases           |      |      |        |       | 4     |       |      | 2     |       |       |       | 2     |
| Permitted Phases           |      |      | 4      | 4     |       |       |      |       |       | 2     |       |       |
| Detector Phase             |      |      | 4      | 4     | 4     |       |      |       |       |       |       |       |
| Switch Phase               |      |      |        |       |       |       |      |       |       |       |       |       |
| Minimum Initial (s)        |      |      | 9.0    | 9.0   | 9.0   |       |      | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          |      |      | 13.0   | 13.0  | 13.0  |       |      | 20.7  |       | 20.7  | 20.7  |       |
| Total Split (s)            |      |      | 26.0   | 26.0  | 26.0  |       |      | 64.0  |       | 64.0  | 64.0  |       |
| Total Split (%)            |      |      | 28.9%  | 28.9% | 28.9% |       |      | 71.1% |       | 71.1% | 71.1% |       |

Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

07/07/2020



| Lane Group              | EBL | EBT | EBR  | WBL  | WBT  | WBR | NBL | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-----|-----|------|------|------|-----|-----|-------|-----|-------|-------|-----|
| Maximum Green (s)       |     |     | 22.0 | 22.0 | 22.0 |     |     | 58.3  |     | 58.3  | 58.3  |     |
| Yellow Time (s)         |     |     | 3.0  | 3.0  | 3.0  |     |     | 4.7   |     | 4.7   | 4.7   |     |
| 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   |     |
| Total Lost Time (s)     |     |     | 4.0  |      | 4.0  |     |     | 5.7   |     |       | 5.7   |     |
| Lead/Lag                |     |     |      |      |      |     |     |       |     |       |       |     |
| Lead-Lag Optimize?      |     |     |      |      |      |     |     |       |     |       |       |     |
| Vehicle Extension (s)   |     |     | 3.0  | 3.0  | 3.0  |     |     | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             |     |     | None | None | None |     |     | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |     |     | 13.4 |      | 13.4 |     |     | 66.9  |     |       | 66.9  |     |
| Actuated g/C Ratio      |     |     | 0.15 |      | 0.15 |     |     | 0.74  |     |       | 0.74  |     |
| v/c Ratio               |     |     | 0.01 |      | 0.63 |     |     | 0.55  |     |       | 0.60  |     |
| Control Delay           |     |     | 0.0  |      | 38.8 |     |     | 6.2   |     |       | 4.9   |     |
| Queue Delay             |     |     | 0.0  |      | 0.0  |     |     | 0.0   |     |       | 0.0   |     |
| Total Delay             |     |     | 0.0  |      | 38.8 |     |     | 6.2   |     |       | 4.9   |     |
| LOS                     |     |     | A    |      | D    |     |     | A     |     |       | A     |     |
| Approach Delay          |     |     |      |      | 38.8 |     |     | 6.2   |     |       | 4.9   |     |
| Approach LOS            |     |     |      |      | D    |     |     | A     |     |       | A     |     |
| 90th %ile Green (s)     |     |     | 18.7 | 18.7 | 18.7 |     |     | 61.6  |     | 61.6  | 61.6  |     |
| 90th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     |     |     | 15.4 | 15.4 | 15.4 |     |     | 64.9  |     | 64.9  | 64.9  |     |
| 70th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     |     |     | 13.1 | 13.1 | 13.1 |     |     | 67.2  |     | 67.2  | 67.2  |     |
| 50th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     |     |     | 10.8 | 10.8 | 10.8 |     |     | 69.5  |     | 69.5  | 69.5  |     |
| 30th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     |     |     | 9.0  | 9.0  | 9.0  |     |     | 71.3  |     | 71.3  | 71.3  |     |
| 10th %ile Term Code     |     |     | Min  | Min  | Min  |     |     | Coord |     | Coord | Coord |     |
| Stops (vph)             |     |     | 0    |      | 125  |     |     | 485   |     |       | 332   |     |
| Fuel Used(gal)          |     |     | 0    |      | 4    |     |     | 18    |     |       | 44    |     |
| CO Emissions (g/hr)     |     |     | 1    |      | 289  |     |     | 1262  |     |       | 3084  |     |
| NOx Emissions (g/hr)    |     |     | 0    |      | 56   |     |     | 245   |     |       | 600   |     |
| VOC Emissions (g/hr)    |     |     | 0    |      | 67   |     |     | 292   |     |       | 715   |     |
| Dilemma Vehicles (#)    |     |     | 0    |      | 0    |     |     | 69    |     |       | 81    |     |
| Queue Length 50th (ft)  |     |     | 0    |      | 81   |     |     | 133   |     |       | 102   |     |
| Queue Length 95th (ft)  |     |     | 0    |      | 139  |     |     | 231   |     |       | m116  |     |
| Internal Link Dist (ft) |     | 337 |      |      | 1535 |     |     | 1066  |     |       | 496   |     |
| Turn Bay Length (ft)    |     |     |      |      |      |     |     |       |     |       |       |     |
| Base Capacity (vph)     |     |     | 315  |      | 453  |     |     | 2466  |     |       | 2340  |     |
| Starvation Cap Reductn  |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Storage Cap Reductn     |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |     |     | 0.01 |      | 0.40 |     |     | 0.55  |     |       | 0.60  |     |

Intersection Summary

|                        |   |
|------------------------|---|
| Area Type:             | Other   |
| Cycle Length:          | 90  |
| Actuated Cycle Length: | 90  |
| Offset:                | 0 (0%), Referenced to phase 2:NBSB, Start of Yellow |



Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↖     | ↗     | ↖     | ↗     |       | ↖     | ↗     |       |
| Traffic Volume (vph)       | 15    | 12    | 4     | 8     | 19    | 89    | 4     | 1021  | 14    | 178   | 1286  | 43    |
| Future Volume (vph)        | 15    | 12    | 4     | 8     | 19    | 89    | 4     | 1021  | 14    | 178   | 1286  | 43    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 80    | 0     |       | 30    | 120   |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 1.00  | 0.97  |       | 1.00  |       |       |       |       |       |       |       |
| Frt                        |       |       | 0.850 |       |       | 0.850 |       | 0.998 |       |       | 0.995 |       |
| Flt Protected              |       | 0.973 |       |       | 0.985 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1780  | 1313  | 0     | 1872  | 1400  | 1703  | 1736  | 0     | 1687  | 1799  | 0     |
| Flt Permitted              |       | 0.812 |       |       | 0.888 |       | 0.079 |       |       | 0.073 |       |       |
| Satd. Flow (perm)          | 0     | 1478  | 1275  | 0     | 1683  | 1400  | 142   | 1736  | 0     | 130   | 1799  | 0     |
| Right Turn on Red          |       |       | No    |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       |       |       |       | 143   |       | 1     |       |       |       | 3     |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 551   |       |       | 1467  |       |       | 2227  |       |       |       | 2334  |
| Travel Time (s)            |       | 15.0  |       |       | 28.6  |       |       | 33.7  |       |       |       | 35.4  |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 0%    | 23%   | 0%    | 0%    | 0%    | 6%    | 9%    | 25%   | 7%    | 5%    | 7%    |
| Adj. Flow (vph)            | 16    | 13    | 4     | 9     | 21    | 97    | 4     | 1110  | 15    | 193   | 1398  | 47    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 29    | 4     | 0     | 30    | 97    | 4     | 1125  | 0     | 193   | 1445  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 12    |       |       | 12    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3     |       | 1     | 3     |       |
| Detector Template          | Left  |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 20    | 15    | 20    | 25    | 20    | 33    | 326   |       | 33    | 326   |       |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Size(ft)        | 20    | 20    | 15    | 20    | 25    | 20    | 38    | 6     |       | 38    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 2.0   | 8.0   | 0.0   | 8.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 144   |       |       | 94    |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

|                            |    |
|----------------------------|----|
| Lane Group                 | Ø3 |
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Lane Width (ft)            |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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         |    |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Detector 3 Position(ft) |       |       |       |       |       |       |       | 320   |     |       | 320   |     |
| Detector 3 Size(ft)     |       |       |       |       |       |       |       | 6     |     |       | 6     |     |
| Detector 3 Type         |       |       |       |       |       |       |       | Cl+Ex |     |       | Cl+Ex |     |
| Detector 3 Channel      |       |       |       |       |       |       |       |       |     |       |       |     |
| Detector 3 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    |     | pm+pt | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     |     | 1     | 6     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |       |     | 6     |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |       |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 4.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 8.0   | 22.8  |     | 9.0   | 22.8  |     |
| Total Split (s)         | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 8.0   | 49.5  |     | 9.0   | 50.5  |     |
| Total Split (%)         | 10.6% | 10.6% | 10.6% | 10.6% | 10.6% | 10.6% | 8.9%  | 55.0% |     | 10.0% | 56.1% |     |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 41.7  |     | 5.0   | 42.7  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.0   | 3.0   |     | 1.0   | 3.0   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.5   | 4.5   |       | 4.5   | 4.5   | 3.0   | 7.8   |     | 4.0   | 7.8   |     |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |       |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 5.0   | 5.0   |       | 5.0   | 5.0   | 63.8  | 54.8  |     | 74.3  | 70.7  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  | 0.06  | 0.71  | 0.61  |     | 0.83  | 0.79  |     |
| v/c Ratio               |       | 0.35  | 0.06  |       | 0.32  | 0.46  | 0.02  | 1.06  |     | 0.62  | 1.02  |     |
| Control Delay           |       | 53.2  | 42.2  |       | 50.4  | 9.9   | 5.8   | 54.9  |     | 22.2  | 29.6  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 53.2  | 42.2  |       | 50.4  | 9.9   | 5.8   | 54.9  |     | 22.2  | 29.6  |     |
| LOS                     |       | D     | D     |       | D     | A     | A     | D     |     | C     | C     |     |
| Approach Delay          |       | 51.9  |       |       | 19.4  |       |       | 54.7  |     |       | 28.7  |     |
| Approach LOS            |       | D     |       |       | B     |       |       | D     |     |       | C     |     |
| 90th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 4.4   | 41.7  |     | 7.0   | 45.3  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 0.0   | 55.3  |     | 13.4  | 72.7  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 50th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 0.0   | 56.0  |     | 12.7  | 72.7  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 30th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 0.0   | 56.3  |     | 12.4  | 72.7  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 64.7  |     | 13.5  | 82.2  |     |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 28    | 7     |       | 29    | 6     | 2     | 474   |     | 110   | 496   |     |
| Fuel Used(gal)          |       | 1     | 0     |       | 1     | 1     | 0     | 41    |     | 5     | 34    |     |
| CO Emissions (g/hr)     |       | 37    | 6     |       | 56    | 82    | 9     | 2900  |     | 340   | 2398  |     |

|                         |      |
|-------------------------|------|
| Lane Group              | Ø3   |
| Detector 2 Extend (s)   |      |
| Detector 3 Position(ft) |      |
| Detector 3 Size(ft)     |      |
| Detector 3 Type         |      |
| Detector 3 Channel      |      |
| Detector 3 Extend (s)   |      |
| Turn Type               |      |
| Protected Phases        | 3    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 7.0  |
| Minimum Split (s)       | 22.0 |
| Total Split (s)         | 22.0 |
| Total Split (%)         | 24%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 4.0  |
| All-Red Time (s)        | 0.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                | Lag  |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 9.0  |
| Pedestrian Calls (#/hr) | 10   |
| 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)     | 16.0 |
| 90th %ile Term Code     | Ped  |
| 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)     |      |

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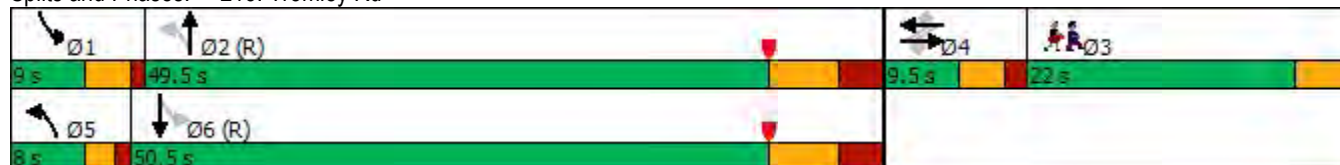


| Lane Group              | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT   | NBR | SBL  | SBT   | SBR |
|-------------------------|-----|------|------|-----|------|------|------|-------|-----|------|-------|-----|
| NOx Emissions (g/hr)    |     | 7    | 1    |     | 11   | 16   | 2    | 564   |     | 66   | 467   |     |
| VOC Emissions (g/hr)    |     | 9    | 1    |     | 13   | 19   | 2    | 672   |     | 79   | 556   |     |
| Dilemma Vehicles (#)    |     | 0    | 0    |     | 2    | 0    | 0    | 67    |     | 0    | 71    |     |
| Queue Length 50th (ft)  |     | 16   | 2    |     | 17   | 0    | 0    | ~684  |     | 63   | 15    |     |
| Queue Length 95th (ft)  |     | 45   | 13   |     | 45   | 20   | m1   | m#887 |     | m68  | m#974 |     |
| Internal Link Dist (ft) |     | 471  |      |     | 1387 |      |      | 2147  |     |      | 2254  |     |
| Turn Bay Length (ft)    |     |      | 80   |     |      | 30   | 120  |       |     | 200  |       |     |
| Base Capacity (vph)     |     | 82   | 70   |     | 93   | 212  | 188  | 1057  |     | 311  | 1413  |     |
| Starvation Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Spillback Cap Reductn   |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Storage Cap Reductn     |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Reduced v/c Ratio       |     | 0.35 | 0.06 |     | 0.32 | 0.46 | 0.02 | 1.06  |     | 0.62 | 1.02  |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 83 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 38.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 95.3%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 213: Tromley Rd



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

















|                         |    |
|-------------------------|----|
| Lane Group              | Ø3 |
| 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)     |    |
| Starvation Cap Reductn  |    |
| Spillback Cap Reductn   |    |
| Storage Cap Reductn     |    |
| Reduced v/c Ratio       |    |
| Intersection Summary    |    |

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|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 13  | 0   | 22  | 2   | 2   | 12  | 5  | 1024  | 21  | 22  | 1257  | 23  |
| Future Volume (vph)        | 13  | 0   | 22  | 2   | 2   | 12  | 5  | 1024  | 21  | 22  | 1257  | 23  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 8   | 12  | 12  | 12  | 8  | 12  | 12  | 8   | 12  | 8   |
| Storage Length (ft)        | 0   |   | 30  | 0   |   | 0   | 50   |   | 0   | 0   |   | 50  |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1  |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25   |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |   |   | 0.850   |   | 0.897   |   |  | 0.997   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.994   |   | 0.950  |   |   |   | 0.999   |   |
| Satd. Flow (prot)          | 0   | 1641  | 1386  | 0   | 1499  | 0   | 1384   | 1773  | 0   | 0   | 1746  | 1386  |
| Flt Permitted              |   |   |   |   | 0.955   |   | 0.087  |   |   |   | 0.970   |   |
| Satd. Flow (perm)          | 0   | 1727  | 1386  | 0   | 1440  | 0   | 127  | 1773  | 0   | 0   | 1695  | 1386  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 48  |   | 13  |   |  | 3   |   |   |   | 16  |
| Link Speed (mph)           |   | 25  |   |   | 35  |   |  | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 801   |   |   | 1499  |   |  | 4074  |   |   |   | 1892  |
| Travel Time (s)            |   | 21.8  |   |   | 29.2  |   |  | 61.7  |   |   |   | 28.7  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 10%   | 0%  | 1%  | 0%  | 0%  | 17%   | 13%  | 7%  | 0%  | 50%   | 8%  | 1%  |
| Adj. Flow (vph)            | 14  | 0   | 24  | 2   | 2   | 13  | 5  | 1113  | 23  | 24  | 1366  | 25  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 14  | 24  | 0   | 17  | 0   | 5  | 1136  | 0   | 0   | 1390  | 25  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 10  |   |   | 0   |   |  | 8   |   |   | 8   |   |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.20   | 1.00  | 1.00  | 1.20  | 1.00  | 1.20  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15   |   | 9   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   |   | 0  | 0   |   | 0   | 0   | 1   |
| Detector Template          | Left  |   | Right   | Left  |   |   |  |   |   |   |   | Right   |
| Leading Detector (ft)      | 20  | 20  | 20  | 20  | 29  |   | 0  | 0   |   | 0   | 0   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | -5  |   | 0  | 0   |   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | -5  |   | 0  | 0   |   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 20  | 20  | 20  | 20  | 34  |   | 20   | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex  | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |  |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Turn Type                  | Perm  | NA  | Perm  | Perm  | NA  |   | Perm   | NA  |   | Perm  | NA  | Perm  |
| Protected Phases           |   | 4   |   |   | 4   |   |  | 2   |   |   |   | 2   |
| Permitted Phases           | 4   |   | 4   | 4   |   |   | 2  |   |   | 2   |   | 2   |
| Detector Phase             | 4   | 4   | 4   | 4   | 4   |   |  |   |   |   |   | 2   |
| Switch Phase               |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   | 15.0   | 15.0  |   | 15.0  | 15.0  | 15.0  |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT    | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|--------|-------|
| Minimum Split (s)       | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |     | 22.0  | 22.0  |     | 22.0  | 22.0   | 22.0  |
| Total Split (s)         | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |     | 75.0  | 75.0  |     | 75.0  | 75.0   | 75.0  |
| Total Split (%)         | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |     | 83.3% | 83.3% |     | 83.3% | 83.3%  | 83.3% |
| Maximum Green (s)       | 10.7  | 10.7  | 10.7  | 10.7  | 10.7  |     | 68.0  | 68.0  |     | 68.0  | 68.0   | 68.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 4.8   | 4.8   |     | 4.8   | 4.8    | 4.8   |
| All-Red Time (s)        | 1.3   | 1.3   | 1.3   | 1.3   | 1.3   |     | 2.2   | 2.2   |     | 2.2   | 2.2    | 2.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0    | 0.0   |
| Total Lost Time (s)     |       | 4.3   | 4.3   |       | 4.3   |     | 7.0   | 7.0   |     |       | 7.0    | 7.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lag   | Lag   |     | Lead  | Lead  |     | Lead  | Lead   | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |        |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 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  | C-Max |
| Act Effct Green (s)     |       | 5.6   | 5.6   |       | 5.6   |     | 79.6  | 79.6  |     |       | 79.6   | 79.6  |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  |     | 0.88  | 0.88  |     |       | 0.88   | 0.88  |
| v/c Ratio               |       | 0.13  | 0.18  |       | 0.17  |     | 0.04  | 0.72  |     |       | 0.93   | 0.02  |
| Control Delay           |       | 42.2  | 7.6   |       | 26.6  |     | 2.8   | 12.3  |     |       | 11.5   | 0.7   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0    | 0.0   |
| Total Delay             |       | 42.2  | 7.6   |       | 26.6  |     | 2.8   | 12.3  |     |       | 11.5   | 0.7   |
| LOS                     |       | D     | A     |       | C     |     | A     | B     |     |       | B      | A     |
| Approach Delay          |       | 20.4  |       |       | 26.6  |     |       | 12.2  |     |       | 11.3   |       |
| Approach LOS            |       | C     |       |       | C     |     |       | B     |     |       | B      |       |
| 90th %ile Green (s)     | 7.1   | 7.1   | 7.1   | 7.1   | 7.1   |     | 71.6  | 71.6  |     | 71.6  | 71.6   | 71.6  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Coord | Coord |     | Coord | Coord  | Coord |
| 70th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 72.9  | 72.9  |     | 72.9  | 72.9   | 72.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Coord | Coord |     | Coord | Coord  | Coord |
| 50th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 73.7  | 73.7  |     | 73.7  | 73.7   | 73.7  |
| 50th %ile Term Code     | Min   | Min   | Min   | Min   | Min   |     | Coord | Coord |     | Coord | Coord  | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 83.0  | 83.0  |     | 83.0  | 83.0   | 83.0  |
| 30th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  |     | Coord | Coord |     | Coord | Coord  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 83.0  | 83.0  |     | 83.0  | 83.0   | 83.0  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  |     | Coord | Coord |     | Coord | Coord  | Coord |
| Stops (vph)             |       | 15    | 3     |       | 10    |     | 1     | 468   |     |       | 203    | 1     |
| Fuel Used(gal)          |       | 0     | 0     |       | 0     |     | 0     | 40    |     |       | 21     | 0     |
| CO Emissions (g/hr)     |       | 18    | 14    |       | 23    |     | 12    | 2795  |     |       | 1483   | 21    |
| NOx Emissions (g/hr)    |       | 4     | 3     |       | 5     |     | 2     | 544   |     |       | 289    | 4     |
| VOC Emissions (g/hr)    |       | 4     | 3     |       | 5     |     | 3     | 648   |     |       | 344    | 5     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 1     |     | 0     | 44    |     |       | 51     | 0     |
| Queue Length 50th (ft)  |       | 8     | 0     |       | 2     |     | 0     | 274   |     |       | ~118   | 0     |
| Queue Length 95th (ft)  |       | 26    | 11    |       | 23    |     | m1    | 498   |     |       | m#1010 | m1    |
| Internal Link Dist (ft) |       | 721   |       |       | 1419  |     |       | 3994  |     |       | 1812   |       |
| Turn Bay Length (ft)    |       |       | 30    |       |       |     |       | 50    |     |       |        | 50    |
| Base Capacity (vph)     |       | 205   | 207   |       | 182   |     | 112   | 1569  |     |       | 1500   | 1228  |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0      | 0     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0      | 0     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0      | 0     |
| Reduced v/c Ratio       |       | 0.07  | 0.12  |       | 0.09  |     | 0.04  | 0.72  |     |       | 0.93   | 0.02  |

Intersection Summary

Area Type: Other

# Lanes, Volumes, Timings

## 214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 97.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.




















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

Splits and Phases: 214: DD/Abbe Rd



Lanes, Volumes, Timings  
215: S Water St

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)       | 110   | 6   | 168   | 5   | 4   | 14  | 169   | 943   | 13  | 26  | 1334  | 14  |
| Future Volume (vph)        | 110   | 6   | 168   | 5   | 4   | 14  | 169   | 943   | 13  | 26  | 1334  | 14  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 300   | 0   |   | 0   | 150   |   | 0   | 320   |   | 0   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 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   |   | 0.916   |   |   | 0.998   |   |   | 0.998   |   |
| Flt Protected              |   | 0.955   |   |   | 0.990   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1814  | 1599  | 0   | 1723  | 0   | 1719  | 1757  | 0   | 1805  | 1773  | 0   |
| Flt Permitted              |   | 0.720   |   |   | 0.694   |   | 0.061   |   |   | 0.185   |   |   |
| Satd. Flow (perm)          | 0   | 1368  | 1599  | 0   | 1208  | 0   | 110   | 1757  | 0   | 352   | 1773  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 144   |   | 15  |   |   | 2   |   |   | 1   |   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |   | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 1143  |   |   | 286   |   |   | 2334  |   |   | 1410  |   |
| Travel Time (s)            |   | 26.0  |   |   | 6.5   |   |   | 35.4  |   |   | 21.4  |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 1%  | 0%  | 0%  | 0%  | 5%  | 8%  | 0%  | 0%  | 7%  | 0%  |
| Adj. Flow (vph)            | 120   | 7   | 183   | 5   | 4   | 15  | 184   | 1025  | 14  | 28  | 1450  | 15  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 127   | 183   | 0   | 24  | 0   | 184   | 1039  | 0   | 28  | 1465  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |   | 12  |   |   | 12  |   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   | 0   |   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   | 16  |   |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   |   | 1   | 0   |   | 1   | 0   |   |
| Detector Template          | Left  |   | Right   | Left  |   |   |   |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 45  | 20  | 20  | 45  |   | 15  | 0   |   | 15  | 0   |   |
| Trailing Detector (ft)     | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Position(ft)    | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Size(ft)        | 20  | 50  | 20  | 20  | 50  |   | 20  | 6   |   | 20  | 6   |   |
| 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   |   |
| Turn Type                  | Perm  | NA  | Perm  | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases           |   | 4   |   |   | 4   |   | 1   | 6   |   | 5   | 2   |   |
| Permitted Phases           | 4   |   | 4   | 4   |   |   | 6   |   |   | 2   |   |   |
| Detector Phase             | 4   | 4   | 4   | 4   | 4   |   | 1   |   |   | 5   |   |   |
| Switch Phase               |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   | 5.0   | 15.0  |   | 5.0   | 15.0  |   |
| Minimum Split (s)          | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |   | 9.0   | 22.3  |   | 9.0   | 22.3  |   |

Lanes, Volumes, Timings  
215: S Water St

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  |     | 9.0   | 70.1  |     | 9.0   | 70.1  |     |
| Total Split (%)         | 12.1% | 12.1% | 12.1% | 12.1% | 12.1% |     | 10.0% | 77.9% |     | 10.0% | 77.9% |     |
| Maximum Green (s)       | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 62.8  |     | 5.0   | 62.8  |     |
| Yellow Time (s)         | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |     | 1.0   | 2.5   |     | 1.0   | 2.5   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.1   | 5.1   |       | 5.1   |     | 4.0   | 7.3   |     | 4.0   | 7.3   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 3.0   |     | 1.5   | 3.0   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Max |     | None  | C-Max |     |
| Act Effct Green (s)     |       | 5.8   | 5.8   |       | 5.8   |     | 73.5  | 68.2  |     | 71.1  | 62.8  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  |     | 0.82  | 0.76  |     | 0.79  | 0.70  |     |
| v/c Ratio               |       | 1.44  | 0.77  |       | 0.26  |     | 1.03  | 0.78  |     | 0.08  | 1.18  |     |
| Control Delay           |       | 286.0 | 34.8  |       | 31.8  |     | 51.1  | 18.1  |     | 0.8   | 108.2 |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 286.0 | 34.8  |       | 31.8  |     | 51.1  | 18.1  |     | 0.8   | 108.2 |     |
| LOS                     |       | F     | C     |       | C     |     | D     | B     |     | A     | F     |     |
| Approach Delay          |       | 137.7 |       |       | 31.8  |     |       | 23.1  |     |       | 106.2 |     |
| Approach LOS            |       | F     |       |       | C     |     |       | C     |     |       | F     |     |
| 90th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 62.8  |     | 5.0   | 62.8  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 62.8  |     | 5.0   | 62.8  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 50th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 71.8  |     | 0.0   | 62.8  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 71.8  |     | 0.0   | 62.8  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |     | 5.0   | 71.8  |     | 0.0   | 62.8  |     |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| Stops (vph)             |       | 84    | 41    |       | 15    |     | 104   | 729   |     | 1     | 925   |     |
| Fuel Used(gal)          |       | 8     | 3     |       | 0     |     | 6     | 27    |     | 0     | 56    |     |
| CO Emissions (g/hr)     |       | 582   | 204   |       | 19    |     | 392   | 1893  |     | 21    | 3904  |     |
| NOx Emissions (g/hr)    |       | 113   | 40    |       | 4     |     | 76    | 368   |     | 4     | 759   |     |
| VOC Emissions (g/hr)    |       | 135   | 47    |       | 4     |     | 91    | 439   |     | 5     | 905   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 52    |     | 0     | 50    |     |
| Queue Length 50th (ft)  |       | ~99   | 22    |       | 5     |     | ~50   | 535   |     | 1     | ~445  |     |
| Queue Length 95th (ft)  |       | #210  | #124  |       | 30    |     | m#53  | m617  |     | m1    | #540  |     |
| Internal Link Dist (ft) |       | 1063  |       |       | 206   |     |       | 2254  |     |       | 1330  |     |
| Turn Bay Length (ft)    |       |       | 300   |       |       |     | 150   |       |     | 320   |       |     |
| Base Capacity (vph)     |       | 88    | 237   |       | 91    |     | 179   | 1332  |     | 358   | 1237  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 1.44  | 0.77  |       | 0.26  |     | 1.03  | 0.78  |     | 0.08  | 1.18  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90

Lanes, Volumes, Timings  
 215: S Water St

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

















Actuated Cycle Length: 90  
 Offset: 71 (79%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.44  
 Intersection Signal Delay: 75.5 Intersection LOS: E  
 Intersection Capacity Utilization 107.2% ICU Level of Service G  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 215: S Water St

|                  |                         |                     |
|------------------|-------------------------|---------------------|
| <p>Ø1<br/>9s</p> | <p>Ø2 (R)<br/>70.1s</p> | <p>Ø4<br/>10.9s</p> |
| <p>Ø5<br/>9s</p> | <p>Ø6 (R)<br/>70.1s</p> |                     |

Lanes, Volumes, Timings  
216: Stoughton Rd

07/07/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |   |   |  |  |  |  |   |  |  |   |
| Traffic Volume (vph)       | 8   | 3   | 3   | 67  | 0   | 25  | 0  | 981   | 68  | 41  | 1232  | 12  |
| Future Volume (vph)        | 8   | 3   | 3   | 67  | 0   | 25  | 0  | 981   | 68  | 41  | 1232  | 12  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 12  | 8   | 8  | 12  | 12  | 8   | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 50   |   | 0   | 50  |   | 0   |
| Storage Lanes              | 0   |   | 0   | 0   |   | 1   | 1  |   | 0   | 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  |
| Ped Bike Factor            |   | 0.99  |   |   | 1.00  | 0.98  |  |   |   |   |   |   |
| Frt                        |   | 0.973   |   |   |   | 0.850   |  | 0.990   |   |   | 0.999   |   |
| Flt Protected              |   | 0.971   |   |   | 0.950   |   |  |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1786  | 0   | 0   | 1612  | 1400  | 1647   | 1741  | 0   | 1448  | 1775  | 0   |
| Flt Permitted              |   | 0.804   |   |   | 0.748   |   |  |   |   | 0.179   |   |   |
| Satd. Flow (perm)          | 0   | 1475  | 0   | 0   | 1263  | 1365  | 1647   | 1741  | 0   | 273   | 1775  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   | 3   |   |   |   | 41  |  | 13  |   |   | 2   |   |
| Link Speed (mph)           |   | 30  |   |   | 35  |   |  | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 411   |   |   | 816   |   |  | 1892  |   |   | 693   |   |
| Travel Time (s)            |   | 9.3   |   |   | 15.9  |   |  | 28.7  |   |   | 10.5  |   |
| Confl. Peds. (#/hr)        | 1   |   | 1   | 1   |   | 1   |  |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 0%  | 12%   | 0%  | 0%  | 0%   | 8%  | 9%  | 8%  | 7%  | 0%  |
| Adj. Flow (vph)            | 9   | 3   | 3   | 73  | 0   | 27  | 0  | 1066  | 74  | 45  | 1339  | 13  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 15  | 0   | 0   | 73  | 27  | 0  | 1140  | 0   | 45  | 1352  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |  | 8   |   |   | 8   |   |
| 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  | 1.20  | 1.20   | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15   |   | 9   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   |   | 1   | 1   | 1   | 0  | 0   |   | 0   | 0   |   |
| Detector Template          | Left  |   |   | Left  |   | Right   |  |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 12  |   | 20  | 36  | 20  | 0  | 0   |   | 0   | 0   |   |
| 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  | 12  |   | 20  | 36  | 20  | 20   | 36  |   | 20  | 6   |   |
| 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   |   |
| Turn Type                  | Perm  | NA  |   | Perm  | NA  | Perm  | Perm   | NA  |   | Perm  | NA  |   |
| Protected Phases           |   | 4   |   |   | 4   |   |  | 2   |   |   | 2   |   |
| Permitted Phases           | 4   |   |   | 4   |   | 4   | 2  |   |   | 2   |   |   |
| Detector Phase             | 4   | 4   |   | 4   | 4   | 4   |  |   |   |   |   |   |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Switch Phase            |       |       |     |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Minimum Split (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 21.4  | 21.4  |     | 21.4  | 21.4  |     |
| Total Split (s)         | 13.0  | 13.0  |     | 13.0  | 13.0  | 13.0  | 77.0  | 77.0  |     | 77.0  | 77.0  |     |
| Total Split (%)         | 14.4% | 14.4% |     | 14.4% | 14.4% | 14.4% | 85.6% | 85.6% |     | 85.6% | 85.6% |     |
| Maximum Green (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.6   | 1.6   |     | 1.6   | 1.6   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.0   |     |       | 4.0   | 4.0   | 6.4   | 6.4   |     | 6.4   | 6.4   |     |
| Lead/Lag                | Lag   | Lag   |     | Lag   | Lag   | Lag   | Lead  | Lead  |     | Lead  | Lead  |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   |     | 1.5   | 1.5   | 1.5   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 7.9   |     |       | 7.9   | 7.9   |       | 74.8  |     | 74.8  | 74.8  |     |
| Actuated g/C Ratio      |       | 0.09  |     |       | 0.09  | 0.09  |       | 0.83  |     | 0.83  | 0.83  |     |
| v/c Ratio               |       | 0.11  |     |       | 0.66  | 0.17  |       | 0.79  |     | 0.20  | 0.92  |     |
| Control Delay           |       | 34.5  |     |       | 67.8  | 10.0  |       | 9.3   |     | 2.3   | 15.5  |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 34.5  |     |       | 67.8  | 10.0  |       | 9.3   |     | 2.3   | 15.5  |     |
| LOS                     |       | C     |     |       | E     | B     |       | A     |     | A     | B     |     |
| Approach Delay          |       | 34.5  |     |       | 52.2  |       |       | 9.3   |     |       | 15.1  |     |
| Approach LOS            |       | C     |     |       | D     |       |       | A     |     |       | B     |     |
| 90th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 70.6  | 70.6  |     | 70.6  | 70.6  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.4   | 7.4   |     | 7.4   | 7.4   | 7.4   | 72.2  | 72.2  |     | 72.2  | 72.2  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.6  | 83.6  |     | 83.6  | 83.6  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 13    |     |       | 61    | 6     |       | 384   |     | 3     | 668   |     |
| Fuel Used(gal)          |       | 0     |     |       | 2     | 0     |       | 20    |     | 0     | 20    |     |
| CO Emissions (g/hr)     |       | 15    |     |       | 124   | 17    |       | 1373  |     | 28    | 1412  |     |
| NOx Emissions (g/hr)    |       | 3     |     |       | 24    | 3     |       | 267   |     | 5     | 275   |     |
| VOC Emissions (g/hr)    |       | 3     |     |       | 29    | 4     |       | 318   |     | 6     | 327   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 3     | 0     |       | 47    |     | 0     | 20    |     |
| Queue Length 50th (ft)  |       | 6     |     |       | 40    | 0     |       | 22    |     | 1     | 389   |     |
| Queue Length 95th (ft)  |       | 25    |     |       | #99   | 17    |       | 597   |     | m3    | #1036 |     |
| Internal Link Dist (ft) |       | 331   |     |       | 736   |       |       | 1812  |     |       | 613   |     |
| Turn Bay Length (ft)    |       |       |     |       |       | 50    |       |       |     | 50    |       |     |
| Base Capacity (vph)     |       | 150   |     |       | 126   | 173   |       | 1449  |     | 227   | 1475  |     |
| 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       |       | 0.10  |     |       | 0.58  | 0.16  |       | 0.79  |     | 0.20  | 0.92  |     |

Lanes, Volumes, Timings  
 216: Stoughton Rd

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Intersection Summary

|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 14 (16%), Referenced to phase 2:NBSB, Start of Yellow   |
| Natural Cycle:                    | 90  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.92  |
| Intersection Signal Delay:        | 14.1  |
| Intersection LOS:                 | B   |
| Intersection Capacity Utilization | 81.7%   |
| ICU Level of Service              | D   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 216: Stoughton Rd



Lanes, Volumes, Timings  
219: Bridge St (CT-140)

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| Lane Group                 | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT  | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations        |      | ↗     |       | ↖     | ↖     |       |      |      |       |       | ↗     | ↗     |
| Traffic Volume (vph)       | 0    | 549   | 124   | 403   | 478   | 0     | 0    | 0    | 0     | 235   | 0     | 235   |
| Future Volume (vph)        | 0    | 549   | 124   | 403   | 478   | 0     | 0    | 0    | 0     | 235   | 0     | 235   |
| Ideal Flow (vphp)          | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0    |       | 0     | 0     |       | 0     | 0    |      | 0     | 0     |       | 50    |
| Storage Lanes              | 0    |       | 0     | 1     |       | 0     | 0    |      | 0     | 0     |       | 1     |
| 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                        |      | 0.975 |       |       |       |       |      |      |       |       |       | 0.850 |
| Flt Protected              |      |       |       | 0.950 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (prot)          | 0    | 1816  | 0     | 1770  | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Flt Permitted              |      |       |       | 0.102 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (perm)          | 0    | 1816  | 0     | 190   | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Right Turn on Red          |      |       | Yes   |       |       | Yes   |      |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      | 16    |       |       |       |       |      |      |       |       |       | 143   |
| Link Speed (mph)           |      | 30    |       |       | 35    |       |      | 30   |       |       |       | 30    |
| Link Distance (ft)         |      | 684   |       |       | 478   |       |      | 428  |       |       |       | 360   |
| Travel Time (s)            |      | 15.5  |       |       | 9.3   |       |      | 9.7  |       |       |       | 8.2   |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 0    | 597   | 135   | 438   | 520   | 0     | 0    | 0    | 0     | 255   | 0     | 255   |
| Shared Lane Traffic (%)    |      |       |       |       |       |       |      |      |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 732   | 0     | 438   | 520   | 0     | 0    | 0    | 0     | 0     | 255   | 255   |
| Enter Blocked Intersection | No   | No    | No    | No    | No    | No    | No   | No   | No    | No    | No    | No    |
| Lane Alignment             | Left | Left  | Right | Left  | Left  | Right | Left | Left | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0     |       |       | 12    |       |      | 0    |       |       |       | 0     |
| Link Offset(ft)            |      | 0     |       |       | 0     |       |      | 0    |       |       |       | 0     |
| Crosswalk Width(ft)        |      | 16    |       |       | 16    |       |      | 16   |       |       |       | 16    |
| Two way Left Turn Lane     |      |       |       |       |       |       |      |      |       |       |       |       |
| Headway Factor             | 1.00 | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        |      | 0     |       | 1     | 0     |       |      |      |       | 1     | 1     | 1     |
| Detector Template          |      |       |       |       |       |       |      |      |       | Left  |       |       |
| Leading Detector (ft)      |      | 0     |       | 36    | 0     |       |      |      |       | 20    | 15    | 15    |
| Trailing Detector (ft)     |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        |      | 6     |       | 36    | 6     |       |      |      |       | 20    | 15    | 15    |
| Detector 1 Type            |      | 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   |
| Detector 1 Queue (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 6.0   | 6.0   |
| Turn Type                  |      | NA    |       | D,P+P | NA    |       |      |      |       | Split | NA    | Prot  |
| Protected Phases           |      | 2     |       | 3     | 3 2   |       |      |      |       | 4     | 4     | 4     |
| Permitted Phases           |      |       |       | 2     |       |       |      |      |       |       |       |       |
| Detector Phase             |      |       |       | 3     |       |       |      |      |       | 4     | 4     | 4     |
| Switch Phase               |      |       |       |       |       |       |      |      |       |       |       |       |
| Minimum Initial (s)        |      | 20.0  |       | 5.0   |       |       |      |      |       | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)          |      | 25.5  |       | 9.9   |       |       |      |      |       | 10.3  | 10.3  | 10.3  |
| Total Split (s)            |      | 43.0  |       | 27.0  |       |       |      |      |       | 20.0  | 20.0  | 20.0  |

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| Lane Group              | EBL | EBT   | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR   |
|-------------------------|-----|-------|-----|-------|------|-----|-----|-----|-----|-------|-------|-------|
| Total Split (%)         |     | 47.8% |     | 30.0% |      |     |     |     |     | 22.2% | 22.2% | 22.2% |
| Maximum Green (s)       |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| Yellow Time (s)         |     | 4.5   |     | 3.9   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        |     | 1.0   |     | 1.0   |      |     |     |     |     | 2.3   | 2.3   | 2.3   |
| Lost Time Adjust (s)    |     | 0.0   |     | 0.0   |      |     |     |     |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |     | 5.5   |     | 4.9   |      |     |     |     |     |       | 5.3   | 5.3   |
| Lead/Lag                |     | Lead  |     | Lag   |      |     |     |     |     |       |       |       |
| Lead-Lag Optimize?      |     |       |     |       |      |     |     |     |     |       |       |       |
| Vehicle Extension (s)   |     | 3.0   |     | 2.0   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             |     | C-Max |     | None  |      |     |     |     |     | None  | None  | None  |
| Act Effct Green (s)     |     | 39.1  |     | 60.0  | 64.9 |     |     |     |     |       | 14.9  | 14.9  |
| Actuated g/C Ratio      |     | 0.43  |     | 0.67  | 0.72 |     |     |     |     |       | 0.17  | 0.17  |
| v/c Ratio               |     | 0.92  |     | 0.91  | 0.39 |     |     |     |     |       | 0.87  | 0.67  |
| Control Delay           |     | 42.9  |     | 34.5  | 1.6  |     |     |     |     |       | 66.3  | 25.2  |
| Queue Delay             |     | 0.0   |     | 0.0   | 0.2  |     |     |     |     |       | 0.0   | 0.0   |
| Total Delay             |     | 42.9  |     | 34.5  | 1.8  |     |     |     |     |       | 66.3  | 25.2  |
| LOS                     |     | D     |     | C     | A    |     |     |     |     |       | E     | C     |
| Approach Delay          |     | 42.9  |     |       | 16.7 |     |     |     |     |       | 45.8  |       |
| Approach LOS            |     | D     |     |       | B    |     |     |     |     |       | D     |       |
| 90th %ile Green (s)     |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| 90th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 70th %ile Green (s)     |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| 70th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 50th %ile Green (s)     |     | 37.5  |     | 22.1  |      |     |     |     |     | 14.7  | 14.7  | 14.7  |
| 50th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 30th %ile Green (s)     |     | 37.5  |     | 20.0  |      |     |     |     |     | 16.8  | 16.8  | 16.8  |
| 30th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Max   | Max   | Max   |
| 10th %ile Green (s)     |     | 45.5  |     | 15.1  |      |     |     |     |     | 13.7  | 13.7  | 13.7  |
| 10th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| Stops (vph)             |     | 546   |     | 407   | 27   |     |     |     |     |       | 205   | 102   |
| Fuel Used(gal)          |     | 12    |     | 7     | 2    |     |     |     |     |       | 5     | 2     |
| CO Emissions (g/hr)     |     | 873   |     | 509   | 140  |     |     |     |     |       | 347   | 170   |
| NOx Emissions (g/hr)    |     | 170   |     | 99    | 27   |     |     |     |     |       | 68    | 33    |
| VOC Emissions (g/hr)    |     | 202   |     | 118   | 33   |     |     |     |     |       | 80    | 39    |
| Dilemma Vehicles (#)    |     | 0     |     | 0     | 10   |     |     |     |     |       | 0     | 0     |
| Queue Length 50th (ft)  |     | 386   |     | 209   | 14   |     |     |     |     |       | 143   | 58    |
| Queue Length 95th (ft)  |     | #630  |     | m#329 | m17  |     |     |     |     |       | #280  | #143  |
| Internal Link Dist (ft) |     | 604   |     |       | 398  |     |     | 348 |     |       | 280   |       |
| Turn Bay Length (ft)    |     |       |     |       |      |     |     |     |     |       |       | 50    |
| Base Capacity (vph)     |     | 798   |     | 518   | 1343 |     |     |     |     |       | 297   | 385   |
| Starvation Cap Reductn  |     | 0     |     | 0     | 220  |     |     |     |     |       | 0     | 0     |
| Spillback Cap Reductn   |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Storage Cap Reductn     |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Reduced v/c Ratio       |     | 0.92  |     | 0.85  | 0.46 |     |     |     |     |       | 0.86  | 0.66  |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Lanes, Volumes, Timings  
219: Bridge St (CT-140)

07/07/2020

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 32.2

Intersection LOS: C

Intersection Capacity Utilization 84.9%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings  
220: Bridge St (CT-140)

07/07/2020



| Lane Group                 | EBL    | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR    | SBL  | SBT  | SBR   |
|----------------------------|--------|-------|-------|------|-------|-------|-------|-------|--------|------|------|-------|
| Lane Configurations        |        | ↔↔    |       |      | ↕↕    |       |       | ↕     | ↔↔     |      |      |       |
| Traffic Volume (vph)       | 178    | 606   | 0     | 0    | 665   | 262   | 216   | 0     | 725    | 0    | 0    | 0     |
| Future Volume (vph)        | 178    | 606   | 0     | 0    | 665   | 262   | 216   | 0     | 725    | 0    | 0    | 0     |
| Ideal Flow (vphpl)         | 1900   | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900   | 1900 | 1900 | 1900  |
| Storage Length (ft)        | 0      |       | 0     | 0    |       | 0     | 250   |       | 300    | 0    |      | 0     |
| Storage Lanes              | 0      |       | 0     | 0    |       | 0     | 1     |       | 1      | 0    |      | 0     |
| Taper Length (ft)          | 25     |       |       | 25   |       |       | 25    |       |        | 25   |      |       |
| Lane Util. Factor          | 0.95   | 0.95  | 1.00  | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 0.88   | 1.00 | 1.00 | 1.00  |
| Frt                        |        |       |       |      | 0.958 |       |       |       | 0.850  |      |      |       |
| Flt Protected              |        | 0.989 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (prot)          | 0      | 3500  | 0     | 0    | 3391  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Flt Permitted              |        | 0.534 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (perm)          | 0      | 1890  | 0     | 0    | 3391  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Right Turn on Red          |        |       | Yes   |      |       | Yes   |       |       | Yes    |      |      | Yes   |
| Satd. Flow (RTOR)          |        |       |       |      | 101   |       |       |       | 389    |      |      |       |
| Link Speed (mph)           |        | 35    |       |      | 35    |       |       | 30    |        |      |      | 30    |
| Link Distance (ft)         |        | 478   |       |      | 323   |       |       | 585   |        |      |      | 321   |
| Travel Time (s)            |        | 9.3   |       |      | 6.3   |       |       | 13.3  |        |      |      | 7.3   |
| Peak Hour Factor           | 0.92   | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92 | 0.92 | 0.92  |
| Adj. Flow (vph)            | 193    | 659   | 0     | 0    | 723   | 285   | 235   | 0     | 788    | 0    | 0    | 0     |
| Shared Lane Traffic (%)    |        |       |       |      |       |       |       |       |        |      |      |       |
| Lane Group Flow (vph)      | 0      | 852   | 0     | 0    | 1008  | 0     | 0     | 235   | 788    | 0    | 0    | 0     |
| Enter Blocked Intersection | No     | No    | No    | No   | No    | No    | No    | No    | No     | No   | No   | No    |
| Lane Alignment             | Left   | Left  | Right | Left | Left  | Right | Left  | Left  | Right  | Left | Left | Right |
| Median Width(ft)           |        | 0     |       |      | 6     |       |       | 0     |        |      |      | 0     |
| Link Offset(ft)            |        | 0     |       |      | 0     |       |       | 0     |        |      |      | 0     |
| Crosswalk Width(ft)        |        | 16    |       |      | 16    |       |       | 16    |        |      |      | 16    |
| Two way Left Turn Lane     |        |       |       |      |       |       |       |       |        |      |      |       |
| Headway Factor             | 1.00   | 1.00  | 1.00  | 1.00 | 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      | 15   |      | 9     |
| Number of Detectors        | 1      | 2     |       |      | 0     |       | 1     | 1     | 1      |      |      |       |
| Detector Template          | Left   | Thru  |       |      |       |       | Left  |       |        |      |      |       |
| Leading Detector (ft)      | 20     | 100   |       |      | 0     |       | 20    | 6     | 21     |      |      |       |
| Trailing Detector (ft)     | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Position(ft)    | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Size(ft)        | 20     | 6     |       |      | 6     |       | 20    | 6     | 24     |      |      |       |
| Detector 1 Type            | 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    |      |      |       |
| Detector 1 Queue (s)       | 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   | 9.0    |      |      |       |
| Detector 2 Position(ft)    |        | 94    |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Size(ft)        |        | 6     |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Type            |        | Cl+Ex |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Channel         |        |       |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Extend (s)      |        | 0.0   |       |      |       |       |       |       |        |      |      |       |
| Turn Type                  | custom | NA    |       |      | NA    |       | Split | NA    | custom |      |      |       |
| Protected Phases           | 3      | 2 3   |       |      | 2 5   |       | 4     | 4     | 4 5    |      |      |       |
| Permitted Phases           | 2      |       |       |      |       |       |       |       |        |      |      |       |

| Lane Group                 | Ø2 | Ø5 |
|----------------------------|----|----|
| 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           |    |    |
| 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           | 2  | 5  |
| Permitted Phases           |    |    |

Lanes, Volumes, Timings  
220: Bridge St (CT-140)

07/07/2020



| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-----|-----|
| Detector Phase          | 3     | 3    |     |     |      |     | 4     | 4     | 5    |     |     |     |
| Switch Phase            |       |      |     |     |      |     |       |       |      |     |     |     |
| Minimum Initial (s)     | 5.0   |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| Minimum Split (s)       | 10.4  |      |     |     |      |     | 12.1  | 12.1  |      |     |     |     |
| Total Split (s)         | 16.4  |      |     |     |      |     | 18.4  | 18.4  |      |     |     |     |
| Total Split (%)         | 18.2% |      |     |     |      |     | 20.4% | 20.4% |      |     |     |     |
| Maximum Green (s)       | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| Yellow Time (s)         | 4.1   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| All-Red Time (s)        | 1.3   |      |     |     |      |     | 2.1   | 2.1   |      |     |     |     |
| Lost Time Adjust (s)    |       |      |     |     |      |     |       | 0.0   |      |     |     |     |
| Total Lost Time (s)     |       |      |     |     |      |     |       | 5.1   |      |     |     |     |
| Lead/Lag                | Lag   |      |     |     |      |     | Lead  | Lead  |      |     |     |     |
| Lead-Lag Optimize?      |       |      |     |     |      |     |       |       |      |     |     |     |
| Vehicle Extension (s)   | 2.5   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| Recall Mode             | Max   |      |     |     |      |     | None  | None  |      |     |     |     |
| Act Effct Green (s)     |       | 47.1 |     |     | 48.7 |     |       | 13.3  | 24.8 |     |     |     |
| Actuated g/C Ratio      |       | 0.52 |     |     | 0.54 |     |       | 0.15  | 0.28 |     |     |     |
| v/c Ratio               |       | 0.73 |     |     | 0.54 |     |       | 0.90  | 0.75 |     |     |     |
| Control Delay           |       | 24.8 |     |     | 18.4 |     |       | 74.8  | 19.7 |     |     |     |
| Queue Delay             |       | 0.0  |     |     | 0.0  |     |       | 0.0   | 0.0  |     |     |     |
| Total Delay             |       | 24.8 |     |     | 18.4 |     |       | 74.8  | 19.7 |     |     |     |
| LOS                     |       | C    |     |     | B    |     |       | E     | B    |     |     |     |
| Approach Delay          |       | 24.8 |     |     | 18.4 |     |       | 32.4  |      |     |     |     |
| Approach LOS            |       | C    |     |     | B    |     |       | C     |      |     |     |     |
| 90th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 90th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 70th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 70th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 50th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 50th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 30th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 30th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 10th %ile Green (s)     | 11.0  |      |     |     |      |     | 13.3  | 13.3  |      |     |     |     |
| 10th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| Stops (vph)             |       | 673  |     |     | 755  |     |       | 185   | 351  |     |     |     |
| Fuel Used(gal)          |       | 12   |     |     | 11   |     |       | 5     | 8    |     |     |     |
| CO Emissions (g/hr)     |       | 820  |     |     | 791  |     |       | 370   | 570  |     |     |     |
| NOx Emissions (g/hr)    |       | 160  |     |     | 154  |     |       | 72    | 111  |     |     |     |
| VOC Emissions (g/hr)    |       | 190  |     |     | 183  |     |       | 86    | 132  |     |     |     |
| Dilemma Vehicles (#)    |       | 72   |     |     | 109  |     |       | 0     | 0    |     |     |     |
| Queue Length 50th (ft)  |       | 228  |     |     | 162  |     |       | 133   | 118  |     |     |     |
| Queue Length 95th (ft)  |       | m267 |     |     | m157 |     |       | #268  | 192  |     |     |     |
| Internal Link Dist (ft) |       | 398  |     |     | 243  |     |       | 505   |      |     | 241 |     |
| Turn Bay Length (ft)    |       |      |     |     |      |     |       |       | 300  |     |     |     |
| Base Capacity (vph)     |       | 1167 |     |     | 1881 |     |       | 261   | 1073 |     |     |     |
| Starvation Cap Reductn  |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Spillback Cap Reductn   |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Storage Cap Reductn     |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Reduced v/c Ratio       |       | 0.73 |     |     | 0.54 |     |       | 0.90  | 0.73 |     |     |     |

Lanes, Volumes, Timings  
 220: Bridge St (CT-140)

07/07/2020

| Lane Group              | Ø2    | Ø5   |
|-------------------------|-------|------|
| Detector Phase          |       |      |
| Switch Phase            |       |      |
| Minimum Initial (s)     | 15.0  | 5.0  |
| Minimum Split (s)       | 21.5  | 10.7 |
| Total Split (s)         | 42.8  | 12.4 |
| Total Split (%)         | 48%   | 14%  |
| Maximum Green (s)       | 36.3  | 6.7  |
| Yellow Time (s)         | 4.5   | 4.5  |
| All-Red Time (s)        | 2.0   | 1.2  |
| Lost Time Adjust (s)    |       |      |
| Total Lost Time (s)     |       |      |
| Lead/Lag                | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |
| Vehicle Extension (s)   | 3.0   | 1.5  |
| Recall Mode             | C-Max | None |
| 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)     | 36.3  | 6.7  |
| 90th %ile Term Code     | Coord | Max  |
| 70th %ile Green (s)     | 36.3  | 6.7  |
| 70th %ile Term Code     | Coord | Max  |
| 50th %ile Green (s)     | 37.6  | 5.4  |
| 50th %ile Term Code     | Coord | Gap  |
| 30th %ile Green (s)     | 38.0  | 5.0  |
| 30th %ile Term Code     | Coord | Min  |
| 10th %ile Green (s)     | 38.0  | 5.0  |
| 10th %ile Term Code     | Coord | Min  |
| 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)     |       |      |
| Starvation Cap Reductn  |       |      |
| Spillback Cap Reductn   |       |      |
| Storage Cap Reductn     |       |      |
| Reduced v/c Ratio       |       |      |

Intersection Summary

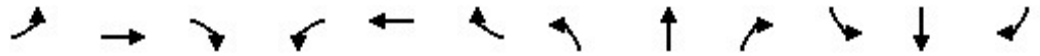
|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 32 (36%), Referenced to phase 2:EBWB, Start of Yellow   |
| Natural Cycle:                    | 70  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.90  |
| Intersection Signal Delay:        | 25.3  |
| Intersection LOS:                 | C   |
| Intersection Capacity Utilization | 75.7%   |
| ICU Level of Service              | D   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 220: Bridge St (CT-140)



Lanes, Volumes, Timings  
222: Southern Auto Auction

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↗     |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 12    | 4     | 17    | 52    | 8     | 56    | 0     | 999   | 15    | 30    | 1216  | 15    |
| Future Volume (vph)        | 12    | 4     | 17    | 52    | 8     | 56    | 0     | 999   | 15    | 30    | 1216  | 15    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 0     |       | 0     | 0     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Frt                        |       | 0.931 |       |       |       | 0.850 |       | 0.998 |       |       | 0.998 |       |
| Flt Protected              |       | 0.982 |       |       | 0.959 |       |       |       |       |       | 0.999 |       |
| Satd. Flow (prot)          | 0     | 1258  | 0     | 0     | 1665  | 1482  | 0     | 3308  | 0     | 0     | 3277  | 0     |
| Flt Permitted              |       | 0.850 |       |       | 0.730 |       |       |       |       |       | 0.898 |       |
| Satd. Flow (perm)          | 0     | 1089  | 0     | 0     | 1267  | 1482  | 0     | 3308  | 0     | 0     | 2945  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 18    |       |       |       | 61    |       | 5     |       |       | 4     |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 484   |       |       | 1094  |       |       | 527   |       |       | 557   |       |
| Travel Time (s)            |       | 13.2  |       |       | 29.8  |       |       | 8.0   |       |       | 8.4   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 100%  | 8%    | 0%    | 10%   | 6%    | 9%    | 8%    | 9%    | 2%    | 3%    | 10%   | 11%   |
| Adj. Flow (vph)            | 13    | 4     | 18    | 57    | 9     | 61    | 0     | 1086  | 16    | 33    | 1322  | 16    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 35    | 0     | 0     | 66    | 61    | 0     | 1102  | 0     | 0     | 1371  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 1     | 0     |       | 1     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right | Left  |       |       | Left  |       |       |
| Leading Detector (ft)      | 20    | 15    |       | 20    | 20    | 20    | 20    | 0     |       | 20    | 0     |       |
| 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    | 15    |       | 20    | 20    | 20    | 20    | 6     |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  |       | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       | 2     |       |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          | 11.7  | 11.7  |       | 11.7  | 11.7  | 11.7  | 21.8  | 21.8  |       | 21.8  | 21.8  |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 12.0  | 12.0  |     | 12.0  | 12.0  | 12.0  | 78.0  | 78.0  |     | 78.0  | 78.0  |     |
| Total Split (%)         | 13.3% | 13.3% |     | 13.3% | 13.3% | 13.3% | 86.7% | 86.7% |     | 86.7% | 86.7% |     |
| Maximum Green (s)       | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.7   | 1.7   |     | 1.7   | 1.7   | 1.7   | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |       | 4.7   |     |       | 4.7   | 4.7   |       | 6.8   |     |       | 6.8   |     |
| Lead/Lag                |       |       |     |       |       |       |       |       |     |       |       |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 7.2   |     |       | 7.2   | 7.2   |       | 75.0  |     |       | 75.0  |     |
| Actuated g/C Ratio      |       | 0.08  |     |       | 0.08  | 0.08  |       | 0.83  |     |       | 0.83  |     |
| v/c Ratio               |       | 0.34  |     |       | 0.65  | 0.35  |       | 0.40  |     |       | 0.56  |     |
| Control Delay           |       | 33.9  |     |       | 70.7  | 16.8  |       | 3.2   |     |       | 1.1   |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |       | 33.9  |     |       | 70.7  | 16.8  |       | 3.2   |     |       | 1.1   |     |
| LOS                     |       | C     |     |       | E     | B     |       | A     |     |       | A     |     |
| Approach Delay          |       | 33.9  |     |       | 44.8  |       |       | 3.2   |     |       | 1.1   |     |
| Approach LOS            |       | C     |     |       | D     |       |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   | 7.3   | 71.2  | 71.2  |     | 71.2  | 71.2  |     |
| 30th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.2  | 83.2  |     | 83.2  | 83.2  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 20    |     |       | 54    | 16    |       | 261   |     |       | 117   |     |
| Fuel Used(gal)          |       | 0     |     |       | 2     | 1     |       | 12    |     |       | 15    |     |
| CO Emissions (g/hr)     |       | 30    |     |       | 116   | 54    |       | 834   |     |       | 1078  |     |
| NOx Emissions (g/hr)    |       | 6     |     |       | 22    | 11    |       | 162   |     |       | 210   |     |
| VOC Emissions (g/hr)    |       | 7     |     |       | 27    | 13    |       | 193   |     |       | 250   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 0     | 0     |       | 64    |     |       | 17    |     |
| Queue Length 50th (ft)  |       | 9     |     |       | 37    | 0     |       | 29    |     |       | 5     |     |
| Queue Length 95th (ft)  |       | 39    |     |       | #101  | 37    |       | 151   |     |       | 16    |     |
| Internal Link Dist (ft) |       | 404   |     |       | 1014  |       |       | 447   |     |       | 477   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |       |       |       |     |       |       |     |
| Base Capacity (vph)     |       | 104   |     |       | 102   | 176   |       | 2756  |     |       | 2453  |     |
| 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       |       | 0.34  |     |       | 0.65  | 0.35  |       | 0.40  |     |       | 0.56  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90

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

















Actuated Cycle Length: 90  
Offset: 83 (92%), Referenced to phase 2:NBSB, Start of Yellow  
Natural Cycle: 55  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.65  
Intersection Signal Delay: 4.5 Intersection LOS: A  
Intersection Capacity Utilization 73.8% ICU Level of Service D  
Analysis Period (min) 15  
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Splits and Phases: 222: Southern Auto Auction



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|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 102   | 0   | 108   | 5   | 0   | 10  | 24  | 719   | 0   | 20  | 576   | 44  |
| Future Volume (vph)        | 102   | 0   | 108   | 5   | 0   | 10  | 24  | 719   | 0   | 20  | 576   | 44  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 0   |   | 400   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   |   |   |   |   | 1.00  |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   | 0.907   |   |   |   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.985   |   | 0.950   |   |   |   | 0.998   |   |
| Satd. Flow (prot)          | 0   | 1399  | 1615  | 0   | 1664  | 0   | 1203  | 1759  | 0   | 0   | 1743  | 1272  |
| Flt Permitted              |   | 0.747   |   |   | 0.926   |   | 0.343   |   |   |   | 0.965   |   |
| Satd. Flow (perm)          | 0   | 1100  | 1615  | 0   | 1564  | 0   | 434   | 1759  | 0   | 0   | 1686  | 1272  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 117   |   | 85  |   |   |   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 30  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 532   |   |   | 223   |   |   | 1555  |   |   |   | 682   |
| Travel Time (s)            |   | 14.5  |   |   | 5.1   |   |   | 23.6  |   |   |   | 10.3  |
| Confl. Peds. (#/hr)        |   |   |   |   |   |   | 1   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 29%   | 2%  | 0%  | 2%  | 2%  | 2%  | 50%   | 8%  | 2%  | 2%  | 9%  | 27%   |
| Adj. Flow (vph)            | 111   | 0   | 117   | 5   | 0   | 11  | 26  | 782   | 0   | 22  | 626   | 48  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 111   | 117   | 0   | 16  | 0   | 26  | 782   | 0   | 0   | 648   | 48  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 2   | 1   | 1   | 2   |   | 1   | 2   |   | 1   | 2   | 1   |
| Detector Template          | Left  | Thru  | Right   | Left  | Thru  |   | Left  |   |   | Left  |   | Right   |
| Leading Detector (ft)      | 20  | 100   | 20  | 20  | 100   |   | 20  | 293   |   | 20  | 283   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Size(ft)        | 20  | 6   | 20  | 20  | 6   |   | 20  | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   | 94  |   |   | 94  |   |   | 287   |   |   |   | 277   |
| Detector 2 Size(ft)        |   | 6   |   |   | 6   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   | Cl+Ex   |   |   | Cl+Ex   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 2 Extend (s)      |   | 0.0   |   |   | 0.0   |   |   | 0.0   |   |   |   | 0.0   |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT  | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|------|-----|-------|-------|-------|
| Turn Type               | Perm  | NA    | Prot  | Perm  | NA    |     | D.P+P | NA   |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 4     | 4     |       | 4     |     | 1     | 1 2  |     |       | 2     |       |
| Permitted Phases        | 4     |       |       | 4     |       |     | 2     |      |     | 2     |       | 2     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     | 2    |     | 2     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |      |     |       |       |       |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |     | 4.5   |      |     | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |     | 9.0   |      |     | 21.0  | 21.0  | 21.0  |
| Total Split (s)         | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |     | 11.0  |      |     | 62.0  | 62.0  | 62.0  |
| Total Split (%)         | 18.9% | 18.9% | 18.9% | 18.9% | 18.9% |     | 12.2% |      |     | 68.9% | 68.9% | 68.9% |
| Maximum Green (s)       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |     | 7.0   |      |     | 56.0  | 56.0  | 56.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   |      |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |     | 1.0   |      |     | 1.2   | 1.2   | 1.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   |      |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.0   | 4.0   |       | 4.0   |     | 4.0   |      |     |       | 6.0   | 6.0   |
| Lead/Lag                |       |       |       |       |       |     | Lead  |      |     | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |      |     |       |       |       |
| 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  |     | None  |      |     | C-Min | C-Min | C-Min |
| Act Effct Green (s)     |       | 13.3  | 13.3  |       | 13.3  |     | 67.1  | 68.7 |     |       | 62.5  | 62.5  |
| Actuated g/C Ratio      |       | 0.15  | 0.15  |       | 0.15  |     | 0.75  | 0.76 |     |       | 0.69  | 0.69  |
| v/c Ratio               |       | 0.69  | 0.35  |       | 0.05  |     | 0.07  | 0.58 |     |       | 0.55  | 0.05  |
| Control Delay           |       | 58.3  | 9.8   |       | 0.3   |     | 4.3   | 6.7  |     |       | 12.5  | 3.0   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0  |     |       | 0.0   | 0.0   |
| Total Delay             |       | 58.3  | 9.8   |       | 0.3   |     | 4.3   | 6.7  |     |       | 12.5  | 3.0   |
| LOS                     |       | E     | A     |       | A     |     | A     | A    |     |       | B     | A     |
| Approach Delay          |       | 33.4  |       |       | 0.3   |     |       | 6.7  |     |       | 11.8  |       |
| Approach LOS            |       | C     |       |       | A     |     |       | A    |     |       | B     |       |
| 90th %ile Green (s)     | 13.3  | 13.3  | 13.3  | 13.3  | 13.3  |     | 6.7   |      |     | 56.0  | 56.0  | 56.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Gap   |      |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 17.7  | 17.7  | 17.7  | 17.7  | 17.7  |     | 6.4   |      |     | 51.9  | 51.9  | 51.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   |      |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |     | 0.0   |      |     | 65.0  | 65.0  | 65.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 12.2  | 12.2  | 12.2  | 12.2  | 12.2  |     | 0.0   |      |     | 67.8  | 67.8  | 67.8  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   |     | 0.0   |      |     | 71.7  | 71.7  | 71.7  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| Stops (vph)             |       | 89    | 20    |       | 0     |     | 6     | 185  |     |       | 304   | 10    |
| Fuel Used(gal)          |       | 2     | 1     |       | 0     |     | 0     | 11   |     |       | 8     | 0     |
| CO Emissions (g/hr)     |       | 141   | 55    |       | 2     |     | 24    | 737  |     |       | 554   | 24    |
| NOx Emissions (g/hr)    |       | 27    | 11    |       | 0     |     | 5     | 143  |     |       | 108   | 5     |
| VOC Emissions (g/hr)    |       | 33    | 13    |       | 0     |     | 5     | 171  |     |       | 128   | 6     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 68   |     |       | 51    | 0     |
| Queue Length 50th (ft)  |       | 59    | 0     |       | 0     |     | 5     | 184  |     |       | 270   | 1     |
| Queue Length 95th (ft)  |       | #141  | 47    |       | 0     |     | m4    | 110  |     |       | 241   | m10   |
| Internal Link Dist (ft) |       | 452   |       |       | 143   |     |       | 1475 |     |       | 602   |       |
| Turn Bay Length (ft)    |       |       |       |       |       |     | 300   |      |     |       |       | 400   |
| Base Capacity (vph)     |       | 175   | 356   |       | 321   |     | 384   | 1358 |     |       | 1186  | 912   |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0    |     |       | 0     | 0     |

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



| Lane Group            | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|-----------------------|-----|------|------|-----|------|-----|------|------|-----|-----|------|------|
| Spillback Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 10   |     |     | 0    | 0    |
| Storage Cap Reductn   |     | 0    | 0    |     | 0    |     | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio     |     | 0.63 | 0.33 |     | 0.05 |     | 0.07 | 0.58 |     |     | 0.55 | 0.05 |

Intersection Summary





















Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 68 (76%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 12.1 Intersection LOS: B  
 Intersection Capacity Utilization 67.1% ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 225: MMCT Casino















Lanes, Volumes, Timings  
226: Big Y/Ethos

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |  |  |  |   |   |  |  |
| Traffic Volume (vph)       | 59  | 0   | 74  | 10  | 0   | 8   | 110   | 675   | 12  | 0   | 645   | 44  |
| Future Volume (vph)        | 59  | 0   | 74  | 10  | 0   | 8   | 110   | 675   | 12  | 0   | 645   | 44  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 360   |   | 0   | 0   |   | 370   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 1   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   | 0.98  |   |   |   |   |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   |   | 0.850   |   | 0.997   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.950   |   | 0.950   |   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 1543  | 1615  | 0   | 1583  | 1615  | 1583  | 1755  | 0   | 0   | 1792  | 1482  |
| Flt Permitted              |   | 0.750   |   |   | 0.715   |   | 0.328   |   |   |   |   |   |
| Satd. Flow (perm)          | 0   | 1218  | 1577  | 0   | 1192  | 1615  | 547   | 1755  | 0   | 0   | 1792  | 1482  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 80  |   |   | 112   |   | 5   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 626   |   |   | 337   |   |   | 1217  |   |   |   | 1555  |
| Travel Time (s)            |   | 17.1  |   |   | 9.2   |   |   | 18.4  |   |   |   | 23.6  |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 17%   | 0%  | 0%  | 14%   | 0%  | 0%  | 14%   | 8%  | 3%  | 0%  | 6%  | 9%  |
| Adj. Flow (vph)            | 64  | 0   | 80  | 11  | 0   | 9   | 120   | 734   | 13  | 0   | 701   | 48  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 64  | 80  | 0   | 11  | 9   | 120   | 747   | 0   | 0   | 701   | 48  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 6   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   |   | 1   | 2   | 2   |
| Detector Template          | Left  |   |   | Left  |   |   |   |   |   | Left  |   |   |
| Leading Detector (ft)      | 20  | 29  | 29  | 20  | 14  | 14  | 24  | 366   |   | 20  | 366   | 366   |
| Trailing Detector (ft)     | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Position(ft)    | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Size(ft)        | 20  | 34  | 34  | 20  | 24  | 24  | 34  | 6   |   | 20  | 6   | 6   |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   |   |   |   |   |   |   | 360   |   |   | 360   | 360   |
| Detector 2 Size(ft)        |   |   |   |   |   |   |   | 6   |   |   | 6   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |   | Cl+Ex   |   |   | Cl+Ex   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |

Lanes, Volumes, Timings  
226: Big Y/Ethos

07/07/2020

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |   |   |   |   |   |   |  | 0.0   |   |   | 0.0   | 0.0   |
| Turn Type               | Perm  | NA  | pm+ov   | Perm  | NA  | Perm  | D.P+P  | NA  |   |   | NA  | Perm  |
| Protected Phases        |   | 4   | 1   |   | 4   |   | 1  | 1 2   |   |   | 2   |   |
| Permitted Phases        | 4   |   | 4   | 4   |   | 4   | 2  |   |   | 2   |   | 2   |
| Detector Phase          | 4   | 4   | 4   | 4   | 4   | 4   | 1  | 2   |   | 2   | 2   | 2   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5  |   |   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0  |   |   | 23.4  | 23.4  | 23.4  |
| Total Split (s)         | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0  |   |   | 72.0  | 72.0  | 72.0  |
| Total Split (%)         | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%  |   |   | 80.0%   | 80.0%   | 80.0%   |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  |   |   | 63.8  | 63.8  | 63.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |   |   | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  |   |   | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0  |   |   |   | 0.0   | 0.0   |
| Total Lost Time (s)     |   | 4.0   | 4.0   |   | 4.0   | 4.0   | 4.0  |   |   |   | 8.2   | 8.2   |
| Lead/Lag                |   |   | Lead  |   |   |   | Lead   |   |   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |  |   |   |   |   |   |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5  |   |   | 2.5   | 2.5   | 2.5   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None   |   |   | C-Min   | C-Min   | C-Min   |
| Act Effct Green (s)     |   | 8.3   | 13.6  |   | 8.3   | 8.3   | 69.7   | 73.7  |   |   | 60.2  | 60.2  |
| Actuated g/C Ratio      |   | 0.09  | 0.15  |   | 0.09  | 0.09  | 0.77   | 0.82  |   |   | 0.67  | 0.67  |
| v/c Ratio               |   | 0.57  | 0.26  |   | 0.10  | 0.04  | 0.25   | 0.52  |   |   | 0.58  | 0.05  |
| Control Delay           |   | 62.1  | 10.2  |   | 40.4  | 0.2   | 6.1  | 12.1  |   |   | 6.0   | 0.3   |
| Queue Delay             |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0  | 0.0   |   |   | 0.0   | 0.0   |
| Total Delay             |   | 62.1  | 10.2  |   | 40.4  | 0.2   | 6.1  | 12.1  |   |   | 6.0   | 0.3   |
| LOS                     |   | E   | B   |   | D   | A   | A  | B   |   |   | A   | A   |
| Approach Delay          |   | 33.3  |   |   | 22.3  |   |  | 11.3  |   |   | 5.6   |   |
| Approach LOS            |   | C   |   |   | C   |   |  | B   |   |   | A   |   |
| 90th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  |   |   | 63.8  | 63.8  | 63.8  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  |   |   | Coord   | Coord   | Coord   |
| 70th %ile Green (s)     | 11.2  | 11.2  | 6.1   | 11.2  | 11.2  | 11.2  | 6.1  |   |   | 56.5  | 56.5  | 56.5  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  |   |   | Coord   | Coord   | Coord   |
| 50th %ile Green (s)     | 10.2  | 10.2  | 5.5   | 10.2  | 10.2  | 10.2  | 5.5  |   |   | 58.1  | 58.1  | 58.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  |   |   | Coord   | Coord   | Coord   |
| 30th %ile Green (s)     | 8.9   | 8.9   | 5.0   | 8.9   | 8.9   | 8.9   | 5.0  |   |   | 59.9  | 59.9  | 59.9  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  |   |   | Coord   | Coord   | Coord   |
| 10th %ile Green (s)     | 6.4   | 6.4   | 4.5   | 6.4   | 6.4   | 6.4   | 4.5  |   |   | 62.9  | 62.9  | 62.9  |
| 10th %ile Term Code     | Gap   | Gap   | Min   | Gap   | Gap   | Gap   | Min  |   |   | Coord   | Coord   | Coord   |
| Stops (vph)             |   | 46  | 17  |   | 12  | 0   | 42   | 402   |   |   | 241   | 1   |
| Fuel Used(gal)          |   | 1   | 1   |   | 0   | 0   | 2  | 14  |   |   | 10  | 0   |
| CO Emissions (g/hr)     |   | 86  | 43  |   | 11  | 2   | 127  | 972   |   |   | 719   | 32  |
| NOx Emissions (g/hr)    |   | 17  | 8   |   | 2   | 0   | 25   | 189   |   |   | 140   | 6   |
| VOC Emissions (g/hr)    |   | 20  | 10  |   | 3   | 0   | 29   | 225   |   |   | 167   | 7   |
| Dilemma Vehicles (#)    |   | 0   | 0   |   | 0   | 0   | 0  | 87  |   |   | 14  | 0   |
| Queue Length 50th (ft)  |   | 35  | 0   |   | 6   | 0   | 49   | 395   |   |   | 310   | 1   |
| Queue Length 95th (ft)  |   | #117  | 39  |   | 23  | 0   | 4  | 20  |   |   | 51  | m0  |
| Internal Link Dist (ft) |   | 546   |   |   | 257   |   |  | 1137  |   |   | 1475  |   |
| Turn Bay Length (ft)    |   |   |   |   |   | 50  | 360  |   |   |   |   | 370   |
| Base Capacity (vph)     |   | 112   | 307   |   | 110   | 251   | 485  | 1506  |   |   | 1270  | 1068  |

Lanes, Volumes, Timings  
226: Big Y/Ethos

07/07/2020



| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|------------------------|-----|------|------|-----|------|------|------|------|-----|-----|------|------|
| Starvation Cap Reductn |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio      |     | 0.57 | 0.26 |     | 0.10 | 0.04 | 0.25 | 0.50 |     |     | 0.55 | 0.04 |

Intersection Summary























|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 6 (7%), Referenced to phase 2:NBSB, Start of Yellow   |
| Natural Cycle:                    | 60  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.58  |
| Intersection Signal Delay:        | 10.8  |
| Intersection LOS:                 | B   |
| Intersection Capacity Utilization | 93.6%   |
| ICU Level of Service              | F   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 226: Big Y/Ethos



Lanes, Volumes, Timings  
228: Walmart

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |  |  |   |  |  |   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 47  | 11  | 77  | 224   | 31  | 124   | 123   | 625   | 338   | 108   | 563   | 54  |
| Future Volume (vph)        | 47  | 11  | 77  | 224   | 31  | 124   | 123   | 625   | 338   | 108   | 563   | 54  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 110   |   | 140   | 250   |   | 0   |
| Storage Lanes              | 1   |   | 0   | 1   |   | 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  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   | 0.98  |   |   |   |   |   |   |   |   |   |   |
| Frt                        |   | 0.869   |   |   | 0.880   |   |   |   | 0.850   |   | 0.987   |   |
| Flt Protected              | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 1745  | 1613  | 0   | 1736  | 1633  | 0   | 1805  | 3312  | 1524  | 1770  | 1763  | 0   |
| Flt Permitted              | 0.889   |   |   | 0.526   |   |   | 0.235   |   |   | 0.356   |   |   |
| Satd. Flow (perm)          | 1633  | 1613  | 0   | 961   | 1633  | 0   | 446   | 3312  | 1524  | 663   | 1763  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   | 84  |   |   | 135   |   |   |   | 367   |   |   | 10  |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 349   |   |   | 546   |   |   | 571   |   |   |   | 400   |
| Travel Time (s)            |   | 9.5   |   |   | 14.9  |   |   | 8.7   |   |   |   | 6.1   |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 0%  | 4%  | 0%  | 3%  | 0%  | 9%  | 6%  | 2%  | 7%  | 0%  |
| Adj. Flow (vph)            | 51  | 12  | 84  | 243   | 34  | 135   | 134   | 679   | 367   | 117   | 612   | 59  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 51  | 96  | 0   | 243   | 169   | 0   | 134   | 679   | 367   | 117   | 671   | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 12  |   |   | 12  |   |   | 12  |   |   |   | 12  |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   |   | 1   | 1   |   | 1   | 2   | 1   | 1   |   | 2   |
| Detector Template          |   |   |   |   |   |   |   |   | Right   |   |   | Thru  |
| Leading Detector (ft)      | 30  | 30  |   | 33  | 46  |   | 48  | 356   | 20  | 38  |   | 100   |
| Trailing Detector (ft)     | -5  | -5  |   | -5  | 0   |   | 0   | 165   | 0   | 0   |   | 0   |
| Detector 1 Position(ft)    | -5  | -5  |   | -5  | 0   |   | 0   | 165   | 0   | 0   |   | 0   |
| Detector 1 Size(ft)        | 35  | 35  |   | 38  | 46  |   | 48  | 6   | 20  | 38  |   | 6   |
| 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)    |   |   |   |   |   |   |   | 350   |   |   |   | 94  |
| Detector 2 Size(ft)        |   |   |   |   |   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-----|-------|
| Detector 2 Extend (s)   |       |       |     |       |       |     |       | 0.0   |       |       |     | 0.0   |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | pm+pt | NA    | Perm  | pm+pt | NA  |       |
| Protected Phases        | 7     | 4     |     | 3     | 8     |     | 5     | 2     |       | 1     |     | 6     |
| Permitted Phases        | 4     |       |     | 8     |       |     | 2     |       | 2     | 6     |     |       |
| Detector Phase          | 7     | 4     |     | 3     | 8     |     | 5     | 2     | 2     | 1     |     | 6     |
| Switch Phase            |       |       |     |       |       |     |       |       |       |       |     |       |
| Minimum Initial (s)     | 3.6   | 5.0   |     | 3.6   | 5.0   |     | 3.6   | 13.1  | 13.1  | 4.1   |     | 13.1  |
| Minimum Split (s)       | 8.1   | 9.7   |     | 8.1   | 9.7   |     | 8.1   | 24.3  | 24.3  | 8.1   |     | 21.3  |
| Total Split (s)         | 8.1   | 10.0  |     | 10.0  | 11.9  |     | 8.1   | 61.8  | 61.8  | 8.2   |     | 61.9  |
| Total Split (%)         | 9.0%  | 11.1% |     | 11.1% | 13.2% |     | 9.0%  | 68.7% | 68.7% | 9.1%  |     | 68.8% |
| Maximum Green (s)       | 5.0   | 5.3   |     | 6.9   | 7.2   |     | 5.0   | 55.5  | 55.5  | 5.1   |     | 55.6  |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 4.5   | 4.5   | 3.0   |     | 4.5   |
| All-Red Time (s)        | 0.1   | 1.7   |     | 0.1   | 1.7   |     | 0.1   | 1.8   | 1.8   | 0.1   |     | 1.8   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Lost Time (s)     | 3.1   | 4.7   |     | 3.1   | 4.7   |     | 3.1   | 6.3   | 6.3   | 3.1   |     | 6.3   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  |     | Lag   |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |       |       |     |       |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.5   | 2.5   | 2.0   |     | 2.5   |
| Recall Mode             | None  | None  |     | None  | None  |     | None  | C-Min | C-Min | None  |     | C-Min |
| Act Effct Green (s)     | 11.4  | 5.2   |     | 24.0  | 17.0  |     | 56.5  | 47.6  | 47.6  | 56.3  |     | 47.5  |
| Actuated g/C Ratio      | 0.13  | 0.06  |     | 0.27  | 0.19  |     | 0.63  | 0.53  | 0.53  | 0.63  |     | 0.53  |
| v/c Ratio               | 0.24  | 0.56  |     | 0.61  | 0.41  |     | 0.37  | 0.39  | 0.38  | 0.24  |     | 0.72  |
| Control Delay           | 29.1  | 25.4  |     | 38.0  | 14.2  |     | 8.1   | 13.3  | 4.0   | 2.4   |     | 13.3  |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Delay             | 29.1  | 25.4  |     | 38.0  | 14.2  |     | 8.1   | 13.3  | 4.0   | 2.4   |     | 13.3  |
| LOS                     | C     | C     |     | D     | B     |     | A     | B     | A     | A     |     | B     |
| Approach Delay          |       | 26.7  |     |       | 28.2  |     |       | 9.8   |       |       |     | 11.6  |
| Approach LOS            |       | C     |     |       | C     |     |       | A     |       |       |     | B     |
| 90th %ile Green (s)     | 5.2   | 5.3   |     | 7.1   | 7.2   |     | 5.0   | 55.3  | 55.3  | 5.1   |     | 55.4  |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   |     | Max   | Coord | Coord | Max   |     | Coord |
| 70th %ile Green (s)     | 7.4   | 5.3   |     | 18.8  | 16.7  |     | 5.0   | 43.6  | 43.6  | 5.1   |     | 43.7  |
| 70th %ile Term Code     | Gap   | Max   |     | Max   | Hold  |     | Max   | Coord | Coord | Max   |     | Coord |
| 50th %ile Green (s)     | 6.5   | 5.4   |     | 19.8  | 18.7  |     | 7.3   | 40.6  | 40.6  | 7.0   |     | 40.3  |
| 50th %ile Term Code     | Gap   | Gap   |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 30th %ile Green (s)     | 0.0   | 5.0   |     | 16.6  | 24.7  |     | 6.3   | 45.2  | 45.2  | 6.0   |     | 44.9  |
| 30th %ile Term Code     | Skip  | Min   |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 19.3  | 17.7  |     | 5.0   | 53.3  | 53.3  | 4.9   |     | 53.2  |
| 10th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| Stops (vph)             | 40    | 28    |     | 161   | 39    |     | 46    | 302   | 55    | 11    |     | 437   |
| Fuel Used(gal)          | 1     | 1     |     | 3     | 1     |     | 1     | 8     | 2     | 1     |     | 14    |
| CO Emissions (g/hr)     | 40    | 58    |     | 237   | 92    |     | 86    | 543   | 155   | 92    |     | 949   |
| NOx Emissions (g/hr)    | 8     | 11    |     | 46    | 18    |     | 17    | 106   | 30    | 18    |     | 185   |
| VOC Emissions (g/hr)    | 9     | 13    |     | 55    | 21    |     | 20    | 126   | 36    | 21    |     | 220   |
| Dilemma Vehicles (#)    | 0     | 0     |     | 0     | 0     |     | 0     | 29    | 0     | 0     |     | 32    |
| Queue Length 50th (ft)  | 20    | 7     |     | 106   | 16    |     | 48    | 134   | 67    | 4     |     | 388   |
| Queue Length 95th (ft)  | 56    | #57   |     | #241  | #98   |     | m10   | m22   | m0    | 11    |     | 74    |
| Internal Link Dist (ft) |       | 269   |     |       | 466   |     |       | 491   |       |       |     | 320   |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 110   |       | 140   | 250   |     |       |
| Base Capacity (vph)     | 215   | 174   |     | 397   | 417   |     | 366   | 2042  | 1080  | 484   |     | 1092  |

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| Lane Group             | EBL  | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Starvation Cap Reductn | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Spillback Cap Reductn  | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Storage Cap Reductn    | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Reduced v/c Ratio      | 0.24 | 0.55 |     | 0.61 | 0.41 |     | 0.37 | 0.33 | 0.34 | 0.24 | 0.61 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 22 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 14.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 73.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 228: Walmart



Lanes, Volumes, Timings  
3: N Rd. (CT-140)

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|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↑↑↑          |       |      | ↑↑                     |      | ↗     |
| Traffic Volume (vph)              | 682          | 0     | 0    | 1195                   | 0    | 41    |
| Future Volume (vph)               | 682          | 0     | 0    | 1195                   | 0    | 41    |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Storage Length (ft)               |              | 0     | 0    |                        | 0    | 0     |
| Storage Lanes                     |              | 0     | 0    |                        | 0    | 1     |
| Taper Length (ft)                 |              |       | 25   |                        | 25   |       |
| Lane Util. Factor                 | 0.91         | 1.00  | 1.00 | 0.95                   | 1.00 | 1.00  |
| Frt                               |              |       |      |                        |      | 0.865 |
| Flt Protected                     |              |       |      |                        |      |       |
| Satd. Flow (prot)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Flt Permitted                     |              |       |      |                        |      |       |
| Satd. Flow (perm)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Link Speed (mph)                  | 35           |       |      | 35                     | 30   |       |
| Link Distance (ft)                | 323          |       |      | 381                    | 386  |       |
| Travel Time (s)                   | 6.3          |       |      | 7.4                    | 8.8  |       |
| Peak Hour Factor                  | 0.92         | 0.92  | 0.92 | 0.92                   | 0.92 | 0.92  |
| Adj. Flow (vph)                   | 741          | 0     | 0    | 1299                   | 0    | 45    |
| Shared Lane Traffic (%)           |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 741          | 0     | 0    | 1299                   | 0    | 45    |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(ft)                  | 0            |       |      | 0                      | 0    |       |
| Link Offset(ft)                   | 0            |       |      | 0                      | 0    |       |
| Crosswalk Width(ft)               | 16           |       |      | 16                     | 16   |       |
| Two way Left Turn Lane            |              |       |      |                        |      |       |
| Headway Factor                    | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Turning Speed (mph)               |              | 9     | 15   |                        | 15   | 9     |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| <b>Intersection Summary</b>       |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 36.4%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

Lanes, Volumes, Timings

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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 110   | 0     | 154   | 20    | 10    | 20    | 44    | 369   | 0     | 10    | 487   | 44    |
| Future Volume (vph)        | 110   | 0     | 154   | 20    | 10    | 20    | 44    | 369   | 0     | 10    | 487   | 44    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 150   |       | 0     | 150   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 0     |       | 0     | 1     |       | 0     | 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 |       |       | 0.946 |       |       |       |       |       |       | 0.988 |
| Flt Protected              | 0.950 |       |       |       | 0.980 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 0     | 0     | 1727  | 0     | 1770  | 1863  | 0     | 1770  | 1840  | 0     |
| Flt Permitted              | 0.810 |       |       |       | 0.782 |       | 0.361 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1509  | 1583  | 0     | 0     | 1378  | 0     | 672   | 1863  | 0     | 1770  | 1840  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 408   |       |       | 22    |       |       |       |       |       |       | 9     |
| Link Speed (mph)           |       | 30    |       |       | 30    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 335   |       |       | 295   |       |       | 682   |       |       |       | 908   |
| Travel Time (s)            |       | 7.6   |       |       | 6.7   |       |       | 10.3  |       |       |       | 13.8  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 120   | 0     | 167   | 22    | 11    | 22    | 48    | 401   | 0     | 11    | 529   | 48    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 120   | 167   | 0     | 0     | 55    | 0     | 48    | 401   | 0     | 11    | 577   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 20    |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       |
| Detector Template          | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       |
| Trailing Detector (ft)     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex |       | 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   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       | 94    |       |       | 94    |       |       | 94    |       |       | 94    |       |
| Detector 2 Size(ft)        |       | 6     |       |       | 6     |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    |       | pm+pt | NA    |       | Prot  | NA    |       |
| Protected Phases           |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4     |       |       | 8     |       |       | 2     |       |       |       | 6     |       |

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7: Eversource

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase          | 4     | 4     |     | 8     | 8     |     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     |
| Minimum Split (s)       | 9.5   | 9.5   |     | 9.5   | 9.5   |     | 9.5   | 22.5  |     | 9.5   | 22.5  |     |
| Total Split (s)         | 23.0  | 23.0  |     | 23.0  | 23.0  |     | 10.0  | 57.0  |     | 10.0  | 57.0  |     |
| Total Split (%)         | 25.6% | 25.6% |     | 25.6% | 25.6% |     | 11.1% | 63.3% |     | 11.1% | 63.3% |     |
| Maximum Green (s)       | 18.5  | 18.5  |     | 18.5  | 18.5  |     | 5.5   | 52.5  |     | 5.5   | 52.5  |     |
| Yellow Time (s)         | 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   |     |
| 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                |       |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 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 |     | None  | C-Max |     |
| Act Effct Green (s)     | 12.7  | 12.7  |     |       | 12.7  |     | 67.4  | 66.3  |     | 5.8   | 62.0  |     |
| Actuated g/C Ratio      | 0.14  | 0.14  |     |       | 0.14  |     | 0.75  | 0.74  |     | 0.06  | 0.69  |     |
| v/c Ratio               | 0.56  | 0.29  |     |       | 0.26  |     | 0.08  | 0.29  |     | 0.10  | 0.45  |     |
| Control Delay           | 45.5  | 1.3   |     |       | 24.9  |     | 4.3   | 7.0   |     | 56.4  | 3.9   |     |
| Queue Delay             | 0.0   | 0.0   |     |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             | 45.5  | 1.3   |     |       | 24.9  |     | 4.3   | 7.0   |     | 56.4  | 3.9   |     |
| LOS                     | D     | A     |     |       | C     |     | A     | A     |     | E     | A     |     |
| Approach Delay          |       | 19.8  |     |       | 24.9  |     |       | 6.7   |     |       | 4.9   |     |
| Approach LOS            |       | B     |     |       | C     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 18.5  | 18.5  |     | 18.5  | 18.5  |     | 5.5   | 52.5  |     | 5.5   | 52.5  |     |
| 90th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 14.7  | 14.7  |     | 14.7  | 14.7  |     | 6.4   | 66.3  |     | 0.0   | 55.4  |     |
| 70th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 12.6  | 12.6  |     | 12.6  | 12.6  |     | 6.1   | 68.4  |     | 0.0   | 57.8  |     |
| 50th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Gap   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 10.4  | 10.4  |     | 10.4  | 10.4  |     | 0.0   | 70.6  |     | 0.0   | 70.6  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   |     | 0.0   | 73.7  |     | 0.0   | 73.7  |     |
| 10th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             | 100   | 0     |     |       | 30    |     | 14    | 146   |     | 8     | 148   |     |
| Fuel Used(gal)          | 2     | 0     |     |       | 1     |     | 0     | 4     |     | 0     | 5     |     |
| CO Emissions (g/hr)     | 130   | 31    |     |       | 38    |     | 28    | 278   |     | 19    | 377   |     |
| NOx Emissions (g/hr)    | 25    | 6     |     |       | 7     |     | 6     | 54    |     | 4     | 73    |     |
| VOC Emissions (g/hr)    | 30    | 7     |     |       | 9     |     | 7     | 64    |     | 4     | 87    |     |
| Dilemma Vehicles (#)    | 0     | 0     |     |       | 0     |     | 0     | 29    |     | 0     | 14    |     |
| Queue Length 50th (ft)  | 65    | 0     |     |       | 17    |     | 10    | 99    |     | 7     | 38    |     |
| Queue Length 95th (ft)  | 112   | 0     |     |       | 48    |     | 20    | 146   |     | m13   | m38   |     |
| Internal Link Dist (ft) |       | 255   |     |       | 215   |     |       | 602   |     |       | 828   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 150   |       |     | 150   |       |     |
| Base Capacity (vph)     | 310   | 649   |     |       | 300   |     | 574   | 1372  |     | 114   | 1270  |     |
| Starvation Cap Reductn  | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.39  | 0.26  |     |       | 0.18  |     | 0.08  | 0.29  |     | 0.10  | 0.45  |     |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 26 (29%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 9.4

Intersection LOS: A

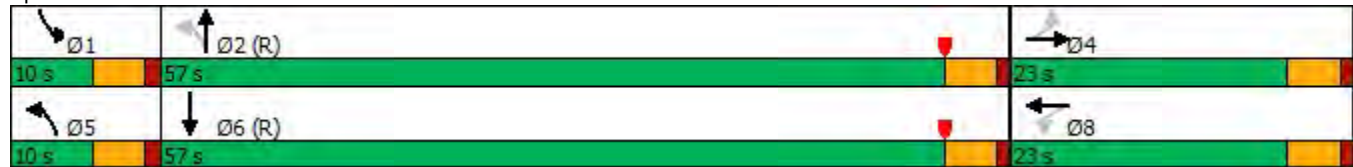
Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

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

Splits and Phases: 7: Eversource



# Lanes, Volumes, Timings

## 13: Site 1

07/07/2020



| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 6     | 37    | 50    | 573  | 396   | 8     |
| Future Volume (vph)        | 6     | 37    | 50    | 573  | 396   | 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  |
| Frt                        | 0.885 |       |       |      | 0.997 |       |
| Flt Protected              | 0.993 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1637  | 0     | 1770  | 1863 | 1857  | 0     |
| Flt Permitted              | 0.993 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1637  | 0     | 1770  | 1863 | 1857  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 203   |       |       | 517  | 266   |       |
| Travel Time (s)            | 4.6   |       |       | 7.8  | 4.0   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 7     | 40    | 54    | 623  | 430   | 9     |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 47    | 0     | 54    | 623  | 439   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 23   | 23    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

### Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 40.2%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
17: Site 2

07/07/2020



| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 4     | 16    | 20    | 430  | 727   | 5     |
| Future Volume (vph)        | 4     | 16    | 20    | 430  | 727   | 5     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Storage Length (ft)        | 0     | 0     | 100   |      |       | 0     |
| Storage Lanes              | 1     | 0     | 1     |      |       | 0     |
| Taper Length (ft)          | 25    |       | 25    |      |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Frt                        | 0.891 |       |       |      | 0.999 |       |
| Flt Protected              | 0.991 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1645  | 0     | 1770  | 1863 | 1861  | 0     |
| Flt Permitted              | 0.991 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1645  | 0     | 1770  | 1863 | 1861  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 236   |       |       | 390  | 828   |       |
| Travel Time (s)            | 5.4   |       |       | 5.9  | 12.5  |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 4     | 17    | 22    | 467  | 790   | 5     |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 21    | 0     | 22    | 467  | 795   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

Intersection Summary

|                                   |                        |
|-----------------------------------|------------------------|
| Area Type:                        | Other                  |
| Control Type:                     | Unsignalized           |
| Intersection Capacity Utilization | 48.6%                  |
|                                   | ICU Level of Service A |
| Analysis Period (min)             | 15                     |

Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020

| Lane Group                 | EBL   | EBT  | EBR   | WBL   | WBT   | WBR    | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |      |       |       |       |        |       |       |       |       |       |       |
| Traffic Volume (vph)       | 14    | 0    | 10    | 87    | 0     | 171    | 10    | 953   | 114   | 226   | 1459  | 16    |
| Future Volume (vph)        | 14    | 0    | 10    | 87    | 0     | 171    | 10    | 953   | 114   | 226   | 1459  | 16    |
| Ideal Flow (vphpl)         | 1900  | 1900 | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |      | 0     | 0     |       | 100    | 0     |       | 0     | 0     |       | 0     |
| Storage Lanes              | 1     |      | 1     | 0     |       | 1      | 1     |       | 0     | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Frt                        |       |      | 0.850 |       |       | 0.850  |       | 0.984 |       |       | 0.998 |       |
| Flt Protected              | 0.950 |      |       | 0.950 |       | 0.950  | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1770  | 0    | 1583  | 0     | 1517  | 1495   | 1770  | 3302  | 0     | 1770  | 3400  | 0     |
| Flt Permitted              | 0.695 |      |       | 0.950 |       | 0.156  |       |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1295  | 0    | 1583  | 0     | 1517  | 1495   | 291   | 3302  | 0     | 1770  | 3400  | 0     |
| Right Turn on Red          |       |      | Yes   |       |       | Yes    |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |      | 119   |       |       | 45     |       | 18    |       |       | 2     |       |
| Link Speed (mph)           |       | 30   |       |       | 25    |        |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 283  |       |       | 1258  |        |       | 264   |       |       | 430   |       |
| Travel Time (s)            |       | 6.4  |       |       | 34.3  |        |       | 4.0   |       |       | 6.5   |       |
| Peak Hour Factor           | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 2%    | 2%   | 2%    | 19%   | 2%    | 8%     | 2%    | 8%    | 4%    | 2%    | 6%    | 2%    |
| Adj. Flow (vph)            | 15    | 0    | 11    | 95    | 0     | 186    | 11    | 1036  | 124   | 246   | 1586  | 17    |
| Shared Lane Traffic (%)    |       |      |       |       |       |        |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 15    | 0    | 11    | 0     | 95    | 186    | 11    | 1160  | 0     | 246   | 1603  | 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)           |       | 12   |       |       | 30    |        |       | 12    |       |       | 20    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     |      | 1     | 1     | 2     | 1      | 1     | 2     |       | 1     | 0     |       |
| Detector Template          | Left  |      | Right |       | Thru  |        | Left  |       |       |       |       |       |
| Leading Detector (ft)      | 20    |      | 20    | 34    | 100   | 34     | 20    | 100   |       | 34    | 0     |       |
| 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    |      | 20    | 34    | 6     | 34     | 20    | 6     |       | 34    | 6     |       |
| 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   | 8.0    | 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                  | D.Pm  |      | Perm  | Prot  | NA    | custom | Perm  | NA    |       | Prot  | NA    |       |
| Protected Phases           |       |      |       | 4     | 8     | 5      |       | 6     |       | 5     | 1 2 5 |       |

| Lane Group                 | Ø1 | Ø2 |
|----------------------------|----|----|
| 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  | 2  |

Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020



| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT  | SBR |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-------|------|-----|
| Permitted Phases        | 4     |      | 4     |       |       | 4     | 6     |       |     |       |      |     |
| Detector Phase          | 4     |      | 4     | 4     | 8     | 4     | 6     | 6     |     | 5     |      |     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |       |      |     |
| Minimum Initial (s)     | 7.0   |      | 7.0   | 7.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 5.0   |      |     |
| Minimum Split (s)       | 12.6  |      | 12.6  | 12.6  | 22.5  | 10.2  | 21.2  | 21.2  |     | 10.2  |      |     |
| Total Split (s)         | 22.5  |      | 22.5  | 22.5  | 22.5  | 22.0  | 45.5  | 45.5  |     | 22.0  |      |     |
| Total Split (%)         | 25.0% |      | 25.0% | 25.0% | 25.0% | 24.4% | 50.6% | 50.6% |     | 24.4% |      |     |
| Maximum Green (s)       | 16.9  |      | 16.9  | 16.9  | 18.0  | 16.8  | 39.3  | 39.3  |     | 16.8  |      |     |
| Yellow Time (s)         | 3.0   |      | 3.0   | 3.0   | 3.5   | 3.0   | 4.8   | 4.8   |     | 3.0   |      |     |
| All-Red Time (s)        | 2.6   |      | 2.6   | 2.6   | 1.0   | 2.2   | 1.4   | 1.4   |     | 2.2   |      |     |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |      |     |
| Total Lost Time (s)     | 5.6   |      | 5.6   |       | 4.5   | 5.2   | 6.2   | 6.2   |     | 5.2   |      |     |
| Lead/Lag                |       |      |       |       |       | Lead  | Lag   | Lag   |     | Lead  |      |     |
| Lead-Lag Optimize?      |       |      |       |       |       |       |       |       |     |       |      |     |
| Vehicle Extension (s)   | 1.5   |      | 1.5   | 1.5   | 3.0   | 1.5   | 2.5   | 2.5   |     | 1.5   |      |     |
| Recall Mode             | None  |      | None  | None  | None  | None  | C-Min | C-Min |     | None  |      |     |
| Walk Time (s)           |       |      |       |       | 7.0   |       |       |       |     |       |      |     |
| Flash Dont Walk (s)     |       |      |       |       | 11.0  |       |       |       |     |       |      |     |
| Pedestrian Calls (#/hr) |       |      |       |       | 0     |       |       |       |     |       |      |     |
| Act Effct Green (s)     | 16.9  |      | 16.9  |       | 18.0  | 37.5  | 41.1  | 41.1  |     | 15.0  | 60.1 |     |
| Actuated g/C Ratio      | 0.19  |      | 0.19  |       | 0.20  | 0.42  | 0.46  | 0.46  |     | 0.17  | 0.67 |     |
| v/c Ratio               | 0.06  |      | 0.03  |       | 0.31  | 0.29  | 0.08  | 0.76  |     | 0.83  | 0.71 |     |
| Control Delay           | 30.9  |      | 0.1   |       | 34.1  | 13.8  | 13.8  | 15.9  |     | 63.4  | 5.6  |     |
| Queue Delay             | 0.0   |      | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.1  |     |
| Total Delay             | 30.9  |      | 0.1   |       | 34.1  | 13.8  | 13.8  | 15.9  |     | 63.4  | 5.7  |     |
| LOS                     | C     |      | A     |       | C     | B     | B     | B     |     | E     | A    |     |
| Approach Delay          |       | 17.9 |       |       | 20.7  |       |       | 15.9  |     |       | 13.4 |     |
| Approach LOS            |       | B    |       |       | C     |       |       | B     |     |       | B    |     |
| 90th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 16.8  | 39.3  | 39.3  |     | 16.8  |      |     |
| 90th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 70th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 16.8  | 39.3  | 39.3  |     | 16.8  |      |     |
| 70th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 50th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 16.8  | 39.3  | 39.3  |     | 16.8  |      |     |
| 50th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 30th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 14.2  | 41.9  | 41.9  |     | 14.2  |      |     |
| 30th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Gap   | Coord | Coord |     | Gap   |      |     |
| 10th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 10.5  | 45.6  | 45.6  |     | 10.5  |      |     |
| 10th %ile Term Code     | Hold  |      | Hold  | Hold  | Hold  | Gap   | Coord | Coord |     | Gap   |      |     |
| Stops (vph)             | 12    |      | 0     |       | 72    | 82    | 5     | 679   |     | 217   | 236  |     |
| Fuel Used(gal)          | 0     |      | 0     |       | 2     | 3     | 0     | 17    |     | 6     | 9    |     |
| CO Emissions (g/hr)     | 13    |      | 2     |       | 127   | 184   | 10    | 1190  |     | 437   | 610  |     |
| NOx Emissions (g/hr)    | 3     |      | 0     |       | 25    | 36    | 2     | 232   |     | 85    | 119  |     |
| VOC Emissions (g/hr)    | 3     |      | 0     |       | 29    | 43    | 2     | 276   |     | 101   | 141  |     |
| Dilemma Vehicles (#)    | 0     |      | 0     |       | 0     | 0     | 0     | 77    |     | 0     | 129  |     |
| Queue Length 50th (ft)  | 7     |      | 0     |       | 46    | 48    | 2     | 207   |     | 152   | 77   |     |
| Queue Length 95th (ft)  | 24    |      | 0     |       | 91    | 95    | m4    | 316   |     | m171  | m109 |     |
| Internal Link Dist (ft) |       | 203  |       |       | 1178  |       |       | 184   |     |       | 350  |     |
| Turn Bay Length (ft)    |       |      |       |       |       | 100   |       |       |     |       |      |     |
| Base Capacity (vph)     | 243   |      | 393   |       | 303   | 649   | 133   | 1517  |     | 330   | 2270 |     |

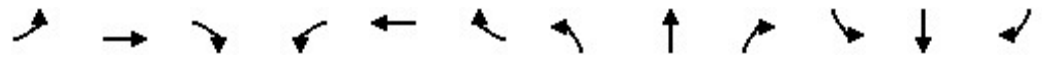
Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020

| Lane Group              | Ø1   | Ø2    |
|-------------------------|------|-------|
| Permitted Phases        |      |       |
| Detector Phase          |      |       |
| Switch Phase            |      |       |
| Minimum Initial (s)     | 5.0  | 15.0  |
| Minimum Split (s)       | 11.6 | 21.2  |
| Total Split (s)         | 17.0 | 50.5  |
| Total Split (%)         | 19%  | 56%   |
| Maximum Green (s)       | 10.4 | 44.3  |
| Yellow Time (s)         | 3.0  | 4.8   |
| All-Red Time (s)        | 3.6  | 1.4   |
| Lost Time Adjust (s)    |      |       |
| Total Lost Time (s)     |      |       |
| Lead/Lag                | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |
| Vehicle Extension (s)   | 1.5  | 2.5   |
| Recall Mode             | None | C-Min |
| 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)     | 10.4 | 44.3  |
| 90th %ile Term Code     | Max  | Coord |
| 70th %ile Green (s)     | 10.4 | 44.3  |
| 70th %ile Term Code     | Max  | Coord |
| 50th %ile Green (s)     | 8.8  | 45.9  |
| 50th %ile Term Code     | Gap  | Coord |
| 30th %ile Green (s)     | 7.1  | 47.6  |
| 30th %ile Term Code     | Gap  | Coord |
| 10th %ile Green (s)     | 0.0  | 61.3  |
| 10th %ile Term Code     | Skip | Coord |
| 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)     |      |       |

Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020

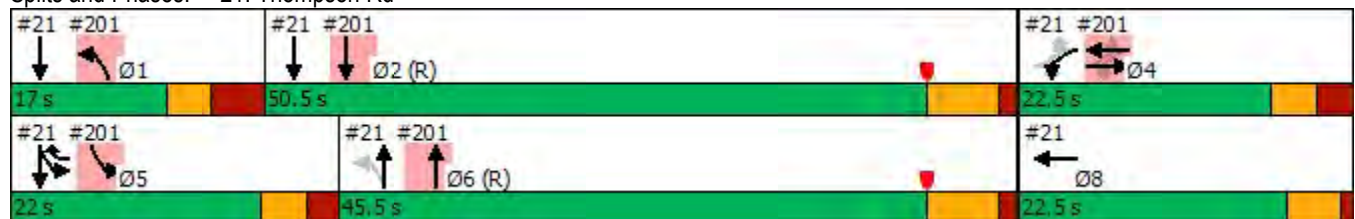


| Lane Group             | EBL  | EBT | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|------|-----|------|-----|------|------|------|------|-----|------|------|-----|
| Starvation Cap Reductn | 0    |     | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 101  |     |
| Spillback Cap Reductn  | 0    |     | 0    |     | 0    | 0    | 0    | 4    |     | 0    | 0    |     |
| Storage Cap Reductn    | 0    |     | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      | 0.06 |     | 0.03 |     | 0.31 | 0.29 | 0.08 | 0.77 |     | 0.75 | 0.74 |     |

Intersection Summary

|   |   |
|---|---|
| Area Type:  | Other   |
| Cycle Length:   | 90  |
| Actuated Cycle Length:  | 90  |
| Offset:   | 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow |
| Natural Cycle:  | 90  |
| Control Type:   | Actuated-Coordinated  |
| Maximum v/c Ratio:  | 0.92  |
| Intersection Signal Delay:  | 14.9  |
| Intersection LOS:   | B   |
| Intersection Capacity Utilization                                 | 79.2%   |
| ICU Level of Service  | D   |
| Analysis Period (min)   | 15  |
| m Volume for 95th percentile queue is metered by upstream signal. |   |

Splits and Phases: 21: Thompson Rd



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| Lane Group             | Ø1 | Ø2 |
|------------------------|----|----|
| Starvation Cap Reductn |    |    |
| Spillback Cap Reductn  |    |    |
| Storage Cap Reductn    |    |    |
| Reduced v/c Ratio      |    |    |
| Intersection Summary   |    |    |

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Lanes, Volumes, Timings

23: Site 4

07/07/2020



| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 50    | 40    | 40    | 1029 | 1502  | 54    |
| Future Volume (vph)        | 50    | 40    | 40    | 1029 | 1502  | 54    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Storage Length (ft)        | 0     | 0     | 100   |      |       | 0     |
| Storage Lanes              | 1     | 1     | 1     |      |       | 0     |
| Taper Length (ft)          | 25    |       | 25    |      |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Frt                        |       | 0.850 |       |      | 0.995 |       |
| Flt Protected              | 0.950 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 1770  | 1863 | 1853  | 0     |
| Flt Permitted              | 0.950 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1770  | 1583  | 1770  | 1863 | 1853  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 274   |       |       | 934  | 476   |       |
| Travel Time (s)            | 6.2   |       |       | 14.2 | 7.2   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 54    | 43    | 43    | 1118 | 1633  | 59    |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 54    | 43    | 43    | 1118 | 1692  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 92.3%        |
| ICU Level of Service              | F            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings

27:

07/07/2020



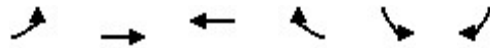
| Lane Group                 | WBL  | WBR   | NBT  | NBR   | SBL  | SBT  |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations        |      | ↗     | ↕    | ↘     |      | ↕    |
| Traffic Volume (vph)       | 0    | 21    | 1109 | 43    | 0    | 1658 |
| Future Volume (vph)        | 0    | 21    | 1109 | 43    | 0    | 1658 |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Storage Length (ft)        | 0    | 0     |      | 150   | 0    |      |
| Storage Lanes              | 0    | 1     |      | 1     | 0    |      |
| Taper Length (ft)          | 25   |       |      |       | 25   |      |
| Lane Util. Factor          | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Frt                        |      | 0.865 |      | 0.850 |      |      |
| Flt Protected              |      |       |      |       |      |      |
| Satd. Flow (prot)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Flt Permitted              |      |       |      |       |      |      |
| Satd. Flow (perm)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Link Speed (mph)           | 30   |       | 45   |       |      | 45   |
| Link Distance (ft)         | 323  |       | 349  |       |      | 1965 |
| Travel Time (s)            | 7.3  |       | 5.3  |       |      | 29.8 |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92 |
| Adj. Flow (vph)            | 0    | 23    | 1205 | 47    | 0    | 1802 |
| Shared Lane Traffic (%)    |      |       |      |       |      |      |
| Lane Group Flow (vph)      | 0    | 23    | 1205 | 47    | 0    | 1802 |
| Enter Blocked Intersection | No   | No    | No   | No    | No   | No   |
| Lane Alignment             | Left | Right | Left | Right | Left | Left |
| Median Width(ft)           | 0    |       | 12   |       |      | 12   |
| Link Offset(ft)            | 0    |       | 0    |       |      | 0    |
| Crosswalk Width(ft)        | 16   |       | 16   |       |      | 16   |
| Two way Left Turn Lane     |      |       |      |       |      |      |
| Headway Factor             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Turning Speed (mph)        | 15   | 9     |      | 9     | 15   |      |
| Sign Control               | Stop |       | Free |       |      | Free |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 90.6%        |
| ICU Level of Service              | E            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
29: Tromley Rd

07/07/2020



| Lane Group                 | EBL   | EBT  | WBT   | WBR   | SBL   | SBR   |
|----------------------------|-------|------|-------|-------|-------|-------|
| Lane Configurations        |       |      |       |       |       |       |
| Traffic Volume (vph)       | 169   | 64   | 233   | 15    | 2     | 30    |
| Future Volume (vph)        | 169   | 64   | 233   | 15    | 2     | 30    |
| Ideal Flow (vphpl)         | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 100   |      |       | 0     | 0     | 0     |
| Storage Lanes              | 1     |      |       | 0     | 1     | 0     |
| Taper Length (ft)          | 25    |      |       |       | 25    |       |
| Lane Util. Factor          | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |       |      | 0.992 |       | 0.873 |       |
| Flt Protected              | 0.950 |      |       |       | 0.997 |       |
| Satd. Flow (prot)          | 1770  | 1863 | 1848  | 0     | 1621  | 0     |
| Flt Permitted              | 0.950 |      |       |       | 0.997 |       |
| Satd. Flow (perm)          | 1770  | 1863 | 1848  | 0     | 1621  | 0     |
| Link Speed (mph)           |       | 35   | 35    |       | 30    |       |
| Link Distance (ft)         |       | 479  | 988   |       | 197   |       |
| Travel Time (s)            |       | 9.3  | 19.2  |       | 4.5   |       |
| Peak Hour Factor           | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 184   | 70   | 253   | 16    | 2     | 33    |
| Shared Lane Traffic (%)    |       |      |       |       |       |       |
| Lane Group Flow (vph)      | 184   | 70   | 269   | 0     | 35    | 0     |
| Enter Blocked Intersection | No    | No   | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left | Left  | Right | Left  | Right |
| Median Width(ft)           |       | 12   | 12    |       | 12    |       |
| Link Offset(ft)            |       | 0    | 0     |       | 0     |       |
| Crosswalk Width(ft)        |       | 16   | 16    |       | 16    |       |
| Two way Left Turn Lane     |       |      |       |       |       |       |
| Headway Factor             | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |      |       | 9     | 15    | 9     |
| Sign Control               |       | Free | Free  |       | Stop  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 35.9%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

# Lanes, Volumes, Timings

32:

07/07/2020



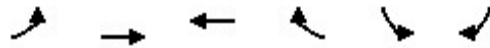
| Lane Group                 | WBL  | WBR   | NBT  | NBR   | SBL  | SBT  |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations        |      | ↗     | ↑    | ↘     |      | ↓    |
| Traffic Volume (vph)       | 0    | 32    | 995  | 50    | 0    | 1513 |
| Future Volume (vph)        | 0    | 32    | 995  | 50    | 0    | 1513 |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Storage Length (ft)        | 0    | 0     |      | 100   | 0    |      |
| Storage Lanes              | 0    | 1     |      | 1     | 0    |      |
| Taper Length (ft)          | 25   |       |      |       | 25   |      |
| Lane Util. Factor          | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Frt                        |      | 0.865 |      | 0.850 |      |      |
| Flt Protected              |      |       |      |       |      |      |
| Satd. Flow (prot)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Flt Permitted              |      |       |      |       |      |      |
| Satd. Flow (perm)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Link Speed (mph)           | 30   |       | 45   |       |      | 45   |
| Link Distance (ft)         | 166  |       | 248  |       |      | 1100 |
| Travel Time (s)            | 3.8  |       | 3.8  |       |      | 16.7 |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92 |
| Adj. Flow (vph)            | 0    | 35    | 1082 | 54    | 0    | 1645 |
| Shared Lane Traffic (%)    |      |       |      |       |      |      |
| Lane Group Flow (vph)      | 0    | 35    | 1082 | 54    | 0    | 1645 |
| Enter Blocked Intersection | No   | No    | No   | No    | No   | No   |
| Lane Alignment             | Left | Right | Left | Right | Left | Left |
| Median Width(ft)           | 0    |       | 8    |       |      | 8    |
| 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   |      |
| Sign Control               | Stop |       | Free |       |      | Free |

## Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 83.0%        |
| ICU Level of Service              | E            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
34: Phelps Rd (CT-191)

07/07/2020



| Lane Group                 | EBL   | EBT  | WBT   | WBR   | SBL   | SBR   |
|----------------------------|-------|------|-------|-------|-------|-------|
| Lane Configurations        |       |      |       |       |       |       |
| Traffic Volume (vph)       | 162   | 272  | 73    | 15    | 2     | 19    |
| Future Volume (vph)        | 162   | 272  | 73    | 15    | 2     | 19    |
| Ideal Flow (vphpl)         | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 100   |      |       | 0     | 0     | 0     |
| Storage Lanes              | 1     |      |       | 0     | 1     | 0     |
| Taper Length (ft)          | 25    |      |       |       | 25    |       |
| Lane Util. Factor          | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |       |      | 0.977 |       | 0.877 |       |
| Flt Protected              | 0.950 |      |       |       | 0.996 |       |
| Satd. Flow (prot)          | 1770  | 1863 | 1820  | 0     | 1627  | 0     |
| Flt Permitted              | 0.950 |      |       |       | 0.996 |       |
| Satd. Flow (perm)          | 1770  | 1863 | 1820  | 0     | 1627  | 0     |
| Link Speed (mph)           |       | 40   | 30    |       | 30    |       |
| Link Distance (ft)         |       | 419  | 959   |       | 137   |       |
| Travel Time (s)            |       | 7.1  | 21.8  |       | 3.1   |       |
| Peak Hour Factor           | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 176   | 296  | 79    | 16    | 2     | 21    |
| Shared Lane Traffic (%)    |       |      |       |       |       |       |
| Lane Group Flow (vph)      | 176   | 296  | 95    | 0     | 23    | 0     |
| Enter Blocked Intersection | No    | No   | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left | Left  | Right | Left  | Right |
| Median Width(ft)           |       | 12   | 12    |       | 12    |       |
| Link Offset(ft)            |       | 0    | 0     |       | 0     |       |
| Crosswalk Width(ft)        |       | 16   | 16    |       | 16    |       |
| Two way Left Turn Lane     |       |      |       |       |       |       |
| Headway Factor             | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |      |       | 9     | 15    | 9     |
| Sign Control               |       | Free | Free  |       | Stop  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 25.6%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings

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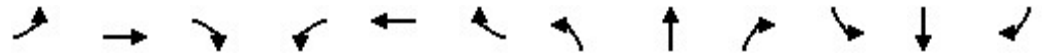
| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT  | SBR   |
|----------------------------|-------|-------|-------|------|------|-------|
| Lane Configurations        |       |       |       |      |      |       |
| Traffic Volume (vph)       | 3     | 4     | 13    | 1261 | 1099 | 10    |
| Future Volume (vph)        | 3     | 4     | 13    | 1261 | 1099 | 10    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Storage Length (ft)        | 0     | 50    | 100   |      |      | 100   |
| Storage Lanes              | 1     | 1     | 1     |      |      | 1     |
| Taper Length (ft)          | 25    |       | 25    |      |      |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Frt                        |       | 0.850 |       |      |      | 0.850 |
| Flt Protected              | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)          | 1770  | 1583  | 1770  | 1863 | 1863 | 1583  |
| Flt Permitted              | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (perm)          | 1770  | 1583  | 1770  | 1863 | 1863 | 1583  |
| Link Speed (mph)           | 30    |       |       | 45   | 45   |       |
| Link Distance (ft)         | 783   |       |       | 1377 | 2673 |       |
| Travel Time (s)            | 17.8  |       |       | 20.9 | 40.5 |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  |
| Adj. Flow (vph)            | 3     | 4     | 14    | 1371 | 1195 | 11    |
| Shared Lane Traffic (%)    |       |       |       |      |      |       |
| Lane Group Flow (vph)      | 3     | 4     | 14    | 1371 | 1195 | 11    |
| Enter Blocked Intersection | No    | No    | No    | No   | No   | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12   |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0    |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16   |       |
| Two way Left Turn Lane     |       |       |       |      |      |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |      | 9     |
| Sign Control               | Stop  |       |       | Free | Free |       |

Intersection Summary

|                                   |                        |
|-----------------------------------|------------------------|
| Area Type:                        | Other                  |
| Control Type:                     | Unsignalized           |
| Intersection Capacity Utilization | 76.4%                  |
|                                   | ICU Level of Service D |
| Analysis Period (min)             | 15                     |

Lanes, Volumes, Timings  
 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↔     |       | ↖     | ↕     |       | ↖     | ↕     |       |
| Traffic Volume (vph)       | 29    | 0     | 124   | 15    | 0     | 18    | 77    | 1035  | 26    | 30    | 1562  | 1     |
| Future Volume (vph)        | 29    | 0     | 124   | 15    | 0     | 18    | 77    | 1035  | 26    | 30    | 1562  | 1     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 100   | 0     |       | 0     | 0     |       | 0     | 700   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.925 |       |       | 0.996 |       |       |       |       |
| Flt Protected              |       | 0.950 |       |       | 0.978 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1719  | 1509  | 0     | 1719  | 0     | 1530  | 3364  | 0     | 1805  | 3406  | 0     |
| Flt Permitted              |       | 0.734 |       |       | 0.887 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 0     | 1328  | 1509  | 0     | 1559  | 0     | 1530  | 3364  | 0     | 1804  | 3406  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 135   |       | 119   |       |       | 3     |       |       |       |       |
| Link Speed (mph)           |       | 30    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 731   |       |       | 393   |       |       | 430   |       |       |       | 1397  |
| Travel Time (s)            |       | 16.6  |       |       | 10.7  |       |       | 6.5   |       |       |       | 21.2  |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 5%    | 0%    | 7%    | 0%    | 0%    | 0%    | 18%   | 7%    | 0%    | 0%    | 6%    | 0%    |
| Adj. Flow (vph)            | 32    | 0     | 135   | 16    | 0     | 20    | 84    | 1125  | 28    | 33    | 1698  | 1     |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 32    | 135   | 0     | 36    | 0     | 84    | 1153  | 0     | 33    | 1699  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Right | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 24    |       |       | 30    |       |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 0     |       | 1     | 2     |       |
| Detector Template          | Left  |       |       | Left  |       |       | Left  |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 29    | 29    | 20    | 29    |       | 34    | 0     |       | 29    | 306   |       |
| Trailing Detector (ft)     | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Position(ft)    | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Size(ft)        | 20    | 34    | 34    | 20    | 34    |       | 34    | 6     |       | 34    | 6     |       |
| 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   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       |       |       |       |       | 300   |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       |       |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       |       |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       |       |       |       |       | 0.0   |

|                            |    |
|----------------------------|----|
| Lane Group                 | Ø8 |
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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)      |    |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    |     | Prot  | NA    |     | Prot  | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       |     |       |       |     |       |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     |       |     | 5     | 2     |     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |     | 11.6  | 21.2  |     | 10.2  | 21.2  |     |
| Total Split (s)         | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |     | 17.0  | 45.5  |     | 22.0  | 50.5  |     |
| Total Split (%)         | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |     | 18.9% | 50.6% |     | 24.4% | 56.1% |     |
| Maximum Green (s)       | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 10.4  | 39.3  |     | 16.8  | 44.3  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 2.6   | 2.6   | 2.6   | 2.6   | 2.6   |     | 3.6   | 1.4   |     | 2.2   | 1.4   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.6   | 5.6   |       | 5.6   |     | 6.6   | 6.2   |     | 5.2   | 6.2   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |     |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |     |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |     |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 16.9  | 16.9  |       | 16.9  |     | 8.3   | 41.1  |     | 15.0  | 48.7  |     |
| Actuated g/C Ratio      |       | 0.19  | 0.19  |       | 0.19  |     | 0.09  | 0.46  |     | 0.17  | 0.54  |     |
| v/c Ratio               |       | 0.13  | 0.34  |       | 0.09  |     | 0.60  | 0.75  |     | 0.11  | 0.92  |     |
| Control Delay           |       | 32.1  | 8.6   |       | 0.5   |     | 56.5  | 12.2  |     | 33.7  | 21.8  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.2   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 32.1  | 8.6   |       | 0.5   |     | 56.5  | 12.4  |     | 33.7  | 21.8  |     |
| LOS                     |       | C     | A     |       | A     |     | E     | B     |     | C     | C     |     |
| Approach Delay          |       | 13.1  |       |       | 0.5   |     |       | 15.4  |     |       | 22.1  |     |
| Approach LOS            |       | B     |       |       | A     |     |       | B     |     |       | C     |     |
| 90th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 10.4  | 39.3  |     | 16.8  | 44.3  |     |
| 90th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 10.4  | 39.3  |     | 16.8  | 44.3  |     |
| 70th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 50th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 8.8   | 39.3  |     | 16.8  | 45.9  |     |
| 50th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Gap   | Coord |     | Max   | Coord |     |
| 30th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 7.1   | 41.9  |     | 14.2  | 47.6  |     |
| 30th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Gap   | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 0.0   | 45.6  |     | 10.5  | 61.3  |     |
| 10th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Skip  | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 25    | 20    |       | 0     |     | 77    | 340   |     | 25    | 1140  |     |
| Fuel Used(gal)          |       | 0     | 1     |       | 0     |     | 2     | 10    |     | 1     | 35    |     |
| CO Emissions (g/hr)     |       | 34    | 72    |       | 8     |     | 144   | 686   |     | 55    | 2468  |     |
| NOx Emissions (g/hr)    |       | 7     | 14    |       | 2     |     | 28    | 134   |     | 11    | 480   |     |
| VOC Emissions (g/hr)    |       | 8     | 17    |       | 2     |     | 33    | 159   |     | 13    | 572   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 80    |     | 0     | 63    |     |
| Queue Length 50th (ft)  |       | 15    | 0     |       | 0     |     | 52    | 90    |     | 15    | 415   |     |
| Queue Length 95th (ft)  |       | 41    | 47    |       | 0     |     | m72   | 128   |     | m18   | m#668 |     |
| Internal Link Dist (ft) |       | 651   |       |       | 313   |     |       | 350   |     |       | 1317  |     |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

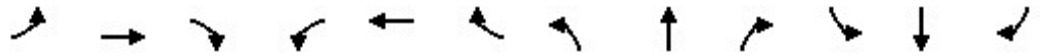
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|                         |      |
|-------------------------|------|
| Lane Group              | Ø8   |
| Turn Type               |      |
| Protected Phases        | 8    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 5.0  |
| Minimum Split (s)       | 22.5 |
| Total Split (s)         | 22.5 |
| Total Split (%)         | 25%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 3.5  |
| All-Red Time (s)        | 1.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                |      |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 11.0 |
| Pedestrian Calls (#/hr) | 0    |
| 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)     | 18.0 |
| 90th %ile Term Code     | Max  |
| 70th %ile Green (s)     | 18.0 |
| 70th %ile Term Code     | Max  |
| 50th %ile Green (s)     | 18.0 |
| 50th %ile Term Code     | Max  |
| 30th %ile Green (s)     | 18.0 |
| 30th %ile Term Code     | Max  |
| 10th %ile Green (s)     | 18.0 |
| 10th %ile Term Code     | Hold |
| 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) |      |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

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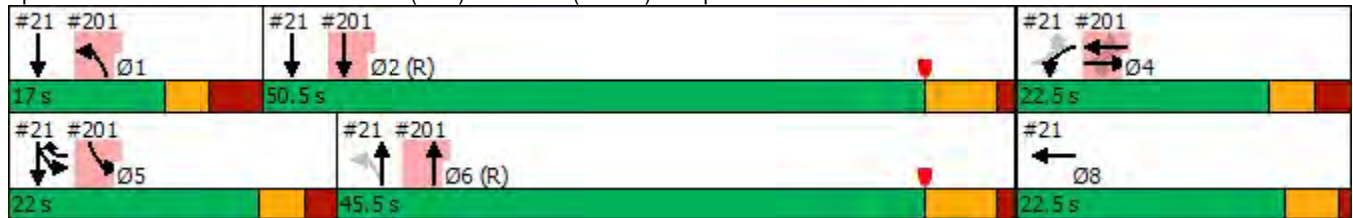


| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|-----|------|------|-----|------|-----|------|------|-----|------|------|-----|
| Turn Bay Length (ft)   |     |      | 100  |     |      |     |      |      |     | 700  |      |     |
| Base Capacity (vph)    |     | 249  | 393  |     | 389  |     | 176  | 1536 |     | 336  | 1842 |     |
| Starvation Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 61   |     | 0    | 0    |     |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      |     | 0.13 | 0.34 |     | 0.09 |     | 0.48 | 0.78 |     | 0.10 | 0.92 |     |

Intersection Summary

|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow   |
| Natural Cycle:                    | 90  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.92  |
| Intersection Signal Delay:        | 18.7  |
| Intersection LOS:                 | B   |
| Intersection Capacity Utilization | 71.4%   |
| ICU Level of Service              | C   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza














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|                        |    |
|------------------------|----|
| Lane Group             | Ø8 |
| Turn Bay Length (ft)   |    |
| Base Capacity (vph)    |    |
| Starvation Cap Reductn |    |
| Spillback Cap Reductn  |    |
| Storage Cap Reductn    |    |
| Reduced v/c Ratio      |    |
| Intersection Summary   |    |

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Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020

|                            |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations        |  |   |  |  |  |  |
| Traffic Volume (vph)       | 49  | 43  | 1002  | 149   | 285   | 1228  |
| Future Volume (vph)        | 49  | 43  | 1002  | 149   | 285   | 1228  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 8   | 10  |
| Storage Length (ft)        | 0   | 0   |   | 250   | 75  |   |
| 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  |
| Ped Bike Factor            |   |   |   |   | 1.00  |   |
| Frt                        | 0.937   |   |   | 0.850   |   |   |
| Flt Protected              | 0.974   |   |   |   | 0.950   |   |
| Satd. Flow (prot)          | 1660  | 0   | 1743  | 1615  | 1564  | 1657  |
| Flt Permitted              | 0.974   |   |   |   | 0.072   |   |
| Satd. Flow (perm)          | 1660  | 0   | 1743  | 1615  | 118   | 1657  |
| Right Turn on Red          |   | Yes   |   | Yes   |   |   |
| Satd. Flow (RTOR)          | 38  |   |   | 133   |   |   |
| Link Speed (mph)           | 30  |   | 45  |   |   | 45  |
| Link Distance (ft)         | 419   |   | 1115  |   |   | 248   |
| Travel Time (s)            | 9.5   |   | 16.9  |   |   | 3.8   |
| Confl. Peds. (#/hr)        |   |   |   |   | 11  |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 4%  | 5%  | 9%  | 0%  | 0%  | 7%  |
| Adj. Flow (vph)            | 53  | 47  | 1089  | 162   | 310   | 1335  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 100   | 0   | 1089  | 162   | 310   | 1335  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Right   | Left  | Right   | Left  | Left  |
| Median Width(ft)           | 24  |   | 0   |   |   | 8   |
| 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  | 1.20  | 1.09  |
| Turning Speed (mph)        | 15  | 9   |   | 9   | 15  |   |
| Number of Detectors        | 1   |   | 0   | 0   | 0   | 0   |
| Detector Template          |   |   |   |   |   |   |
| Leading Detector (ft)      | 25  |   | 0   | 0   | 0   | 0   |
| Trailing Detector (ft)     | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 30  |   | 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   |
| Turn Type                  | Prot  |   | NA  | pm+ov   | D.P+P   | NA  |
| Protected Phases           | 4   |   | 2   | 4   | 1   | 12  |
| Permitted Phases           |   |   |   | 2   | 2   |   |
| Detector Phase             | 4   |   |   |   |   |   |

Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020



| Lane Group              | WBL   | WBR | NBT   | NBR   | SBL   | SBT  |
|-------------------------|-------|-----|-------|-------|-------|------|
| Switch Phase            |       |     |       |       |       |      |
| Minimum Initial (s)     | 5.0   |     | 15.0  | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.4   |     | 22.8  | 9.4   | 9.0   |      |
| Total Split (s)         | 9.4   |     | 63.6  | 9.4   | 17.0  |      |
| Total Split (%)         | 10.4% |     | 70.7% | 10.4% | 18.9% |      |
| Maximum Green (s)       | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| Yellow Time (s)         | 3.0   |     | 4.8   | 3.0   | 3.0   |      |
| All-Red Time (s)        | 1.4   |     | 3.0   | 1.4   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0   |     | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.4   |     | 7.8   | 4.4   | 4.0   |      |
| Lead/Lag                |       |     | Lag   |       | Lead  |      |
| Lead-Lag Optimize?      |       |     |       |       |       |      |
| Vehicle Extension (s)   | 1.5   |     | 3.0   | 1.5   | 3.0   |      |
| Recall Mode             | None  |     | C-Max | None  | Max   |      |
| Act Effect Green (s)    | 5.0   |     | 55.8  | 68.6  | 72.6  | 76.6 |
| Actuated g/C Ratio      | 0.06  |     | 0.62  | 0.76  | 0.81  | 0.85 |
| v/c Ratio               | 0.78  |     | 1.01  | 0.13  | 1.02  | 0.95 |
| Control Delay           | 66.4  |     | 42.5  | 1.5   | 49.8  | 13.7 |
| Queue Delay             | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Delay             | 66.4  |     | 42.5  | 1.5   | 49.8  | 13.7 |
| LOS                     | E     |     | D     | A     | D     | B    |
| Approach Delay          | 66.4  |     | 37.2  |       |       | 20.5 |
| Approach LOS            | E     |     | D     |       |       | C    |
| 90th %ile Green (s)     | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| 90th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 70th %ile Green (s)     | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| 70th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 50th %ile Green (s)     | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| 50th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 30th %ile Green (s)     | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| 30th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 10th %ile Green (s)     | 5.0   |     | 55.8  | 5.0   | 13.0  |      |
| 10th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| Stops (vph)             | 51    |     | 563   | 17    | 210   | 425  |
| Fuel Used(gal)          | 2     |     | 27    | 2     | 6     | 11   |
| CO Emissions (g/hr)     | 128   |     | 1856  | 131   | 417   | 746  |
| NOx Emissions (g/hr)    | 25    |     | 361   | 26    | 81    | 145  |
| VOC Emissions (g/hr)    | 30    |     | 430   | 30    | 97    | 173  |
| Dilemma Vehicles (#)    | 0     |     | 8     | 0     | 0     | 96   |
| Queue Length 50th (ft)  | 35    |     | ~332  | 8     | ~147  | 205  |
| Queue Length 95th (ft)  | #122  |     | #881  | 22    | m131  | m367 |
| Internal Link Dist (ft) | 339   |     | 1035  |       |       | 168  |
| Turn Bay Length (ft)    |       |     |       | 250   | 75    |      |
| Base Capacity (vph)     | 128   |     | 1080  | 1262  | 304   | 1410 |
| 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       | 0.78  |     | 1.01  | 0.13  | 1.02  | 0.95 |

Lanes, Volumes, Timings  
 205: Phelps Rd (CT-191)

07/07/2020

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 70 (78%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 29.0 Intersection LOS: C  
 Intersection Capacity Utilization 87.4% ICU Level of Service E  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings  
209: I-91 Access/Egress/Newberry Rd

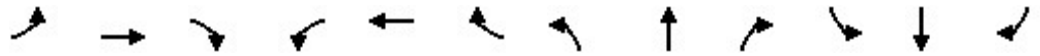
07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        | ↖     | ↖     | ↖↖    |       | ↖↖    |       | ↖↖    | ↖↖    |       | ↖     | ↖↖    | ↖     |
| Traffic Volume (vph)       | 176   | 307   | 1200  | 35    | 352   | 35    | 748   | 281   | 57    | 60    | 358   | 349   |
| Future Volume (vph)        | 176   | 307   | 1200  | 35    | 352   | 35    | 748   | 281   | 57    | 60    | 358   | 349   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 350   |       | 290   | 0     |       | 200   | 400   |       | 0     | 205   |       | 130   |
| Storage Lanes              | 1     |       | 2     | 0     |       | 1     | 2     |       | 0     | 2     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 0.95  | 0.95  | 0.88  | 0.95  | 0.95  | 0.95  | 0.97  | 0.95  | 0.95  | 1.00  | 0.95  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.988 |       |       | 0.975 |       |       |       | 0.850 |
| Flt Protected              | 0.950 | 0.997 |       |       | 0.996 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1603  | 1760  | 2733  | 0     | 3242  | 0     | 3273  | 3262  | 0     | 1703  | 3374  | 1583  |
| Flt Permitted              | 0.950 | 0.997 |       |       | 0.996 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1603  | 1760  | 2733  | 0     | 3242  | 0     | 3273  | 3262  | 0     | 1698  | 3374  | 1583  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 651   |       | 9     |       |       | 27    |       |       |       | 177   |
| Link Speed (mph)           |       | 45    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 734   |       |       | 813   |       |       | 1397  |       |       |       | 571   |
| Travel Time (s)            |       | 11.1  |       |       | 15.8  |       |       | 21.2  |       |       |       | 8.7   |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 2%    | 4%    | 0%    | 10%   | 15%   | 7%    | 7%    | 10%   | 6%    | 7%    | 2%    |
| Adj. Flow (vph)            | 191   | 334   | 1304  | 38    | 383   | 38    | 813   | 305   | 62    | 65    | 389   | 379   |
| Shared Lane Traffic (%)    | 10%   |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 172   | 353   | 1304  | 0     | 459   | 0     | 813   | 367   | 0     | 65    | 389   | 379   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 33    |       |       | 12    |       |       | 32    |       |       |       | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 2     |       | 1     | 2     | 0     |
| Detector Template          |       |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 34    | 29    | 20    | 48    |       | 34    | 326   |       | 39    | 326   | 0     |
| Trailing Detector (ft)     | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Position(ft)    | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Size(ft)        | 34    | 34    | 39    | 20    | 48    |       | 34    | 6     |       | 34    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 320   |       |       | 320   |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       | 0.0   |       |       | 0.0   |       |

Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Turn Type               | Split | NA    | pm+ov | Split | NA    |     | Prot  | NA    |     | Prot  | NA    | pm+ov |
| Protected Phases        | 4     | 4     | 1     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 4     |
| Permitted Phases        |       |       | 4     |       |       |     |       |       |     |       | 2     | 2     |
| Detector Phase          | 4     | 4     | 4     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 9.0   | 9.0   | 5.0   | 9.0   | 9.0   |     | 5.0   | 15.0  |     | 5.0   | 11.0  | 9.0   |
| Minimum Split (s)       | 15.5  | 15.5  | 10.9  | 15.7  | 15.7  |     | 10.9  | 21.0  |     | 10.0  | 21.0  | 15.5  |
| Total Split (s)         | 23.0  | 23.0  | 26.8  | 19.0  | 19.0  |     | 26.8  | 34.0  |     | 14.0  | 21.2  | 23.0  |
| Total Split (%)         | 25.6% | 25.6% | 29.8% | 21.1% | 21.1% |     | 29.8% | 37.8% |     | 15.6% | 23.6% | 25.6% |
| Maximum Green (s)       | 16.5  | 16.5  | 20.9  | 12.3  | 12.3  |     | 20.9  | 28.0  |     | 9.0   | 15.2  | 16.5  |
| Yellow Time (s)         | 3.3   | 3.3   | 3.0   | 4.1   | 4.1   |     | 3.0   | 4.8   |     | 3.0   | 4.8   | 3.3   |
| All-Red Time (s)        | 3.2   | 3.2   | 2.9   | 2.6   | 2.6   |     | 2.9   | 1.2   |     | 2.0   | 1.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.5   | 6.5   | 5.9   |       | 6.7   |     | 5.9   | 6.0   |     | 5.0   | 6.0   | 6.5   |
| Lead/Lag                |       |       | Lead  |       |       |     | Lead  | Lag   |     | Lead  | Lag   |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.5   |     | 2.0   | 2.5   | 3.0   |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min | None  |
| Act Effct Green (s)     | 18.0  | 18.0  | 39.5  |       | 12.3  |     | 20.9  | 30.1  |     | 7.4   | 13.7  | 37.7  |
| Actuated g/C Ratio      | 0.20  | 0.20  | 0.44  |       | 0.14  |     | 0.23  | 0.33  |     | 0.08  | 0.15  | 0.42  |
| v/c Ratio               | 0.54  | 1.01  | 0.83  |       | 1.02  |     | 1.07  | 0.33  |     | 0.46  | 0.76  | 0.50  |
| Control Delay           | 40.1  | 88.6  | 11.7  |       | 87.0  |     | 69.7  | 22.3  |     | 49.7  | 45.4  | 9.8   |
| Queue Delay             | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Delay             | 40.1  | 88.6  | 11.7  |       | 87.0  |     | 69.7  | 22.3  |     | 49.7  | 45.4  | 9.8   |
| LOS                     | D     | F     | B     |       | F     |     | E     | C     |     | D     | D     | A     |
| Approach Delay          |       | 29.2  |       |       | 87.0  |     |       | 54.9  |     |       | 29.6  |       |
| Approach LOS            |       | C     |       |       | F     |     |       | D     |     |       | C     |       |
| 90th %ile Green (s)     | 16.5  | 16.5  | 20.9  | 12.3  | 12.3  |     | 20.9  | 28.0  |     | 9.0   | 15.2  | 16.5  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 70th %ile Green (s)     | 16.5  | 16.5  | 20.9  | 12.3  | 12.3  |     | 20.9  | 28.0  |     | 9.0   | 15.2  | 16.5  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 50th %ile Green (s)     | 16.8  | 16.8  | 20.9  | 12.3  | 12.3  |     | 20.9  | 29.0  |     | 7.7   | 14.9  | 16.8  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Gap   | Coord | Max   |
| 30th %ile Green (s)     | 19.4  | 19.4  | 20.9  | 12.3  | 12.3  |     | 20.9  | 27.8  |     | 6.3   | 12.3  | 19.4  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Gap   | Coord | Max   |
| 10th %ile Green (s)     | 20.7  | 20.7  | 20.9  | 12.3  | 12.3  |     | 20.9  | 37.8  |     | 0.0   | 11.0  | 20.7  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord | Max   |
| Stops (vph)             | 141   | 259   | 543   |       | 357   |     | 668   | 309   |     | 57    | 317   | 156   |
| Fuel Used(gal)          | 4     | 11    | 15    |       | 13    |     | 26    | 8     |     | 2     | 9     | 4     |
| CO Emissions (g/hr)     | 265   | 743   | 1071  |       | 883   |     | 1797  | 590   |     | 108   | 600   | 275   |
| NOx Emissions (g/hr)    | 52    | 145   | 208   |       | 172   |     | 350   | 115   |     | 21    | 117   | 53    |
| VOC Emissions (g/hr)    | 61    | 172   | 248   |       | 205   |     | 416   | 137   |     | 25    | 139   | 64    |
| Dilemma Vehicles (#)    | 0     | 15    | 0     |       | 21    |     | 0     | 1     |     | 0     | 29    | 0     |
| Queue Length 50th (ft)  | 94    | ~237  | 73    |       | ~140  |     | ~279  | 112   |     | 37    | 94    | 53    |
| Queue Length 95th (ft)  | 165   | #416  | 131   |       | #244  |     | #397  | m151  |     | m74   | 145   | 32    |
| Internal Link Dist (ft) |       | 654   |       |       | 733   |     |       | 1317  |     |       | 491   |       |
| Turn Bay Length (ft)    | 350   |       | 290   |       |       |     | 400   |       |     | 205   |       | 130   |
| Base Capacity (vph)     | 320   | 351   | 1564  |       | 450   |     | 760   | 1111  |     | 170   | 569   | 728   |
| Starvation Cap Reductn  | 0     | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 0     |

Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020

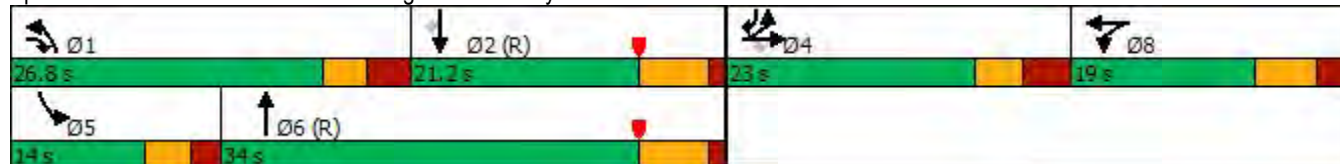


| Lane Group            | EBL  | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|-----------------------|------|------|------|-----|------|-----|------|------|-----|------|------|------|
| Spillback Cap Reductn | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn   | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio     | 0.54 | 1.01 | 0.83 |     | 1.02 |     | 1.07 | 0.33 |     | 0.38 | 0.68 | 0.52 |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 47 (52%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 42.5 Intersection LOS: D  
 Intersection Capacity Utilization 80.2% ICU Level of Service D  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 236   | 370   | 117   | 142   | 898   | 144   | 207   | 243   | 40    | 69    | 276   | 90    |
| Future Volume (vph)        | 236   | 370   | 117   | 142   | 898   | 144   | 207   | 243   | 40    | 69    | 276   | 90    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11    | 11    | 11    | 11    | 11    | 11    | 10    | 11    | 12    | 11    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 260   |       | 475   | 300   |       | 200   | 200   |       | 0     |
| Storage Lanes              | 1     |       | 1     | 1     |       | 1     | 2     |       | 1     | 1     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 0.97  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       |       | 0.99  | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.979 |       |       |       | 0.850 |       | 0.963 |       |
| Flt Protected              | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1558  | 3172  | 1516  | 1504  | 3268  | 0     | 3083  | 1640  | 1442  | 1517  | 1610  | 0     |
| Flt Permitted              | 0.136 |       |       | 0.480 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 223   | 3172  | 1516  | 760   | 3268  | 0     | 3083  | 1640  | 1423  | 1513  | 1610  | 0     |
| Right Turn on Red          |       |       | No    |       |       | No    |       |       | No    |       |       | No    |
| Satd. Flow (RTOR)          |       |       |       |       |       |       |       |       |       |       |       |       |
| Link Speed (mph)           |       | 35    |       |       | 45    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 381   |       |       | 922   |       |       | 908   |       |       | 517   |       |
| Travel Time (s)            |       | 7.4   |       |       | 14.0  |       |       | 13.8  |       |       | 7.8   |       |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 12%   | 10%   | 3%    | 16%   | 4%    | 8%    | 6%    | 12%   | 12%   | 15%   | 8%    | 31%   |
| Adj. Flow (vph)            | 257   | 402   | 127   | 154   | 976   | 157   | 225   | 264   | 43    | 75    | 300   | 98    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 257   | 402   | 127   | 154   | 1133  | 0     | 225   | 264   | 43    | 75    | 398   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 11    |       |       | 11    |       |       | 20    |       |       | 20    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.09  | 1.04  | 1.00  | 1.04  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 12    | 15    |       | 12    |
| Number of Detectors        | 1     | 1     | 0     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |
| Detector Template          |       |       |       |       |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 256   | 0     | 30    | 315   |       | 29    | 29    | 29    | 29    | 29    |       |
| Trailing Detector (ft)     | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Position(ft)    | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Size(ft)        | 34    | 6     | 20    | 35    | 5     |       | 34    | 34    | 34    | 34    | 34    |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Turn Type                  | pm+pt | NA    | pm+ov | pm+pt | NA    |       | Prot  | NA    | pm+ov | Prot  | NA    |       |
| Protected Phases           | 5     | 2     | 3     | 1     | 6     |       | 3     | 8     | 1     | 7     | 4     |       |
| Permitted Phases           | 2     |       | 2     | 6     |       |       |       |       | 8     |       |       |       |
| Detector Phase             | 5     | 2     | 2     | 1     | 6     |       | 3     | 8     | 8     | 7     | 4     |       |

Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase            |       |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 6.0   | 15.0  | 4.0   | 6.0   | 15.0  |     | 4.0   | 9.0   | 6.0   | 4.0   | 5.0   |     |
| Minimum Split (s)       | 11.8  | 20.5  | 8.0   | 12.6  | 20.5  |     | 8.0   | 15.8  | 12.6  | 8.0   | 11.8  |     |
| Total Split (s)         | 16.0  | 33.9  | 11.0  | 17.2  | 35.1  |     | 11.0  | 27.9  | 17.2  | 11.0  | 27.9  |     |
| Total Split (%)         | 17.8% | 37.7% | 12.2% | 19.1% | 39.0% |     | 12.2% | 31.0% | 19.1% | 12.2% | 31.0% |     |
| Maximum Green (s)       | 10.2  | 28.4  | 7.0   | 10.6  | 29.6  |     | 7.0   | 21.1  | 10.6  | 7.0   | 21.1  |     |
| Yellow Time (s)         | 3.0   | 4.5   | 3.0   | 3.0   | 4.5   |     | 3.0   | 4.4   | 3.0   | 3.0   | 4.4   |     |
| All-Red Time (s)        | 2.8   | 1.0   | 1.0   | 3.6   | 1.0   |     | 1.0   | 2.4   | 3.6   | 1.0   | 2.4   |     |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 5.8   | 5.5   | 4.0   | 6.6   | 5.5   |     | 4.0   | 6.8   | 6.6   | 4.0   | 6.8   |     |
| Lead/Lag                | Lead  | Lag   | Lead  | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |       |       |       |     |
| Vehicle Extension (s)   | 1.5   | 4.0   | 1.5   | 1.5   | 4.0   |     | 1.5   | 2.5   | 1.5   | 1.5   | 2.5   |     |
| Recall Mode             | None  | C-Min | None  | None  | C-Min |     | None  | None  | None  | None  | None  |     |
| Act Effct Green (s)     | 40.1  | 30.2  | 42.7  | 37.3  | 29.6  |     | 7.0   | 23.3  | 32.3  | 6.6   | 21.1  |     |
| Actuated g/C Ratio      | 0.45  | 0.34  | 0.47  | 0.41  | 0.33  |     | 0.08  | 0.26  | 0.36  | 0.07  | 0.23  |     |
| v/c Ratio               | 1.03  | 0.38  | 0.18  | 0.40  | 1.05  |     | 0.94  | 0.62  | 0.08  | 0.68  | 1.06  |     |
| Control Delay           | 89.2  | 28.8  | 15.9  | 16.5  | 74.1  |     | 95.7  | 36.0  | 13.9  | 71.7  | 97.3  |     |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 89.2  | 28.8  | 15.9  | 16.5  | 74.1  |     | 95.7  | 36.0  | 13.9  | 71.7  | 97.3  |     |
| LOS                     | F     | C     | B     | B     | E     |     | F     | D     | B     | E     | F     |     |
| Approach Delay          |       | 46.5  |       |       | 67.2  |     |       | 59.5  |       |       | 93.3  |     |
| Approach LOS            |       | D     |       |       | E     |     |       | E     |       |       | F     |     |
| 90th %ile Green (s)     | 10.2  | 28.4  | 7.0   | 10.6  | 29.6  |     | 7.0   | 21.1  | 10.6  | 7.0   | 21.1  |     |
| 90th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 70th %ile Green (s)     | 10.2  | 28.4  | 7.0   | 10.6  | 29.6  |     | 7.0   | 21.1  | 10.6  | 7.0   | 21.1  |     |
| 70th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 50th %ile Green (s)     | 10.2  | 29.9  | 7.0   | 9.1   | 29.6  |     | 7.0   | 21.1  | 9.1   | 7.0   | 21.1  |     |
| 50th %ile Term Code     | Max   | Coord | Max   | Gap   | Coord |     | Max   | Hold  | Gap   | Max   | Max   |     |
| 30th %ile Green (s)     | 10.2  | 31.4  | 7.0   | 7.6   | 29.6  |     | 7.0   | 21.1  | 7.6   | 7.0   | 21.1  |     |
| 30th %ile Term Code     | Max   | Coord | Max   | Gap   | Coord |     | Max   | Hold  | Gap   | Max   | Max   |     |
| 10th %ile Green (s)     | 10.2  | 33.0  | 7.0   | 6.0   | 29.6  |     | 7.0   | 32.1  | 6.0   | 0.0   | 21.1  |     |
| 10th %ile Term Code     | Max   | Coord | Max   | Min   | Coord |     | Max   | Hold  | Min   | Skip  | Max   |     |
| Stops (vph)             | 152   | 313   | 67    | 84    | 899   |     | 182   | 193   | 22    | 62    | 304   |     |
| Fuel Used(gal)          | 6     | 6     | 1     | 2     | 33    |     | 8     | 6     | 1     | 2     | 12    |     |
| CO Emissions (g/hr)     | 425   | 387   | 84    | 166   | 2315  |     | 525   | 392   | 44    | 140   | 857   |     |
| NOx Emissions (g/hr)    | 83    | 75    | 16    | 32    | 451   |     | 102   | 76    | 8     | 27    | 167   |     |
| VOC Emissions (g/hr)    | 99    | 90    | 20    | 38    | 537   |     | 122   | 91    | 10    | 33    | 199   |     |
| Dilemma Vehicles (#)    | 0     | 15    | 0     | 0     | 52    |     | 0     | 22    | 0     | 0     | 17    |     |
| Queue Length 50th (ft)  | ~99   | 109   | 43    | 47    | ~374  |     | 67    | 123   | 9     | 42    | ~250  |     |
| Queue Length 95th (ft)  | #269  | 134   | 80    | 84    | #501  |     | #141  | #248  | 33    | #108  | #426  |     |
| Internal Link Dist (ft) |       | 301   |       |       | 842   |     |       | 828   |       |       | 437   |     |
| Turn Bay Length (ft)    |       |       |       | 260   |       |     | 300   |       | 200   | 200   |       |     |
| Base Capacity (vph)     | 250   | 1064  | 719   | 417   | 1074  |     | 239   | 424   | 512   | 117   | 377   |     |
| Starvation Cap Reductn  | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Reduced v/c Ratio       | 1.03  | 0.38  | 0.18  | 0.37  | 1.05  |     | 0.94  | 0.62  | 0.08  | 0.64  | 1.06  |     |

Lanes, Volumes, Timings  
 210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

Intersection Summary


















|   |  |
|---|--|
| Area Type:  | Other  |
| Cycle Length:   | 90   |
| Actuated Cycle Length:  | 90   |
| Offset:   | 30 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow |
| Natural Cycle:  | 120  |
| Control Type:   | Actuated-Coordinated   |
| Maximum v/c Ratio:  | 1.06   |
| Intersection Signal Delay:  | 64.6   |
| Intersection LOS:   | E  |
| Intersection Capacity Utilization   | 86.6%  |
| ICU Level of Service  | E  |
| Analysis Period (min)   | 15   |
| ~ Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |  |
| # 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |  |

Splits and Phases: 210: N Rd. (CT-140)/N Rd. (CT140)



Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

07/07/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |   |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 0   | 0   | 3   | 346   | 0   | 14  | 0  | 1260  | 44  | 28  | 1072  | 3   |
| Future Volume (vph)        | 0   | 0   | 3   | 346   | 0   | 14  | 0  | 1260  | 44  | 28  | 1072  | 3   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Fr <sub>t</sub>            |   |   | 0.865   |   | 0.995   |   |  | 0.995   |   |   |   |   |
| Fl <sub>t</sub> Protected  |   |   |   |   | 0.954   |   |  |   |   |   | 0.999   |   |
| Satd. Flow (prot)          | 0   | 0   | 1096  | 0   | 1779  | 0   | 0  | 3334  | 0   | 0   | 3338  | 0   |
| Fl <sub>t</sub> Permitted  |   |   |   |   | 0.954   |   |  |   |   |   | 0.877   |   |
| Satd. Flow (perm)          | 0   | 0   | 1096  | 0   | 1779  | 0   | 0  | 3334  | 0   | 0   | 2930  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 80  |   | 33  |   |  | 7   |   |   |   |   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |  | 50  |   |   | 45  |   |
| Link Distance (ft)         |   | 417   |   |   | 1615  |   |  | 1146  |   |   | 576   |   |
| Travel Time (s)            |   | 9.5   |   |   | 36.7  |   |  | 15.6  |   |   | 8.7   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Growth Factor              | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 50%  | 100%  | 100%  | 100%  | 100%  | 100%  |
| Heavy Vehicles (%)         | 0%  | 0%  | 50%   | 1%  | 0%  | 11%   | 14%  | 8%  | 0%  | 6%  | 8%  | 50%   |
| Adj. Flow (vph)            | 0   | 0   | 3   | 376   | 0   | 15  | 0  | 1370  | 48  | 30  | 1165  | 3   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 0   | 3   | 0   | 391   | 0   | 0  | 1418  | 0   | 0   | 1198  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |  | 26  |   |   | 26  |   |
| 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   | 15  |   | 9   |
| Number of Detectors        |   |   | 0   | 1   | 1   |   |  | 0   |   | 1   | 0   |   |
| Detector Template          |   |   |   | Left  |   |   |  |   |   | Left  |   |   |
| Leading Detector (ft)      |   |   | 0   | 20  | 25  |   |  | 0   |   | 20  | 0   |   |
| Trailing Detector (ft)     |   |   | 0   | 0   | 0   |   |  | 0   |   | 0   | 0   |   |
| Detector 1 Position(ft)    |   |   | 0   | 0   | 0   |   |  | 0   |   | 0   | 0   |   |
| Detector 1 Size(ft)        |   |   | 20  | 20  | 25  |   |  | 0   |   | 20  | 0   |   |
| Detector 1 Type            |   |   | Extend  | 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   |   |
| Detector 1 Queue (s)       |   |   | 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   |   |
| Turn Type                  |   |   | Perm  | Perm  | NA  |   |  | NA  |   | Perm  | NA  |   |
| Protected Phases           |   |   |   |   | 4   |   |  | 2   |   |   | 2   |   |
| Permitted Phases           |   |   | 4   | 4   |   |   |  |   |   | 2   |   |   |
| Detector Phase             |   |   | 4   | 4   | 4   |   |  |   |   |   |   |   |
| Switch Phase               |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)        |   |   | 9.0   | 9.0   | 9.0   |   |  | 15.0  |   | 15.0  | 15.0  |   |
| Minimum Split (s)          |   |   | 13.0  | 13.0  | 13.0  |   |  | 20.7  |   | 20.7  | 20.7  |   |
| Total Split (s)            |   |   | 31.0  | 31.0  | 31.0  |   |  | 59.0  |   | 59.0  | 59.0  |   |
| Total Split (%)            |   |   | 34.4%   | 34.4%   | 34.4%   |   |  | 65.6%   |   | 65.6%   | 65.6%   |   |

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| Lane Group              | EBL | EBT | EBR  | WBL  | WBT  | WBR | NBL | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-----|-----|------|------|------|-----|-----|-------|-----|-------|-------|-----|
| Maximum Green (s)       |     |     | 27.0 | 27.0 | 27.0 |     |     | 53.3  |     | 53.3  | 53.3  |     |
| Yellow Time (s)         |     |     | 3.0  | 3.0  | 3.0  |     |     | 4.7   |     | 4.7   | 4.7   |     |
| 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   |     |
| Total Lost Time (s)     |     |     | 4.0  |      | 4.0  |     |     | 5.7   |     |       | 5.7   |     |
| Lead/Lag                |     |     |      |      |      |     |     |       |     |       |       |     |
| Lead-Lag Optimize?      |     |     |      |      |      |     |     |       |     |       |       |     |
| Vehicle Extension (s)   |     |     | 3.0  | 3.0  | 3.0  |     |     | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             |     |     | None | None | None |     |     | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |     |     | 22.6 |      | 22.6 |     |     | 57.7  |     |       | 57.7  |     |
| Actuated g/C Ratio      |     |     | 0.25 |      | 0.25 |     |     | 0.64  |     |       | 0.64  |     |
| v/c Ratio               |     |     | 0.01 |      | 0.83 |     |     | 0.66  |     |       | 0.64  |     |
| Control Delay           |     |     | 0.0  |      | 44.2 |     |     | 12.7  |     |       | 9.3   |     |
| Queue Delay             |     |     | 0.0  |      | 0.0  |     |     | 0.0   |     |       | 0.0   |     |
| Total Delay             |     |     | 0.0  |      | 44.2 |     |     | 12.7  |     |       | 9.3   |     |
| LOS                     |     |     | A    |      | D    |     |     | B     |     |       | A     |     |
| Approach Delay          |     |     |      |      | 44.3 |     |     | 12.7  |     |       | 9.3   |     |
| Approach LOS            |     |     |      |      | D    |     |     | B     |     |       | A     |     |
| 90th %ile Green (s)     |     |     | 27.0 | 27.0 | 27.0 |     |     | 53.3  |     | 53.3  | 53.3  |     |
| 90th %ile Term Code     |     |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     |     |     | 26.6 | 26.6 | 26.6 |     |     | 53.7  |     | 53.7  | 53.7  |     |
| 70th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     |     |     | 23.6 | 23.6 | 23.6 |     |     | 56.7  |     | 56.7  | 56.7  |     |
| 50th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     |     |     | 20.3 | 20.3 | 20.3 |     |     | 60.0  |     | 60.0  | 60.0  |     |
| 30th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     |     |     | 15.5 | 15.5 | 15.5 |     |     | 64.8  |     | 64.8  | 64.8  |     |
| 10th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| Stops (vph)             |     |     | 0    |      | 306  |     |     | 786   |     |       | 453   |     |
| Fuel Used(gal)          |     |     | 0    |      | 9    |     |     | 25    |     |       | 22    |     |
| CO Emissions (g/hr)     |     |     | 1    |      | 662  |     |     | 1743  |     |       | 1516  |     |
| NOx Emissions (g/hr)    |     |     | 0    |      | 129  |     |     | 339   |     |       | 295   |     |
| VOC Emissions (g/hr)    |     |     | 0    |      | 153  |     |     | 404   |     |       | 351   |     |
| Dilemma Vehicles (#)    |     |     | 0    |      | 0    |     |     | 73    |     |       | 47    |     |
| Queue Length 50th (ft)  |     |     | 0    |      | 191  |     |     | 245   |     |       | 121   |     |
| Queue Length 95th (ft)  |     |     | 0    |      | 284  |     |     | 355   |     |       | 233   |     |
| Internal Link Dist (ft) |     | 337 |      |      | 1535 |     |     | 1066  |     |       | 496   |     |
| Turn Bay Length (ft)    |     |     |      |      |      |     |     |       |     |       |       |     |
| Base Capacity (vph)     |     |     | 384  |      | 556  |     |     | 2140  |     |       | 1878  |     |
| Starvation Cap Reductn  |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Storage Cap Reductn     |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |     |     | 0.01 |      | 0.70 |     |     | 0.66  |     |       | 0.64  |     |

Intersection Summary

|                        |   |
|------------------------|---|
| Area Type:             | Other   |
| Cycle Length:          | 90  |
| Actuated Cycle Length: | 90  |
| Offset:                | 33 (37%), Referenced to phase 2:NBSB, Start of Yellow |

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|   |                        |
|---|------------------------|
| Natural Cycle: 50                       |                        |
| Control Type: Actuated-Coordinated      |                        |
| Maximum v/c Ratio: 0.83                 |                        |
| Intersection Signal Delay: 15.4         | Intersection LOS: B    |
| Intersection Capacity Utilization 78.0% | ICU Level of Service D |
| Analysis Period (min) 15                |                        |

Splits and Phases: 211: Crow Park Rd / Scantic Rd



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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↖     | ↗     | ↖     | ↗     |       | ↖     | ↗     |       |
| Traffic Volume (vph)       | 25    | 13    | 14    | 22    | 53    | 188   | 17    | 939   | 58    | 162   | 1466  | 30    |
| Future Volume (vph)        | 25    | 13    | 14    | 22    | 53    | 188   | 17    | 939   | 58    | 162   | 1466  | 30    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 80    | 0     |       | 30    | 120   |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 1.00  | 0.97  |       | 1.00  |       |       |       |       |       |       |       |
| Frt                        |       |       | 0.850 |       |       | 0.850 |       | 0.991 |       |       | 0.997 |       |
| Flt Protected              |       | 0.968 |       |       | 0.986 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1758  | 1313  | 0     | 1873  | 1400  | 1703  | 1713  | 0     | 1687  | 1803  | 0     |
| Flt Permitted              |       | 0.752 |       |       | 0.887 |       | 0.083 |       |       | 0.076 |       |       |
| Satd. Flow (perm)          | 0     | 1361  | 1279  | 0     | 1683  | 1400  | 149   | 1713  | 0     | 135   | 1803  | 0     |
| Right Turn on Red          |       |       | No    |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       |       |       |       | 204   |       | 4     |       |       |       | 1     |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 551   |       |       | 479   |       |       | 2227  |       |       |       | 349   |
| Travel Time (s)            |       | 15.0  |       |       | 9.3   |       |       | 33.7  |       |       |       | 5.3   |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 0%    | 23%   | 0%    | 0%    | 0%    | 6%    | 9%    | 25%   | 7%    | 5%    | 7%    |
| Adj. Flow (vph)            | 27    | 14    | 15    | 24    | 58    | 204   | 18    | 1021  | 63    | 176   | 1593  | 33    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 41    | 15    | 0     | 82    | 204   | 18    | 1084  | 0     | 176   | 1626  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 12    |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3     |       | 1     |       | 3     |
| Detector Template          | Left  |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 20    | 15    | 20    | 25    | 20    | 33    | 326   |       | 33    |       | 326   |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    |       | 0     |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    |       | 0     |
| Detector 1 Size(ft)        | 20    | 20    | 15    | 20    | 25    | 20    | 38    | 6     |       | 38    |       | 6     |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex |       | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 2.0   | 8.0   | 0.0   | 8.0   | 8.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 144   |       |       |       | 94    |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

|                            |    |
|----------------------------|----|
| Lane Group                 | Ø3 |
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Lane Width (ft)            |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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         |    |

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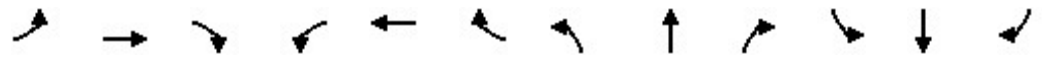


| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Detector 3 Position(ft) |       |       |       |       |       |       |       | 320   |     |       | 320   |     |
| Detector 3 Size(ft)     |       |       |       |       |       |       |       | 6     |     |       | 6     |     |
| Detector 3 Type         |       |       |       |       |       |       |       | Cl+Ex |     |       | Cl+Ex |     |
| Detector 3 Channel      |       |       |       |       |       |       |       |       |     |       |       |     |
| Detector 3 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    |     | pm+pt | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     |     | 1     | 6     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |       |     | 6     |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |       |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 4.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 8.0   | 22.8  |     | 9.0   | 22.8  |     |
| Total Split (s)         | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 8.0   | 48.0  |     | 8.0   | 48.0  |     |
| Total Split (%)         | 13.3% | 13.3% | 13.3% | 13.3% | 13.3% | 13.3% | 8.9%  | 53.3% |     | 8.9%  | 53.3% |     |
| Maximum Green (s)       | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 5.0   | 40.2  |     | 4.0   | 40.2  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.0   | 3.0   |     | 1.0   | 3.0   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.5   | 4.5   |       | 4.5   | 4.5   | 3.0   | 7.8   |     | 4.0   | 7.8   |     |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |       |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 7.0   | 7.0   |       | 7.0   | 7.0   | 60.8  | 51.6  |     | 70.1  | 63.6  |     |
| Actuated g/C Ratio      |       | 0.08  | 0.08  |       | 0.08  | 0.08  | 0.68  | 0.57  |     | 0.78  | 0.71  |     |
| v/c Ratio               |       | 0.39  | 0.15  |       | 0.63  | 0.69  | 0.10  | 1.10  |     | 0.60  | 1.28  |     |
| Control Delay           |       | 50.3  | 42.1  |       | 61.8  | 19.1  | 1.7   | 63.0  |     | 22.9  | 139.5 |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 50.3  | 42.1  |       | 61.8  | 19.1  | 1.7   | 63.0  |     | 22.9  | 139.5 |     |
| LOS                     |       | D     | D     |       | E     | B     | A     | E     |     | C     | F     |     |
| Approach Delay          |       | 48.1  |       |       | 31.4  |       |       | 62.0  |     |       | 128.1 |     |
| Approach LOS            |       | D     |       |       | C     |       |       | E     |     |       | F     |     |
| 90th %ile Green (s)     | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 5.2   | 40.2  |     | 6.0   | 42.0  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 4.3   | 53.8  |     | 12.4  | 62.9  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Gap   | Coord |     |
| 50th %ile Green (s)     | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 7.5   | 0.0   | 54.5  |     | 11.7  | 70.2  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 30th %ile Green (s)     | 7.4   | 7.4   | 7.4   | 7.4   | 7.4   | 7.4   | 0.0   | 54.8  |     | 11.5  | 70.3  |     |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 5.1   | 0.0   | 54.9  |     | 13.7  | 72.6  |     |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 37    | 15    |       | 69    | 29    | 2     | 589   |     | 111   | 760   |     |
| Fuel Used(gal)          |       | 1     | 0     |       | 2     | 2     | 0     | 42    |     | 3     | 55    |     |
| CO Emissions (g/hr)     |       | 50    | 17    |       | 120   | 112   | 28    | 2911  |     | 175   | 3867  |     |

|                         |      |
|-------------------------|------|
| Lane Group              | Ø3   |
| Detector 2 Extend (s)   |      |
| Detector 3 Position(ft) |      |
| Detector 3 Size(ft)     |      |
| Detector 3 Type         |      |
| Detector 3 Channel      |      |
| Detector 3 Extend (s)   |      |
| Turn Type               |      |
| Protected Phases        | 3    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 7.0  |
| Minimum Split (s)       | 22.0 |
| Total Split (s)         | 22.0 |
| Total Split (%)         | 24%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 4.0  |
| All-Red Time (s)        | 0.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                | Lag  |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 9.0  |
| Pedestrian Calls (#/hr) | 10   |
| 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)     | 16.0 |
| 90th %ile Term Code     | Ped  |
| 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)     |      |

Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020

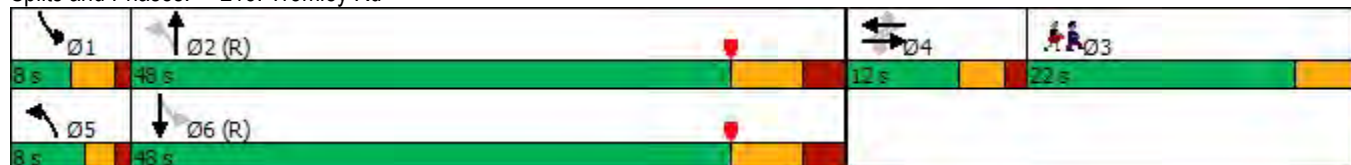


| Lane Group              | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT   | NBR | SBL  | SBT    | SBR |
|-------------------------|-----|------|------|-----|------|------|------|-------|-----|------|--------|-----|
| NOx Emissions (g/hr)    |     | 10   | 3    |     | 23   | 22   | 5    | 566   |     | 34   | 752    |     |
| VOC Emissions (g/hr)    |     | 11   | 4    |     | 28   | 26   | 6    | 675   |     | 41   | 896    |     |
| Dilemma Vehicles (#)    |     | 0    | 0    |     | 4    | 0    | 0    | 4     |     | 0    | 8      |     |
| Queue Length 50th (ft)  |     | 22   | 8    |     | 46   | 0    | 1    | ~681  |     | 34   | ~1152  |     |
| Queue Length 95th (ft)  |     | 56   | 28   |     | #105 | #82  | m1   | m#857 |     | m35  | m#1103 |     |
| Internal Link Dist (ft) |     | 471  |      |     | 399  |      |      | 2147  |     |      | 269    |     |
| Turn Bay Length (ft)    |     |      | 80   |     |      | 30   | 120  |       |     | 200  |        |     |
| Base Capacity (vph)     |     | 113  | 106  |     | 140  | 303  | 188  | 984   |     | 295  | 1274   |     |
| Starvation Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0      |     |
| Spillback Cap Reductn   |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0      |     |
| Storage Cap Reductn     |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0      |     |
| Reduced v/c Ratio       |     | 0.36 | 0.14 |     | 0.59 | 0.67 | 0.10 | 1.10  |     | 0.60 | 1.28   |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 36 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.28  
 Intersection Signal Delay: 95.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 106.6%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 213: Tromley Rd



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|                         |    |
|-------------------------|----|
| Lane Group              | Ø3 |
| 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)     |    |
| Starvation Cap Reductn  |    |
| Spillback Cap Reductn   |    |
| Storage Cap Reductn     |    |
| Reduced v/c Ratio       |    |
| Intersection Summary    |    |

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Lanes, Volumes, Timings  
214: DD/Abbe Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     | ↗     |       | ↔     |       | ↖     | ↗     |       |       | ↕     | ↗     |
| Traffic Volume (vph)       | 64    | 6     | 79    | 12    | 10    | 7     | 49    | 1211  | 4     | 7     | 1018  | 102   |
| Future Volume (vph)        | 64    | 6     | 79    | 12    | 10    | 7     | 49    | 1211  | 4     | 7     | 1018  | 102   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 8     | 12    | 12    | 12    | 8     | 12    | 12    | 8     | 12    | 8     |
| Storage Length (ft)        | 0     |       | 30    | 0     |       | 0     | 50    |       | 0     | 0     |       | 50    |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 0     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Fr <sub>t</sub>            |       |       | 0.850 |       | 0.966 |       |       |       |       |       |       | 0.850 |
| Fl <sub>t</sub> Protected  |       | 0.957 |       |       | 0.980 |       | 0.950 |       |       |       |       |       |
| Satd. Flow (prot)          | 0     | 1667  | 1386  | 0     | 1725  | 0     | 1384  | 1776  | 0     | 0     | 1754  | 1386  |
| Fl <sub>t</sub> Permitted  |       | 0.722 |       |       | 0.834 |       | 0.187 |       |       |       | 0.990 |       |
| Satd. Flow (perm)          | 0     | 1257  | 1386  | 0     | 1468  | 0     | 273   | 1776  | 0     | 0     | 1737  | 1386  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 86    |       | 8     |       |       | 1     |       |       |       | 60    |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 801   |       |       | 1499  |       |       | 2673  |       |       |       | 1892  |
| Travel Time (s)            |       | 21.8  |       |       | 29.2  |       |       | 40.5  |       |       |       | 28.7  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 10%   | 0%    | 1%    | 0%    | 0%    | 17%   | 13%   | 7%    | 0%    | 50%   | 8%    | 1%    |
| Adj. Flow (vph)            | 70    | 7     | 86    | 13    | 11    | 8     | 53    | 1316  | 4     | 8     | 1107  | 111   |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 77    | 86    | 0     | 32    | 0     | 53    | 1320  | 0     | 0     | 1115  | 111   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 10    |       |       | 0     |       |       | 8     |       |       |       | 8     |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.20  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 0     | 0     |       | 0     | 0     | 1     |
| Detector Template          | Left  |       | Right | Left  |       |       |       |       |       |       |       | Right |
| Leading Detector (ft)      | 20    | 20    | 20    | 20    | 29    |       | 0     | 0     |       | 0     | 0     | 20    |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | -5    |       | 0     | 0     |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | -5    |       | 0     | 0     |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        | 20    | 20    | 20    | 20    | 34    |       | 20    | 6     |       | 20    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Turn Type                  | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       | Perm  | NA    | Perm  |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       |       | 2     |
| Permitted Phases           | 4     |       | 4     | 4     |       |       | 2     |       |       | 2     |       | 2     |
| Detector Phase             | 4     | 4     | 4     | 4     | 4     |       |       |       |       |       |       | 2     |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |       | 15.0  | 15.0  |       | 15.0  | 15.0  | 15.0  |

Lanes, Volumes, Timings  
214: DD/Abbe Rd

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Minimum Split (s)       | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |     | 22.0  | 22.0  |     | 22.0  | 22.0  | 22.0  |
| Total Split (s)         | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 79.0  | 79.0  |     | 79.0  | 79.0  | 79.0  |
| Total Split (%)         | 12.2% | 12.2% | 12.2% | 12.2% | 12.2% |     | 87.8% | 87.8% |     | 87.8% | 87.8% | 87.8% |
| Maximum Green (s)       | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   |     | 72.0  | 72.0  |     | 72.0  | 72.0  | 72.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 4.8   | 4.8   |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.3   | 1.3   | 1.3   | 1.3   | 1.3   |     | 2.2   | 2.2   |     | 2.2   | 2.2   | 2.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.3   | 4.3   |       | 4.3   |     | 7.0   | 7.0   |     |       | 7.0   | 7.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lag   | Lag   |     | Lead  | Lead  |     | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 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 | C-Max |
| Act Effct Green (s)     |       | 6.6   | 6.6   |       | 6.6   |     | 72.1  | 72.1  |     | 72.1  | 72.1  | 72.1  |
| Actuated g/C Ratio      |       | 0.07  | 0.07  |       | 0.07  |     | 0.80  | 0.80  |     | 0.80  | 0.80  | 0.80  |
| v/c Ratio               |       | 0.84  | 0.48  |       | 0.28  |     | 0.24  | 0.93  |     | 0.80  | 0.10  | 0.10  |
| Control Delay           |       | 101.6 | 18.7  |       | 38.6  |     | 4.8   | 27.5  |     | 11.1  | 1.5   | 1.5   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Delay             |       | 101.6 | 18.7  |       | 38.6  |     | 4.8   | 27.5  |     | 11.1  | 1.5   | 1.5   |
| LOS                     |       | F     | B     |       | D     |     | A     | C     |     | B     | A     | A     |
| Approach Delay          |       | 57.8  |       |       | 38.6  |     |       | 26.6  |     | 10.2  |       |       |
| Approach LOS            |       | E     |       |       | D     |     |       | C     |     | B     |       |       |
| 90th %ile Green (s)     | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   |     | 72.0  | 72.0  |     | 72.0  | 72.0  | 72.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   |     | 72.0  | 72.0  |     | 72.0  | 72.0  | 72.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   |     | 72.0  | 72.0  |     | 72.0  | 72.0  | 72.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 6.7   | 6.7   | 6.7   | 6.7   | 6.7   |     | 72.0  | 72.0  |     | 72.0  | 72.0  | 72.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 6.3   | 6.3   | 6.3   | 6.3   | 6.3   |     | 72.4  | 72.4  |     | 72.4  | 72.4  | 72.4  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Coord | Coord |     | Coord | Coord | Coord |
| Stops (vph)             |       | 58    | 19    |       | 24    |     | 11    | 671   |     | 645   | 14    | 14    |
| Fuel Used(gal)          |       | 2     | 1     |       | 1     |     | 1     | 36    |     | 23    | 1     | 1     |
| CO Emissions (g/hr)     |       | 152   | 64    |       | 50    |     | 72    | 2531  |     | 1603  | 102   | 102   |
| NOx Emissions (g/hr)    |       | 30    | 12    |       | 10    |     | 14    | 492   |     | 312   | 20    | 20    |
| VOC Emissions (g/hr)    |       | 35    | 15    |       | 12    |     | 17    | 587   |     | 372   | 24    | 24    |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 2     |     | 0     | 78    |     | 67    | 0     | 0     |
| Queue Length 50th (ft)  |       | 44    | 0     |       | 13    |     | 5     | 513   |     | 438   | 7     | 7     |
| Queue Length 95th (ft)  |       | #125  | 44    |       | 42    |     | m13   | #600  |     | m593  | m10   | m10   |
| Internal Link Dist (ft) |       | 721   |       |       | 1419  |     |       | 2593  |     | 1812  |       |       |
| Turn Bay Length (ft)    |       |       | 30    |       |       |     | 50    |       |     |       |       | 50    |
| Base Capacity (vph)     |       | 93    | 182   |       | 116   |     | 218   | 1422  |     | 1391  | 1121  | 1121  |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 0     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 0     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 0     |
| Reduced v/c Ratio       |       | 0.83  | 0.47  |       | 0.28  |     | 0.24  | 0.93  |     | 0.80  | 0.10  | 0.10  |

Intersection Summary

Area Type: Other

# Lanes, Volumes, Timings

## 214: DD/Abbe Rd

07/07/2020

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 21.4

Intersection LOS: C

Intersection Capacity Utilization 95.9%

ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.




















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

Splits and Phases: 214: DD/Abbe Rd



Lanes, Volumes, Timings  
215: S Water St

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)       | 30  | 5   | 136   | 5   | 5   | 6   | 96  | 1037  | 2   | 5   | 1519  | 18  |
| Future Volume (vph)        | 30  | 5   | 136   | 5   | 5   | 6   | 96  | 1037  | 2   | 5   | 1519  | 18  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 300   | 0   |   | 0   | 150   |   | 0   | 320   |   | 0   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 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   |   | 0.944   |   |   |   |   |   |   | 0.998   |
| Flt Protected              |   | 0.958   |   |   | 0.986   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 0   | 1820  | 1599  | 0   | 1768  | 0   | 1719  | 1759  | 0   | 1805  | 1774  | 0   |
| Flt Permitted              |   | 0.747   |   |   | 0.887   |   | 0.059   |   |   | 0.154   |   |   |
| Satd. Flow (perm)          | 0   | 1419  | 1599  | 0   | 1591  | 0   | 107   | 1759  | 0   | 293   | 1774  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 123   |   | 7   |   |   |   |   |   |   | 2   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |   | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 1143  |   |   | 286   |   |   | 1965  |   |   | 934   |   |
| Travel Time (s)            |   | 26.0  |   |   | 6.5   |   |   | 29.8  |   |   | 14.2  |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 1%  | 0%  | 0%  | 0%  | 5%  | 8%  | 0%  | 0%  | 7%  | 0%  |
| Adj. Flow (vph)            | 33  | 5   | 148   | 5   | 5   | 7   | 104   | 1127  | 2   | 5   | 1651  | 20  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 38  | 148   | 0   | 17  | 0   | 104   | 1129  | 0   | 5   | 1671  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |   | 12  |   |   | 12  |   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   | 0   |   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   | 16  |   |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   |   | 1   | 0   |   | 1   | 0   |   |
| Detector Template          | Left  |   | Right   | Left  |   |   |   |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 45  | 20  | 20  | 45  |   | 15  | 0   |   | 15  | 0   |   |
| Trailing Detector (ft)     | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Position(ft)    | 0   | -5  | 0   | 0   | -5  |   | -5  | 0   |   | -5  | 0   |   |
| Detector 1 Size(ft)        | 20  | 50  | 20  | 20  | 50  |   | 20  | 6   |   | 20  | 6   |   |
| 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   |   |
| Turn Type                  | Perm  | NA  | Perm  | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases           |   | 4   |   |   | 4   |   | 1   | 6   |   | 5   | 2   |   |
| Permitted Phases           | 4   |   | 4   | 4   |   |   | 6   |   |   | 2   |   |   |
| Detector Phase             | 4   | 4   | 4   | 4   | 4   |   | 1   |   |   | 5   |   |   |
| Switch Phase               |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   | 5.0   | 15.0  |   | 5.0   | 15.0  |   |
| Minimum Split (s)          | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |   | 9.0   | 22.3  |   | 9.0   | 22.3  |   |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |     | 9.0   | 70.9  |     | 9.0   | 70.9  |     |
| Total Split (%)         | 11.2% | 11.2% | 11.2% | 11.2% | 11.2% |     | 10.0% | 78.8% |     | 10.0% | 78.8% |     |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 5.0   | 63.6  |     | 5.0   | 63.6  |     |
| Yellow Time (s)         | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |     | 1.0   | 2.5   |     | 1.0   | 2.5   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.1   | 5.1   |       | 5.1   |     | 4.0   | 7.3   |     | 4.0   | 7.3   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 3.0   |     | 1.5   | 3.0   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Max |     | None  | C-Max |     |
| Act Effct Green (s)     |       | 5.0   | 5.0   |       | 5.0   |     | 75.1  | 70.8  |     | 72.7  | 65.4  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  |     | 0.83  | 0.79  |     | 0.81  | 0.73  |     |
| v/c Ratio               |       | 0.49  | 0.72  |       | 0.18  |     | 0.58  | 0.82  |     | 0.02  | 1.30  |     |
| Control Delay           |       | 62.9  | 32.9  |       | 35.3  |     | 24.4  | 5.7   |     | 2.2   | 161.4 |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 62.9  | 32.9  |       | 35.3  |     | 24.4  | 5.7   |     | 2.2   | 161.4 |     |
| LOS                     |       | E     | C     |       | D     |     | C     | A     |     | A     | F     |     |
| Approach Delay          |       | 39.0  |       |       | 35.3  |     |       | 7.3   |     |       | 161.0 |     |
| Approach LOS            |       | D     |       |       | D     |     |       | A     |     |       | F     |     |
| 90th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 5.0   | 63.6  |     | 5.0   | 63.6  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 5.0   | 72.6  |     | 0.0   | 63.6  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 5.0   | 72.6  |     | 0.0   | 63.6  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 5.0   | 72.6  |     | 0.0   | 63.6  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 0.0   | 72.6  |     | 0.0   | 72.6  |     |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             |       | 33    | 33    |       | 13    |     | 84    | 137   |     | 2     | 1099  |     |
| Fuel Used(gal)          |       | 1     | 2     |       | 0     |     | 3     | 16    |     | 0     | 74    |     |
| CO Emissions (g/hr)     |       | 66    | 161   |       | 16    |     | 192   | 1130  |     | 4     | 5138  |     |
| NOx Emissions (g/hr)    |       | 13    | 31    |       | 3     |     | 37    | 220   |     | 1     | 1000  |     |
| VOC Emissions (g/hr)    |       | 15    | 37    |       | 4     |     | 44    | 262   |     | 1     | 1191  |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 15    |     | 0     | 118   |     |
| Queue Length 50th (ft)  |       | 21    | 14    |       | 6     |     | 16    | 19    |     | 1     | ~1224 |     |
| Queue Length 95th (ft)  |       | #63   | #103  |       | 27    |     | m25   | m90   |     | m1    | #1488 |     |
| Internal Link Dist (ft) |       | 1063  |       |       | 206   |     |       | 1885  |     |       | 854   |     |
| Turn Bay Length (ft)    |       |       | 300   |       |       |     | 150   |       |     | 320   |       |     |
| Base Capacity (vph)     |       | 78    | 205   |       | 95    |     | 178   | 1383  |     | 321   | 1289  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 0.49  | 0.72  |       | 0.18  |     | 0.58  | 0.82  |     | 0.02  | 1.30  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90



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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↕     | ↕     | ↕     |       | ↕     | ↕     |       |
| Traffic Volume (vph)       | 4     | 2     | 2     | 63    | 0     | 31    | 5     | 1220  | 57    | 14    | 1062  | 1     |
| Future Volume (vph)        | 4     | 2     | 2     | 63    | 0     | 31    | 5     | 1220  | 57    | 14    | 1062  | 1     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 8     | 12    | 12    | 8     | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 50    | 50    |       | 0     | 50    |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.99  | 0.97  |       |       |       |       |       |       |
| Frt                        |       | 0.966 |       |       |       | 0.850 |       | 0.993 |       |       |       |       |
| Flt Protected              |       | 0.976 |       |       | 0.950 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1778  | 0     | 0     | 1612  | 1400  | 1564  | 1746  | 0     | 1448  | 1776  | 0     |
| Flt Permitted              |       | 0.810 |       |       | 0.800 |       | 0.186 |       |       | 0.081 |       |       |
| Satd. Flow (perm)          | 0     | 1470  | 0     | 0     | 1345  | 1359  | 306   | 1746  | 0     | 124   | 1776  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 2     |       |       |       | 41    |       | 11    |       |       |       |       |
| Link Speed (mph)           |       | 30    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 411   |       |       | 816   |       |       | 1892  |       |       |       | 693   |
| Travel Time (s)            |       | 9.3   |       |       | 15.9  |       |       | 28.7  |       |       |       | 10.5  |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       | 1     |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%    | 0%    | 0%    | 12%   | 0%    | 0%    | 0%    | 8%    | 9%    | 8%    | 7%    | 0%    |
| Adj. Flow (vph)            | 4     | 2     | 2     | 68    | 0     | 34    | 5     | 1326  | 62    | 15    | 1154  | 1     |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 8     | 0     | 0     | 68    | 34    | 5     | 1388  | 0     | 15    | 1155  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 8     |       |       | 8     |       |
| 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  | 1.20  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 0     | 0     |       | 0     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 12    |       | 20    | 36    | 20    | 0     | 0     |       | 0     | 0     |       |
| 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    | 12    |       | 20    | 36    | 20    | 20    | 36    |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       | 2     |       |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Switch Phase            |       |       |     |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Minimum Split (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 21.4  | 21.4  |     | 21.4  | 21.4  |     |
| Total Split (s)         | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 81.0  | 81.0  |     | 81.0  | 81.0  |     |
| Total Split (%)         | 10.0% | 10.0% |     | 10.0% | 10.0% | 10.0% | 90.0% | 90.0% |     | 90.0% | 90.0% |     |
| Maximum Green (s)       | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.6   | 1.6   |     | 1.6   | 1.6   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.0   |     |       | 4.0   | 4.0   | 6.4   | 6.4   |     | 6.4   | 6.4   |     |
| Lead/Lag                | Lag   | Lag   |     | Lag   | Lag   | Lag   | Lead  | Lead  |     | Lead  | Lead  |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   |     | 1.5   | 1.5   | 1.5   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 5.0   |     |       | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| Actuated g/C Ratio      |       | 0.06  |     |       | 0.06  | 0.06  | 0.83  | 0.83  |     | 0.83  | 0.83  |     |
| v/c Ratio               |       | 0.10  |     |       | 0.92  | 0.30  | 0.02  | 0.96  |     | 0.15  | 0.78  |     |
| Control Delay           |       | 38.7  |     |       | 130.2 | 18.3  | 0.4   | 11.5  |     | 1.3   | 2.4   |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 38.7  |     |       | 130.2 | 18.3  | 0.4   | 11.5  |     | 1.3   | 2.4   |     |
| LOS                     |       | D     |     |       | F     | B     | A     | B     |     | A     | A     |     |
| Approach Delay          |       | 38.7  |     |       | 92.9  |       |       | 11.5  |     |       | 2.3   |     |
| Approach LOS            |       | D     |     |       | F     |       |       | B     |     |       | A     |     |
| 90th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 30th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 10th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 8     |     |       | 48    | 9     | 0     | 89    |     | 0     | 70    |     |
| Fuel Used(gal)          |       | 0     |     |       | 2     | 0     | 0     | 20    |     | 0     | 10    |     |
| CO Emissions (g/hr)     |       | 9     |     |       | 168   | 26    | 4     | 1383  |     | 9     | 714   |     |
| NOx Emissions (g/hr)    |       | 2     |     |       | 33    | 5     | 1     | 269   |     | 2     | 139   |     |
| VOC Emissions (g/hr)    |       | 2     |     |       | 39    | 6     | 1     | 321   |     | 2     | 165   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 3     | 0     | 0     | 28    |     | 0     | 13    |     |
| Queue Length 50th (ft)  |       | 3     |     |       | 39    | 0     | 0     | 22    |     | 0     | 1     |     |
| Queue Length 95th (ft)  |       | 17    |     |       | #121  | 26    | m0    | m#80  |     | m0    | m1    |     |
| Internal Link Dist (ft) |       | 331   |     |       | 736   |       |       | 1812  |     |       | 613   |     |
| Turn Bay Length (ft)    |       |       |     |       |       | 50    | 50    |       |     | 50    |       |     |
| Base Capacity (vph)     |       | 83    |     |       | 74    | 114   | 253   | 1449  |     | 102   | 1472  |     |
| Starvation Cap Reductn  |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 0.10  |     |       | 0.92  | 0.30  | 0.02  | 0.96  |     | 0.15  | 0.78  |     |

# Lanes, Volumes, Timings

## 216: Stoughton Rd

07/07/2020

### Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 23 (26%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 88.0%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 216: Stoughton Rd



Lanes, Volumes, Timings  
219: Bridge St (CT-140)

07/07/2020



| Lane Group                 | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT  | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations        |      | ↕     |       | ↕     | ↕     |       |      |      |       |       | ↕     | ↕     |
| Traffic Volume (vph)       | 0    | 257   | 310   | 391   | 677   | 0     | 0    | 0    | 0     | 206   | 0     | 206   |
| Future Volume (vph)        | 0    | 257   | 310   | 391   | 677   | 0     | 0    | 0    | 0     | 206   | 0     | 206   |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0    |       | 0     | 0     |       | 0     | 0    |      | 0     | 0     |       | 50    |
| Storage Lanes              | 0    |       | 0     | 1     |       | 0     | 0    |      | 0     | 0     |       | 1     |
| 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                        |      | 0.926 |       |       |       |       |      |      |       |       |       | 0.850 |
| Flt Protected              |      |       |       | 0.950 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (prot)          | 0    | 1725  | 0     | 1770  | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Flt Permitted              |      |       |       | 0.216 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (perm)          | 0    | 1725  | 0     | 402   | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Right Turn on Red          |      |       | Yes   |       |       | Yes   |      |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      | 80    |       |       |       |       |      |      |       |       |       | 145   |
| Link Speed (mph)           |      | 30    |       |       | 35    |       |      | 30   |       |       |       | 30    |
| Link Distance (ft)         |      | 684   |       |       | 478   |       |      | 428  |       |       |       | 360   |
| Travel Time (s)            |      | 15.5  |       |       | 9.3   |       |      | 9.7  |       |       |       | 8.2   |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 0    | 279   | 337   | 425   | 736   | 0     | 0    | 0    | 0     | 224   | 0     | 224   |
| Shared Lane Traffic (%)    |      |       |       |       |       |       |      |      |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 616   | 0     | 425   | 736   | 0     | 0    | 0    | 0     | 0     | 224   | 224   |
| Enter Blocked Intersection | No   | No    | No    | No    | No    | No    | No   | No   | No    | No    | No    | No    |
| Lane Alignment             | Left | Left  | Right | Left  | Left  | Right | Left | Left | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0     |       |       | 12    |       |      | 0    |       |       |       | 0     |
| Link Offset(ft)            |      | 0     |       |       | 0     |       |      | 0    |       |       |       | 0     |
| Crosswalk Width(ft)        |      | 16    |       |       | 16    |       |      | 16   |       |       |       | 16    |
| Two way Left Turn Lane     |      |       |       |       |       |       |      |      |       |       |       |       |
| Headway Factor             | 1.00 | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        |      | 0     |       | 1     | 0     |       |      |      |       | 1     | 1     | 1     |
| Detector Template          |      |       |       |       |       |       |      |      |       | Left  |       |       |
| Leading Detector (ft)      |      | 0     |       | 36    | 0     |       |      |      |       | 20    | 15    | 15    |
| Trailing Detector (ft)     |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        |      | 6     |       | 36    | 6     |       |      |      |       | 20    | 15    | 15    |
| Detector 1 Type            |      | 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   |
| Detector 1 Queue (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 6.0   | 6.0   |
| Turn Type                  |      | NA    |       | D,P+P | NA    |       |      |      |       | Split | NA    | Prot  |
| Protected Phases           |      | 2     |       | 3     | 3 2   |       |      |      |       | 4     | 4     | 4     |
| Permitted Phases           |      |       |       | 2     |       |       |      |      |       |       |       |       |
| Detector Phase             |      |       |       | 3     |       |       |      |      |       | 4     | 4     | 4     |
| Switch Phase               |      |       |       |       |       |       |      |      |       |       |       |       |
| Minimum Initial (s)        |      | 20.0  |       | 5.0   |       |       |      |      |       | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)          |      | 25.5  |       | 9.9   |       |       |      |      |       | 10.3  | 10.3  | 10.3  |
| Total Split (s)            |      | 41.2  |       | 27.8  |       |       |      |      |       | 21.0  | 21.0  | 21.0  |

Lanes, Volumes, Timings  
219: Bridge St (CT-140)

07/07/2020



| Lane Group              | EBL | EBT   | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR   |
|-------------------------|-----|-------|-----|-------|------|-----|-----|-----|-----|-------|-------|-------|
| Total Split (%)         |     | 45.8% |     | 30.9% |      |     |     |     |     | 23.3% | 23.3% | 23.3% |
| Maximum Green (s)       |     | 35.7  |     | 22.9  |      |     |     |     |     | 15.7  | 15.7  | 15.7  |
| Yellow Time (s)         |     | 4.5   |     | 3.9   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        |     | 1.0   |     | 1.0   |      |     |     |     |     | 2.3   | 2.3   | 2.3   |
| Lost Time Adjust (s)    |     | 0.0   |     | 0.0   |      |     |     |     |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |     | 5.5   |     | 4.9   |      |     |     |     |     |       | 5.3   | 5.3   |
| Lead/Lag                |     | Lead  |     | Lag   |      |     |     |     |     |       |       |       |
| Lead-Lag Optimize?      |     |       |     |       |      |     |     |     |     |       |       |       |
| Vehicle Extension (s)   |     | 3.0   |     | 2.0   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             |     | C-Max |     | None  |      |     |     |     |     | None  | None  | None  |
| Act Effect Green (s)    |     | 40.5  |     | 60.1  | 65.0 |     |     |     |     |       | 14.8  | 14.8  |
| Actuated g/C Ratio      |     | 0.45  |     | 0.67  | 0.72 |     |     |     |     |       | 0.16  | 0.16  |
| v/c Ratio               |     | 0.75  |     | 0.76  | 0.55 |     |     |     |     |       | 0.77  | 0.59  |
| Control Delay           |     | 26.6  |     | 15.0  | 5.0  |     |     |     |     |       | 54.7  | 19.8  |
| Queue Delay             |     | 0.0   |     | 0.0   | 0.1  |     |     |     |     |       | 0.0   | 0.0   |
| Total Delay             |     | 26.6  |     | 15.0  | 5.0  |     |     |     |     |       | 54.7  | 19.8  |
| LOS                     |     | C     |     | B     | A    |     |     |     |     |       | D     | B     |
| Approach Delay          |     | 26.6  |     |       | 8.7  |     |     |     |     |       | 37.3  |       |
| Approach LOS            |     | C     |     |       | A    |     |     |     |     |       | D     |       |
| 90th %ile Green (s)     |     | 35.7  |     | 22.9  |      |     |     |     |     | 15.7  | 15.7  | 15.7  |
| 90th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 70th %ile Green (s)     |     | 35.7  |     | 22.9  |      |     |     |     |     | 15.7  | 15.7  | 15.7  |
| 70th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 50th %ile Green (s)     |     | 37.2  |     | 20.2  |      |     |     |     |     | 16.9  | 16.9  | 16.9  |
| 50th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     |     | 42.8  |     | 17.0  |      |     |     |     |     | 14.5  | 14.5  | 14.5  |
| 30th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     |     | 51.3  |     | 12.0  |      |     |     |     |     | 11.0  | 11.0  | 11.0  |
| 10th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| Stops (vph)             |     | 404   |     | 203   | 132  |     |     |     |     |       | 185   | 75    |
| Fuel Used(gal)          |     | 8     |     | 4     | 4    |     |     |     |     |       | 4     | 2     |
| CO Emissions (g/hr)     |     | 582   |     | 284   | 280  |     |     |     |     |       | 272   | 128   |
| NOx Emissions (g/hr)    |     | 113   |     | 55    | 55   |     |     |     |     |       | 53    | 25    |
| VOC Emissions (g/hr)    |     | 135   |     | 66    | 65   |     |     |     |     |       | 63    | 30    |
| Dilemma Vehicles (#)    |     | 0     |     | 0     | 44   |     |     |     |     |       | 0     | 0     |
| Queue Length 50th (ft)  |     | 266   |     | 50    | 87   |     |     |     |     |       | 119   | 39    |
| Queue Length 95th (ft)  |     | #474  |     | 59    | 95   |     |     |     |     |       | #224  | 112   |
| Internal Link Dist (ft) |     | 604   |     |       | 398  |     |     | 348 |     |       | 280   |       |
| Turn Bay Length (ft)    |     |       |     |       |      |     |     |     |     |       |       | 50    |
| Base Capacity (vph)     |     | 820   |     | 634   | 1346 |     |     |     |     |       | 313   | 399   |
| Starvation Cap Reductn  |     | 0     |     | 0     | 63   |     |     |     |     |       | 0     | 0     |
| Spillback Cap Reductn   |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Storage Cap Reductn     |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Reduced v/c Ratio       |     | 0.75  |     | 0.67  | 0.57 |     |     |     |     |       | 0.72  | 0.56  |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90



Lanes, Volumes, Timings  
220: Bridge St (CT-140)

07/07/2020

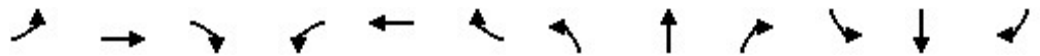


| Lane Group                 | EBL    | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR    | SBL  | SBT  | SBR   |
|----------------------------|--------|-------|-------|------|-------|-------|-------|-------|--------|------|------|-------|
| Lane Configurations        |        | ↑↑    |       |      | ↑↑    |       |       | ↑     | ↑↑     |      |      |       |
| Traffic Volume (vph)       | 164    | 299   | 0     | 0    | 956   | 239   | 112   | 0     | 383    | 0    | 0    | 0     |
| Future Volume (vph)        | 164    | 299   | 0     | 0    | 956   | 239   | 112   | 0     | 383    | 0    | 0    | 0     |
| Ideal Flow (vphpl)         | 1900   | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900   | 1900 | 1900 | 1900  |
| Storage Length (ft)        | 0      |       | 0     | 0    |       | 0     | 250   |       | 300    | 0    |      | 0     |
| Storage Lanes              | 0      |       | 0     | 0    |       | 0     | 1     |       | 1      | 0    |      | 0     |
| Taper Length (ft)          | 25     |       |       | 25   |       |       | 25    |       |        | 25   |      |       |
| Lane Util. Factor          | 0.95   | 0.95  | 1.00  | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 0.88   | 1.00 | 1.00 | 1.00  |
| Frt                        |        |       |       |      | 0.970 |       |       |       | 0.850  |      |      |       |
| Flt Protected              |        | 0.983 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (prot)          | 0      | 3479  | 0     | 0    | 3433  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Flt Permitted              |        | 0.534 |       |      |       |       |       | 0.950 |        |      |      |       |
| Satd. Flow (perm)          | 0      | 1890  | 0     | 0    | 3433  | 0     | 0     | 1770  | 2787   | 0    | 0    | 0     |
| Right Turn on Red          |        |       | Yes   |      |       | Yes   |       |       | Yes    |      |      | Yes   |
| Satd. Flow (RTOR)          |        |       |       |      | 53    |       |       |       | 416    |      |      |       |
| Link Speed (mph)           |        | 35    |       |      | 35    |       |       | 30    |        |      |      | 30    |
| Link Distance (ft)         |        | 478   |       |      | 323   |       |       | 585   |        |      |      | 321   |
| Travel Time (s)            |        | 9.3   |       |      | 6.3   |       |       | 13.3  |        |      |      | 7.3   |
| Peak Hour Factor           | 0.92   | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92 | 0.92 | 0.92  |
| Adj. Flow (vph)            | 178    | 325   | 0     | 0    | 1039  | 260   | 122   | 0     | 416    | 0    | 0    | 0     |
| Shared Lane Traffic (%)    |        |       |       |      |       |       |       |       |        |      |      |       |
| Lane Group Flow (vph)      | 0      | 503   | 0     | 0    | 1299  | 0     | 0     | 122   | 416    | 0    | 0    | 0     |
| Enter Blocked Intersection | No     | No    | No    | No   | No    | No    | No    | No    | No     | No   | No   | No    |
| Lane Alignment             | Left   | Left  | Right | Left | Left  | Right | Left  | Left  | Right  | Left | Left | Right |
| Median Width(ft)           |        | 0     |       |      | 6     |       |       | 0     |        |      |      | 0     |
| Link Offset(ft)            |        | 0     |       |      | 0     |       |       | 0     |        |      |      | 0     |
| Crosswalk Width(ft)        |        | 16    |       |      | 16    |       |       | 16    |        |      |      | 16    |
| Two way Left Turn Lane     |        |       |       |      |       |       |       |       |        |      |      |       |
| Headway Factor             | 1.00   | 1.00  | 1.00  | 1.00 | 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      | 15   |      | 9     |
| Number of Detectors        | 1      | 2     |       |      | 0     |       | 1     | 1     | 1      |      |      |       |
| Detector Template          | Left   | Thru  |       |      |       |       | Left  |       |        |      |      |       |
| Leading Detector (ft)      | 20     | 100   |       |      | 0     |       | 20    | 6     | 21     |      |      |       |
| Trailing Detector (ft)     | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Position(ft)    | 0      | 0     |       |      | 0     |       | 0     | 0     | -3     |      |      |       |
| Detector 1 Size(ft)        | 20     | 6     |       |      | 6     |       | 20    | 6     | 24     |      |      |       |
| Detector 1 Type            | 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    |      |      |       |
| Detector 1 Queue (s)       | 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   | 9.0    |      |      |       |
| Detector 2 Position(ft)    |        | 94    |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Size(ft)        |        | 6     |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Type            |        | Cl+Ex |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Channel         |        |       |       |      |       |       |       |       |        |      |      |       |
| Detector 2 Extend (s)      |        | 0.0   |       |      |       |       |       |       |        |      |      |       |
| Turn Type                  | custom | NA    |       |      | NA    |       | Split | NA    | custom |      |      |       |
| Protected Phases           | 3      | 2 3   |       |      | 2 5   |       | 4     | 4     | 4 5    |      |      |       |
| Permitted Phases           | 2      |       |       |      |       |       |       |       |        |      |      |       |

| Lane Group                 | Ø2 | Ø5 |
|----------------------------|----|----|
| 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           |    |    |
| 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           | 2  | 5  |
| Permitted Phases           |    |    |

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| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-----|-----|
| Detector Phase          | 3     | 3    |     |     |      |     | 4     | 4     | 5    |     |     |     |
| Switch Phase            |       |      |     |     |      |     |       |       |      |     |     |     |
| Minimum Initial (s)     | 5.0   |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| Minimum Split (s)       | 10.4  |      |     |     |      |     | 12.1  | 12.1  |      |     |     |     |
| Total Split (s)         | 17.0  |      |     |     |      |     | 18.0  | 18.0  |      |     |     |     |
| Total Split (%)         | 18.9% |      |     |     |      |     | 20.0% | 20.0% |      |     |     |     |
| Maximum Green (s)       | 11.6  |      |     |     |      |     | 12.9  | 12.9  |      |     |     |     |
| Yellow Time (s)         | 4.1   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| All-Red Time (s)        | 1.3   |      |     |     |      |     | 2.1   | 2.1   |      |     |     |     |
| Lost Time Adjust (s)    |       |      |     |     |      |     |       | 0.0   |      |     |     |     |
| Total Lost Time (s)     |       |      |     |     |      |     |       | 5.1   |      |     |     |     |
| Lead/Lag                | Lag   |      |     |     |      |     | Lead  | Lead  |      |     |     |     |
| Lead-Lag Optimize?      |       |      |     |     |      |     |       |       |      |     |     |     |
| Vehicle Extension (s)   | 2.5   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| Recall Mode             | Max   |      |     |     |      |     | None  | None  |      |     |     |     |
| Act Effct Green (s)     |       | 50.4 |     |     | 50.6 |     |       | 10.8  | 21.5 |     |     |     |
| Actuated g/C Ratio      |       | 0.56 |     |     | 0.56 |     |       | 0.12  | 0.24 |     |     |     |
| v/c Ratio               |       | 0.40 |     |     | 0.66 |     |       | 0.58  | 0.42 |     |     |     |
| Control Delay           |       | 13.7 |     |     | 2.3  |     |       | 48.1  | 4.3  |     |     |     |
| Queue Delay             |       | 0.0  |     |     | 0.0  |     |       | 0.0   | 0.0  |     |     |     |
| Total Delay             |       | 13.7 |     |     | 2.3  |     |       | 48.1  | 4.3  |     |     |     |
| LOS                     |       | B    |     |     | A    |     |       | D     | A    |     |     |     |
| Approach Delay          |       | 13.7 |     |     | 2.3  |     |       | 14.2  |      |     |     |     |
| Approach LOS            |       | B    |     |     | A    |     |       | B     |      |     |     |     |
| 90th %ile Green (s)     | 11.6  |      |     |     |      |     | 12.9  | 12.9  |      |     |     |     |
| 90th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 70th %ile Green (s)     | 11.6  |      |     |     |      |     | 12.9  | 12.9  |      |     |     |     |
| 70th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 50th %ile Green (s)     | 11.6  |      |     |     |      |     | 11.5  | 11.5  |      |     |     |     |
| 50th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| 30th %ile Green (s)     | 11.6  |      |     |     |      |     | 9.6   | 9.6   |      |     |     |     |
| 30th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| 10th %ile Green (s)     | 11.6  |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| 10th %ile Term Code     | MaxR  |      |     |     |      |     | Min   | Min   |      |     |     |     |
| Stops (vph)             |       | 280  |     |     | 94   |     |       | 104   | 34   |     |     |     |
| Fuel Used(gal)          |       | 5    |     |     | 4    |     |       | 2     | 2    |     |     |     |
| CO Emissions (g/hr)     |       | 349  |     |     | 283  |     |       | 153   | 158  |     |     |     |
| NOx Emissions (g/hr)    |       | 68   |     |     | 55   |     |       | 30    | 31   |     |     |     |
| VOC Emissions (g/hr)    |       | 81   |     |     | 66   |     |       | 35    | 37   |     |     |     |
| Dilemma Vehicles (#)    |       | 78   |     |     | 13   |     |       | 0     | 0    |     |     |     |
| Queue Length 50th (ft)  |       | 70   |     |     | 22   |     |       | 66    | 0    |     |     |     |
| Queue Length 95th (ft)  |       | 132  |     |     | m21  |     |       | 120   | 37   |     |     |     |
| Internal Link Dist (ft) |       | 398  |     |     | 243  |     |       | 505   |      |     | 241 |     |
| Turn Bay Length (ft)    |       |      |     |     |      |     |       |       | 300  |     |     |     |
| Base Capacity (vph)     |       | 1244 |     |     | 1954 |     |       | 253   | 1042 |     |     |     |
| Starvation Cap Reductn  |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Spillback Cap Reductn   |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Storage Cap Reductn     |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Reduced v/c Ratio       |       | 0.40 |     |     | 0.66 |     |       | 0.48  | 0.40 |     |     |     |

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| Lane Group              | Ø2    | Ø5   |
|-------------------------|-------|------|
| Detector Phase          |       |      |
| Switch Phase            |       |      |
| Minimum Initial (s)     | 15.0  | 5.0  |
| Minimum Split (s)       | 21.5  | 10.7 |
| Total Split (s)         | 42.0  | 13.0 |
| Total Split (%)         | 47%   | 14%  |
| Maximum Green (s)       | 35.5  | 7.3  |
| Yellow Time (s)         | 4.5   | 4.5  |
| All-Red Time (s)        | 2.0   | 1.2  |
| Lost Time Adjust (s)    |       |      |
| Total Lost Time (s)     |       |      |
| Lead/Lag                | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |
| Vehicle Extension (s)   | 3.0   | 1.5  |
| Recall Mode             | C-Max | None |
| 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)     | 37.8  | 5.0  |
| 90th %ile Term Code     | Coord | Min  |
| 70th %ile Green (s)     | 37.8  | 5.0  |
| 70th %ile Term Code     | Coord | Min  |
| 50th %ile Green (s)     | 39.2  | 5.0  |
| 50th %ile Term Code     | Coord | Min  |
| 30th %ile Green (s)     | 41.1  | 5.0  |
| 30th %ile Term Code     | Coord | Min  |
| 10th %ile Green (s)     | 43.7  | 5.0  |
| 10th %ile Term Code     | Coord | Min  |
| 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)     |       |      |
| Starvation Cap Reductn  |       |      |
| Spillback Cap Reductn   |       |      |
| Storage Cap Reductn     |       |      |
| Reduced v/c Ratio       |       |      |

Intersection Summary

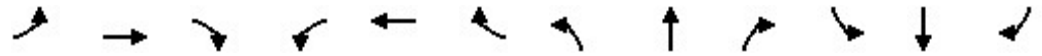
|   |   |
|---|---|
| Area Type:  | Other   |
| Cycle Length:   | 90  |
| Actuated Cycle Length:  | 90  |
| Offset:   | 60 (67%), Referenced to phase 2:EBWB, Start of Yellow |
| Natural Cycle:  | 60  |
| Control Type:   | Actuated-Coordinated                                  |
| Maximum v/c Ratio:  | 0.66  |
| Intersection Signal Delay:  | 7.5   |
| Intersection LOS:   | A   |
| Intersection Capacity Utilization                                 | 68.4%   |
| ICU Level of Service  | C   |
| Analysis Period (min)   | 15  |
| m Volume for 95th percentile queue is metered by upstream signal. |   |

Splits and Phases: 220: Bridge St (CT-140)



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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↕     |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 6     | 41    | 4     | 6     | 47    | 10    | 16    | 1135  | 104   | 188   | 1067  | 23    |
| Future Volume (vph)        | 6     | 41    | 4     | 6     | 47    | 10    | 16    | 1135  | 104   | 188   | 1067  | 23    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 0     |       | 0     | 0     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Frt                        |       | 0.990 |       |       |       | 0.850 |       | 0.988 |       |       | 0.997 |       |
| Flt Protected              |       | 0.994 |       |       | 0.994 |       |       | 0.999 |       |       | 0.993 |       |
| Satd. Flow (prot)          | 0     | 1572  | 0     | 0     | 1774  | 1482  | 0     | 3287  | 0     | 0     | 3279  | 0     |
| Flt Permitted              |       | 0.945 |       |       | 0.969 |       |       | 0.924 |       |       | 0.554 |       |
| Satd. Flow (perm)          | 0     | 1495  | 0     | 0     | 1729  | 1482  | 0     | 3040  | 0     | 0     | 1829  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 3     |       |       |       | 46    |       | 36    |       |       | 7     |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 484   |       |       | 1094  |       |       | 527   |       |       | 557   |       |
| Travel Time (s)            |       | 13.2  |       |       | 29.8  |       |       | 8.0   |       |       | 8.4   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 100%  | 8%    | 0%    | 10%   | 6%    | 9%    | 8%    | 9%    | 2%    | 3%    | 10%   | 11%   |
| Adj. Flow (vph)            | 7     | 45    | 4     | 7     | 51    | 11    | 17    | 1234  | 113   | 204   | 1160  | 25    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 56    | 0     | 0     | 58    | 11    | 0     | 1364  | 0     | 0     | 1389  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 1     | 0     |       | 1     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right | Left  |       |       | Left  |       |       |
| Leading Detector (ft)      | 20    | 15    |       | 20    | 20    | 20    | 20    | 0     |       | 20    | 0     |       |
| 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    | 15    |       | 20    | 20    | 20    | 20    | 6     |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       |       | 2     |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          | 11.7  | 11.7  |       | 11.7  | 11.7  | 11.7  | 21.8  | 21.8  |       | 21.8  | 21.8  |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 11.7  | 11.7  |     | 11.7  | 11.7  | 11.7  | 78.3  | 78.3  |     | 78.3  | 78.3  |     |
| Total Split (%)         | 13.0% | 13.0% |     | 13.0% | 13.0% | 13.0% | 87.0% | 87.0% |     | 87.0% | 87.0% |     |
| Maximum Green (s)       | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.7   | 1.7   |     | 1.7   | 1.7   | 1.7   | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |       | 4.7   |     |       | 4.7   | 4.7   |       | 6.8   |     |       | 6.8   |     |
| Lead/Lag                |       |       |     |       |       |       |       |       |     |       |       |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 7.0   |     |       | 7.0   | 7.0   |       | 75.2  |     |       | 75.2  |     |
| Actuated g/C Ratio      |       | 0.08  |     |       | 0.08  | 0.08  |       | 0.84  |     |       | 0.84  |     |
| v/c Ratio               |       | 0.47  |     |       | 0.43  | 0.07  |       | 0.54  |     |       | 0.91  |     |
| Control Delay           |       | 51.6  |     |       | 50.2  | 0.9   |       | 4.4   |     |       | 10.2  |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |       | 51.6  |     |       | 50.2  | 0.9   |       | 4.4   |     |       | 10.2  |     |
| LOS                     |       | D     |     |       | D     | A     |       | A     |     |       | B     |     |
| Approach Delay          |       | 51.6  |     |       | 42.3  |       |       | 4.4   |     |       | 10.2  |     |
| Approach LOS            |       | D     |     |       | D     |       |       | A     |     |       | B     |     |
| 90th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.0   | 7.0   |     | 7.0   | 7.0   | 7.0   | 71.5  | 71.5  |     | 71.5  | 71.5  |     |
| 30th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.2  | 83.2  |     | 83.2  | 83.2  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 48    |     |       | 51    | 0     |       | 491   |     |       | 530   |     |
| Fuel Used(gal)          |       | 1     |     |       | 1     | 0     |       | 17    |     |       | 23    |     |
| CO Emissions (g/hr)     |       | 66    |     |       | 86    | 7     |       | 1200  |     |       | 1615  |     |
| NOx Emissions (g/hr)    |       | 13    |     |       | 17    | 1     |       | 233   |     |       | 314   |     |
| VOC Emissions (g/hr)    |       | 15    |     |       | 20    | 2     |       | 278   |     |       | 374   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 0     | 0     |       | 57    |     |       | 67    |     |
| Queue Length 50th (ft)  |       | 29    |     |       | 32    | 0     |       | 128   |     |       | 85    |     |
| Queue Length 95th (ft)  |       | #70   |     |       | 71    | 0     |       | m170  |     |       | m#177 |     |
| Internal Link Dist (ft) |       | 404   |     |       | 1014  |       |       | 447   |     |       | 477   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |       |       |       |     |       |       |     |
| Base Capacity (vph)     |       | 119   |     |       | 134   | 157   |       | 2546  |     |       | 1529  |     |
| Starvation Cap Reductn  |       | 0     |     |       | 0     | 0     |       | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |       | 0     |     |       | 0     | 0     |       | 0     |     |       | 0     |     |
| Storage Cap Reductn     |       | 0     |     |       | 0     | 0     |       | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |       | 0.47  |     |       | 0.43  | 0.07  |       | 0.54  |     |       | 0.91  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90

Lanes, Volumes, Timings  
222: Southern Auto Auction

07/07/2020




















Actuated Cycle Length: 90  
Offset: 87 (97%), Referenced to phase 2:NBSB, Start of Yellow  
Natural Cycle: 90  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.91  
Intersection Signal Delay: 9.0 Intersection LOS: A  
Intersection Capacity Utilization 93.6% ICU Level of Service F  
Analysis Period (min) 15  
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.  
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 222: Southern Auto Auction



Lanes, Volumes, Timings  
225: MMCT Casino

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 53  | 0   | 111   | 0   | 0   | 0   | 24  | 360   | 0   | 3   | 622   | 36  |
| Future Volume (vph)        | 53  | 0   | 111   | 0   | 0   | 0   | 24  | 360   | 0   | 3   | 622   | 36  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 0   |   | 400   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   |   |   |   |   | 1.00  |   |   |   |   |   |
| Fr <sub>t</sub>            |   |   | 0.850   |   |   |   |   |   |   |   |   | 0.850   |
| Fl <sub>t</sub> Protected  |   | 0.950   |   |   |   |   | 0.950   |   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 1399  | 1615  | 0   | 1863  | 0   | 1203  | 1759  | 0   | 0   | 1744  | 1272  |
| Fl <sub>t</sub> Permitted  |   | 0.757   |   |   |   |   | 0.342   |   |   |   | 0.999   |   |
| Satd. Flow (perm)          | 0   | 1115  | 1615  | 0   | 1863  | 0   | 433   | 1759  | 0   | 0   | 1742  | 1272  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 121   |   |   |   |   |   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 30  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 532   |   |   | 223   |   |   | 1555  |   |   |   | 682   |
| Travel Time (s)            |   | 14.5  |   |   | 5.1   |   |   | 23.6  |   |   |   | 10.3  |
| Confl. Peds. (#/hr)        |   |   |   |   |   |   | 1   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 29%   | 2%  | 0%  | 2%  | 2%  | 2%  | 50%   | 8%  | 2%  | 2%  | 9%  | 27%   |
| Adj. Flow (vph)            | 58  | 0   | 121   | 0   | 0   | 0   | 26  | 391   | 0   | 3   | 676   | 39  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 58  | 121   | 0   | 0   | 0   | 26  | 391   | 0   | 0   | 679   | 39  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 2   | 1   | 1   | 2   |   | 1   | 2   |   | 1   | 2   | 1   |
| Detector Template          | Left  | Thru  | Right   | Left  | Thru  |   | Left  |   |   | Left  |   | Right   |
| Leading Detector (ft)      | 20  | 100   | 20  | 20  | 100   |   | 20  | 293   |   | 20  | 283   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Size(ft)        | 20  | 6   | 20  | 20  | 6   |   | 20  | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   | 94  |   |   | 94  |   |   | 287   |   |   |   | 277   |
| Detector 2 Size(ft)        |   | 6   |   |   | 6   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   | Cl+Ex   |   |   | Cl+Ex   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 2 Extend (s)      |   | 0.0   |   |   | 0.0   |   |   | 0.0   |   |   |   | 0.0   |

Lanes, Volumes, Timings  
225: MMCT Casino

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT  | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|------|-----|-------|-------|-------|
| Turn Type               | Perm  | NA    | Prot  |       |       |     | D.P+P | NA   |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 4     | 4     |       | 4     |     | 1     | 1 2  |     |       | 2     |       |
| Permitted Phases        | 4     |       |       | 4     |       |     | 2     |      |     | 2     |       | 2     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     | 2    |     | 2     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |      |     |       |       |       |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |     | 4.5   |      |     | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |     | 9.0   |      |     | 21.0  | 21.0  | 21.0  |
| Total Split (s)         | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |     | 9.0   |      |     | 66.0  | 66.0  | 66.0  |
| Total Split (%)         | 16.7% | 16.7% | 16.7% | 16.7% | 16.7% |     | 10.0% |      |     | 73.3% | 73.3% | 73.3% |
| Maximum Green (s)       | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  |     | 5.0   |      |     | 60.0  | 60.0  | 60.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   |      |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |     | 1.0   |      |     | 1.2   | 1.2   | 1.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   |      |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.0   | 4.0   |       | 4.0   |     | 4.0   |      |     |       | 6.0   | 6.0   |
| Lead/Lag                |       |       |       |       |       |     | Lead  |      |     | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |      |     |       |       |       |
| 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  |     | None  |      |     | C-Min | C-Min | C-Min |
| Act Effct Green (s)     |       | 10.0  | 10.0  |       |       |     | 70.4  | 72.0 |     |       | 65.8  | 65.8  |
| Actuated g/C Ratio      |       | 0.11  | 0.11  |       |       |     | 0.78  | 0.80 |     |       | 0.73  | 0.73  |
| v/c Ratio               |       | 0.47  | 0.42  |       |       |     | 0.07  | 0.28 |     |       | 0.53  | 0.04  |
| Control Delay           |       | 48.5  | 11.5  |       |       |     | 0.7   | 1.0  |     |       | 5.6   | 0.3   |
| Queue Delay             |       | 0.0   | 0.0   |       |       |     | 0.0   | 0.0  |     |       | 0.0   | 0.0   |
| Total Delay             |       | 48.5  | 11.5  |       |       |     | 0.7   | 1.0  |     |       | 5.6   | 0.3   |
| LOS                     |       | D     | B     |       |       |     | A     | A    |     |       | A     | A     |
| Approach Delay          |       | 23.5  |       |       |       |     |       | 1.0  |     |       | 5.3   |       |
| Approach LOS            |       | C     |       |       |       |     |       | A    |     |       | A     |       |
| 90th %ile Green (s)     | 14.8  | 14.8  | 14.8  | 14.8  | 14.8  |     | 6.8   |      |     | 54.4  | 54.4  | 54.4  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   |      |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  |     | 6.2   |      |     | 57.9  | 57.9  | 57.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Gap   |      |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |     | 0.0   |      |     | 70.0  | 70.0  | 70.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |     | 0.0   |      |     | 72.0  | 72.0  | 72.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |     | 0.0   |      |     | 74.5  | 74.5  | 74.5  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| Stops (vph)             |       | 48    | 20    |       |       |     | 1     | 29   |     |       | 193   | 0     |
| Fuel Used(gal)          |       | 1     | 1     |       |       |     | 0     | 4    |     |       | 6     | 0     |
| CO Emissions (g/hr)     |       | 66    | 59    |       |       |     | 18    | 285  |     |       | 411   | 11    |
| NOx Emissions (g/hr)    |       | 13    | 11    |       |       |     | 4     | 55   |     |       | 80    | 2     |
| VOC Emissions (g/hr)    |       | 15    | 14    |       |       |     | 4     | 66   |     |       | 95    | 3     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       |       |     | 0     | 3    |     |       | 25    | 0     |
| Queue Length 50th (ft)  |       | 31    | 0     |       |       |     | 0     | 4    |     |       | 132   | 1     |
| Queue Length 95th (ft)  |       | 67    | 46    |       |       |     | 1     | 8    |     |       | 78    | m1    |
| Internal Link Dist (ft) |       | 452   |       |       | 143   |     |       | 1475 |     |       | 602   |       |
| Turn Bay Length (ft)    |       |       |       |       |       |     | 300   |      |     |       |       | 400   |
| Base Capacity (vph)     |       | 148   | 319   |       |       |     | 389   | 1436 |     |       | 1302  | 966   |
| Starvation Cap Reductn  |       | 0     | 0     |       |       |     | 0     | 0    |     |       | 0     | 0     |

Lanes, Volumes, Timings

225: MMCT Casino

07/07/2020



| Lane Group            | EBL | EBT  | EBR  | WBL | WBT | WBR | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|-----------------------|-----|------|------|-----|-----|-----|------|------|-----|-----|------|------|
| Spillback Cap Reductn |     | 0    | 0    |     |     |     | 0    | 0    |     |     | 0    | 0    |
| Storage Cap Reductn   |     | 0    | 0    |     |     |     | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio     |     | 0.39 | 0.38 |     |     |     | 0.07 | 0.27 |     |     | 0.52 | 0.04 |

Intersection Summary





















Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 44 (49%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.53  
 Intersection Signal Delay: 6.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 48.1%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 225: MMCT Casino















Lanes, Volumes, Timings  
226: Big Y/Ethos

07/07/2020

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |  |  |  |   |   |  |  |
| Traffic Volume (vph)       | 8   | 0   | 32  | 7   | 1   | 8   | 23  | 367   | 44  | 12  | 693   | 28  |
| Future Volume (vph)        | 8   | 0   | 32  | 7   | 1   | 8   | 23  | 367   | 44  | 12  | 693   | 28  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 360   |   | 0   | 0   |   | 370   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 1   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   | 0.98  |   |   |   |   |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   |   | 0.850   |   | 0.984   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.957   |   | 0.950   |   |   |   | 0.999   |   |
| Satd. Flow (prot)          | 0   | 1543  | 1615  | 0   | 1617  | 1615  | 1583  | 1740  | 0   | 0   | 1792  | 1482  |
| Flt Permitted              |   |   |   |   |   |   | 0.334   |   |   |   | 0.991   |   |
| Satd. Flow (perm)          | 0   | 1624  | 1577  | 0   | 1690  | 1615  | 557   | 1740  | 0   | 0   | 1778  | 1482  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 63  |   |   | 112   |   | 33  |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 626   |   |   | 337   |   |   | 828   |   |   |   | 1555  |
| Travel Time (s)            |   | 17.1  |   |   | 9.2   |   |   | 12.5  |   |   |   | 23.6  |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 17%   | 0%  | 0%  | 14%   | 0%  | 0%  | 14%   | 8%  | 3%  | 0%  | 6%  | 9%  |
| Adj. Flow (vph)            | 9   | 0   | 35  | 8   | 1   | 9   | 25  | 399   | 48  | 13  | 753   | 30  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 9   | 35  | 0   | 9   | 9   | 25  | 447   | 0   | 0   | 766   | 30  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 6   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   |   | 1   | 2   | 2   |
| Detector Template          | Left  |   |   | Left  |   |   |   |   |   | Left  |   |   |
| Leading Detector (ft)      | 20  | 29  | 29  | 20  | 14  | 14  | 24  | 366   |   | 20  | 366   | 366   |
| Trailing Detector (ft)     | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Position(ft)    | 0   | -5  | -5  | 0   | -10   | -10   | -10   | 180   |   | 0   | 180   | 180   |
| Detector 1 Size(ft)        | 20  | 34  | 34  | 20  | 24  | 24  | 34  | 6   |   | 20  | 6   | 6   |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   |   |   |   |   |   |   | 360   |   |   | 360   | 360   |
| Detector 2 Size(ft)        |   |   |   |   |   |   |   | 6   |   |   | 6   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |   | Cl+Ex   |   |   | Cl+Ex   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |

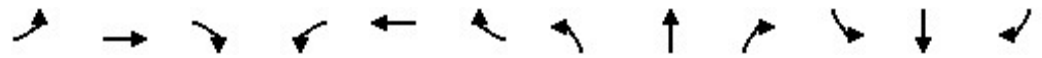
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|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Detector 2 Extend (s)   |   |   |   |   |   |   |  | 0.0   |   |   | 0.0   | 0.0   |
| Turn Type               | Perm  | NA  | pm+ov   | Perm  | NA  | Perm  | D.P+P  | NA  |   | Perm  | NA  | Perm  |
| Protected Phases        |   | 4   | 1   |   | 4   |   | 1  | 1 2   |   |   | 2   |   |
| Permitted Phases        | 4   |   | 4   | 4   |   | 4   | 2  |   |   | 2   |   | 2   |
| Detector Phase          | 4   | 4   | 4   | 4   | 4   | 4   | 1  | 2   |   | 2   | 2   | 2   |
| Switch Phase            |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5  |   |   | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0  |   |   | 23.4  | 23.4  | 23.4  |
| Total Split (s)         | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0  |   |   | 72.0  | 72.0  | 72.0  |
| Total Split (%)         | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%  |   |   | 80.0%   | 80.0%   | 80.0%   |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  |   |   | 63.8  | 63.8  | 63.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |   |   | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  |   |   | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0  |   |   |   | 0.0   | 0.0   |
| Total Lost Time (s)     |   | 4.0   | 4.0   |   | 4.0   | 4.0   | 4.0  |   |   |   | 8.2   | 8.2   |
| Lead/Lag                |   |   | Lead  |   |   |   | Lead   |   |   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |  |   |   |   |   |   |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5  |   |   | 2.5   | 2.5   | 2.5   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None   |   |   | C-Min   | C-Min   | C-Min   |
| Act Effct Green (s)     |   | 5.1   | 6.9   |   | 5.1   | 5.1   | 78.7   | 81.9  |   |   | 76.0  | 76.0  |
| Actuated g/C Ratio      |   | 0.06  | 0.08  |   | 0.06  | 0.06  | 0.87   | 0.91  |   |   | 0.84  | 0.84  |
| v/c Ratio               |   | 0.10  | 0.19  |   | 0.09  | 0.05  | 0.05   | 0.28  |   |   | 0.51  | 0.02  |
| Control Delay           |   | 42.1  | 5.8   |   | 42.0  | 0.5   | 1.5  | 2.8   |   |   | 1.9   | 0.1   |
| Queue Delay             |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0  | 0.0   |   |   | 0.0   | 0.0   |
| Total Delay             |   | 42.1  | 5.8   |   | 42.0  | 0.5   | 1.5  | 2.8   |   |   | 1.9   | 0.1   |
| LOS                     |   | D   | A   |   | D   | A   | A  | A   |   |   | A   | A   |
| Approach Delay          |   | 13.2  |   |   | 21.3  |   |  | 2.7   |   |   | 1.8   |   |
| Approach LOS            |   | B   |   |   | C   |   |  | A   |   |   | A   |   |
| 90th %ile Green (s)     | 6.3   | 6.3   | 4.7   | 6.3   | 6.3   | 6.3   | 4.7  |   |   | 62.8  | 62.8  | 62.8  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  |   |   | Coord   | Coord   | Coord   |
| 70th %ile Green (s)     | 5.4   | 5.4   | 4.5   | 5.4   | 5.4   | 5.4   | 4.5  |   |   | 63.9  | 63.9  | 63.9  |
| 70th %ile Term Code     | Gap   | Gap   | Min   | Gap   | Gap   | Gap   | Min  |   |   | Coord   | Coord   | Coord   |
| 50th %ile Green (s)     | 4.7   | 4.7   | 0.0   | 4.7   | 4.7   | 4.7   | 0.0  |   |   | 73.1  | 73.1  | 73.1  |
| 50th %ile Term Code     | Gap   | Gap   | Skip  | Gap   | Gap   | Gap   | Skip   |   |   | Coord   | Coord   | Coord   |
| 30th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |   |   | 81.8  | 81.8  | 81.8  |
| 30th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip   |   |   | Coord   | Coord   | Coord   |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |   |   | 81.8  | 81.8  | 81.8  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip   |   |   | Coord   | Coord   | Coord   |
| Stops (vph)             |   | 10  | 3   |   | 10  | 0   | 4  | 105   |   |   | 32  | 0   |
| Fuel Used(gal)          |   | 0   | 0   |   | 0   | 0   | 0  | 4   |   |   | 8   | 0   |
| CO Emissions (g/hr)     |   | 10  | 15  |   | 9   | 2   | 13   | 262   |   |   | 544   | 20  |
| NOx Emissions (g/hr)    |   | 2   | 3   |   | 2   | 0   | 2  | 51  |   |   | 106   | 4   |
| VOC Emissions (g/hr)    |   | 2   | 4   |   | 2   | 0   | 3  | 61  |   |   | 126   | 5   |
| Dilemma Vehicles (#)    |   | 0   | 0   |   | 0   | 0   | 0  | 23  |   |   | 11  | 0   |
| Queue Length 50th (ft)  |   | 5   | 0   |   | 5   | 0   | 0  | 9   |   |   | 11  | 0   |
| Queue Length 95th (ft)  |   | 20  | 12  |   | 20  | 0   | 7  | 74  |   |   | 53  | m0  |
| Internal Link Dist (ft) |   | 546   |   |   | 257   |   |  | 748   |   |   | 1475  |   |
| Turn Bay Length (ft)    |   |   |   |   |   | 50  | 360  |   |   |   |   | 370   |
| Base Capacity (vph)     |   | 96  | 184   |   | 100   | 201   | 545  | 1590  |   |   | 1504  | 1263  |

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| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|------------------------|-----|------|------|-----|------|------|------|------|-----|-----|------|------|
| Starvation Cap Reductn |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio      |     | 0.09 | 0.19 |     | 0.09 | 0.04 | 0.05 | 0.28 |     |     | 0.51 | 0.02 |

Intersection Summary

|   |   |
|---|---|
| Area Type:  | Other   |
| Cycle Length:   | 90  |
| Actuated Cycle Length:  | 90  |
| Offset:   | 66 (73%), Referenced to phase 2:NBSB, Start of Yellow |
| Natural Cycle:  | 60  |
| Control Type:   | Actuated-Coordinated                                  |
| Maximum v/c Ratio:  | 0.51  |
| Intersection Signal Delay:  | 2.8   |
| Intersection LOS:   | A   |
| Intersection Capacity Utilization                                 | 62.9%   |
| ICU Level of Service  | B   |
| Analysis Period (min)   | 15  |
| m Volume for 95th percentile queue is metered by upstream signal. |   |

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| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 0     | 0     | 5     | 74    | 0     | 42    | 18    | 408   | 77    | 47    | 688   | 8     |
| Future Volume (vph)        | 0     | 0     | 5     | 74    | 0     | 42    | 18    | 408   | 77    | 47    | 688   | 8     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 110   |       | 140   | 250   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 1     |       | 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  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       | 0.97  |       |       |       |       |       |       |       |       |       |       |
| Frt                        |       | 0.850 |       |       | 0.850 |       |       |       | 0.850 |       | 0.998 |       |
| Flt Protected              |       |       |       | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1837  | 1572  | 0     | 1736  | 1568  | 0     | 1805  | 3312  | 1524  | 1770  | 1774  | 0     |
| Flt Permitted              |       |       |       | 0.976 |       |       | 0.307 |       |       | 0.487 |       |       |
| Satd. Flow (perm)          | 1837  | 1572  | 0     | 1783  | 1568  | 0     | 583   | 3312  | 1524  | 907   | 1774  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 321   |       |       | 533   |       |       |       | 96    |       |       | 1     |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 349   |       |       | 546   |       |       | 571   |       |       |       | 400   |
| Travel Time (s)            |       | 9.5   |       |       | 14.9  |       |       | 8.7   |       |       |       | 6.1   |
| Confl. Bikes (#/hr)        |       |       | 1     |       |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%    | 0%    | 0%    | 4%    | 0%    | 3%    | 0%    | 9%    | 6%    | 2%    | 7%    | 0%    |
| Adj. Flow (vph)            | 0     | 0     | 5     | 80    | 0     | 46    | 20    | 443   | 84    | 51    | 748   | 9     |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 5     | 0     | 80    | 46    | 0     | 20    | 443   | 84    | 51    | 757   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 12    |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       |       | 0     |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       |       | 16    |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.04  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     |       | 1     | 2     | 1     | 1     |       | 2     |
| Detector Template          |       |       |       |       |       |       |       |       | Right |       |       | Thru  |
| Leading Detector (ft)      | 30    | 30    |       | 33    | 46    |       | 48    | 356   | 20    | 38    |       | 100   |
| Trailing Detector (ft)     | -5    | -5    |       | -5    | 0     |       | 0     | 165   | 0     | 0     |       | 0     |
| Detector 1 Position(ft)    | -5    | -5    |       | -5    | 0     |       | 0     | 165   | 0     | 0     |       | 0     |
| Detector 1 Size(ft)        | 35    | 35    |       | 38    | 46    |       | 48    | 6     | 20    | 38    |       | 6     |
| 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)    |       |       |       |       |       |       |       | 350   |       |       |       | 94    |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-----|-------|
| Detector 2 Extend (s)   |       |       |     |       |       |     |       | 0.0   |       |       |     | 0.0   |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | pm+pt | NA    | Perm  | pm+pt | NA  |       |
| Protected Phases        | 7     | 4     |     | 3     | 8     |     | 5     | 2     |       | 1     |     | 6     |
| Permitted Phases        | 4     |       |     | 8     |       |     | 2     |       | 2     | 6     |     |       |
| Detector Phase          | 7     | 4     |     | 3     | 8     |     | 5     | 2     | 2     | 1     |     | 6     |
| Switch Phase            |       |       |     |       |       |     |       |       |       |       |     |       |
| Minimum Initial (s)     | 3.6   | 5.0   |     | 3.6   | 5.0   |     | 3.6   | 13.1  | 13.1  | 4.1   |     | 13.1  |
| Minimum Split (s)       | 8.1   | 9.7   |     | 8.1   | 9.7   |     | 8.1   | 24.3  | 24.3  | 8.1   |     | 21.3  |
| Total Split (s)         | 8.1   | 9.8   |     | 10.0  | 11.7  |     | 8.2   | 61.8  | 61.8  | 8.4   |     | 62.0  |
| Total Split (%)         | 9.0%  | 10.9% |     | 11.1% | 13.0% |     | 9.1%  | 68.7% | 68.7% | 9.3%  |     | 68.9% |
| Maximum Green (s)       | 5.0   | 5.1   |     | 6.9   | 7.0   |     | 5.1   | 55.5  | 55.5  | 5.3   |     | 55.7  |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 4.5   | 4.5   | 3.0   |     | 4.5   |
| All-Red Time (s)        | 0.1   | 1.7   |     | 0.1   | 1.7   |     | 0.1   | 1.8   | 1.8   | 0.1   |     | 1.8   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Lost Time (s)     | 3.1   | 4.7   |     | 3.1   | 4.7   |     | 3.1   | 6.3   | 6.3   | 3.1   |     | 6.3   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  |     | Lag   |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |       |       |     |       |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.5   | 2.5   | 2.0   |     | 2.5   |
| Recall Mode             | None  | None  |     | None  | None  |     | None  | C-Min | C-Min | None  |     | C-Min |
| Act Effct Green (s)     |       | 5.0   |     | 9.2   | 7.8   |     | 74.2  | 69.3  | 69.3  | 75.1  |     | 71.0  |
| Actuated g/C Ratio      |       | 0.06  |     | 0.10  | 0.09  |     | 0.82  | 0.77  | 0.77  | 0.83  |     | 0.79  |
| v/c Ratio               |       | 0.01  |     | 0.44  | 0.07  |     | 0.04  | 0.17  | 0.07  | 0.06  |     | 0.54  |
| Control Delay           |       | 0.0   |     | 44.2  | 0.2   |     | 1.0   | 2.2   | 0.9   | 1.5   |     | 4.8   |
| Queue Delay             |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Delay             |       | 0.0   |     | 44.2  | 0.2   |     | 1.0   | 2.2   | 0.9   | 1.5   |     | 4.8   |
| LOS                     |       | A     |     | D     | A     |     | A     | A     | A     | A     |     | A     |
| Approach Delay          |       |       |     |       | 28.2  |     |       | 2.0   |       |       |     | 4.6   |
| Approach LOS            |       |       |     |       | C     |     |       | A     |       |       |     | A     |
| 90th %ile Green (s)     | 0.0   | 5.0   |     | 6.9   | 15.0  |     | 5.2   | 55.5  | 55.5  | 5.4   |     | 55.7  |
| 90th %ile Term Code     | Skip  | Min   |     | Max   | Hold  |     | Max   | Coord | Coord | Max   |     | Coord |
| 70th %ile Green (s)     | 0.0   | 0.0   |     | 9.5   | 7.9   |     | 4.8   | 62.9  | 62.9  | 5.1   |     | 63.2  |
| 70th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 50th %ile Green (s)     | 0.0   | 0.0   |     | 7.9   | 6.3   |     | 0.0   | 64.7  | 64.7  | 4.9   |     | 72.7  |
| 50th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Skip  | Coord | Coord | Gap   |     | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   |     | 7.1   | 0.0   |     | 0.0   | 73.5  | 73.5  | 0.0   |     | 73.5  |
| 30th %ile Term Code     | Skip  | Skip  |     | Gap   | Skip  |     | Skip  | Coord | Coord | Skip  |     | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 83.7  | 83.7  | 0.0   |     | 83.7  |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  |     | Skip  | Coord | Coord | Skip  |     | Coord |
| Stops (vph)             |       | 0     |     | 66    | 0     |     | 2     | 59    | 5     | 5     |     | 172   |
| Fuel Used(gal)          |       | 0     |     | 1     | 0     |     | 0     | 2     | 0     | 0     |     | 6     |
| CO Emissions (g/hr)     |       | 1     |     | 88    | 14    |     | 7     | 170   | 25    | 22    |     | 447   |
| NOx Emissions (g/hr)    |       | 0     |     | 17    | 3     |     | 1     | 33    | 5     | 4     |     | 87    |
| VOC Emissions (g/hr)    |       | 0     |     | 20    | 3     |     | 2     | 39    | 6     | 5     |     | 104   |
| Dilemma Vehicles (#)    |       | 0     |     | 0     | 0     |     | 0     | 10    | 0     | 0     |     | 44    |
| Queue Length 50th (ft)  |       | 0     |     | 44    | 0     |     | 0     | 1     | 0     | 4     |     | 91    |
| Queue Length 95th (ft)  |       | 0     |     | 80    | 0     |     | m2    | m22   | m0    | m4    |     | 123   |
| Internal Link Dist (ft) |       | 269   |     |       | 466   |     |       | 491   |       |       |     | 320   |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 110   |       | 140   | 250   |     |       |
| Base Capacity (vph)     |       | 391   |     | 188   | 633   |     | 551   | 2550  | 1196  | 807   |     | 1400  |

Lanes, Volumes, Timings

228: Walmart

07/07/2020

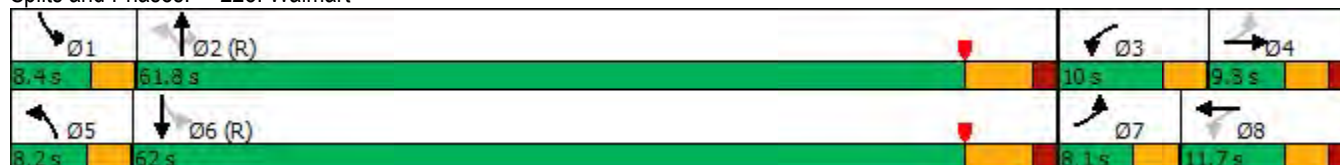


| Lane Group             | EBL | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|-----|------|-----|------|------|-----|------|------|------|------|------|-----|
| Starvation Cap Reductn |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Spillback Cap Reductn  |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Storage Cap Reductn    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Reduced v/c Ratio      |     | 0.01 |     | 0.43 | 0.07 |     | 0.04 | 0.17 | 0.07 | 0.06 | 0.54 |     |

Intersection Summary

|   |  |
|---|--|
| Area Type:  | Other  |
| Cycle Length:   | 90   |
| Actuated Cycle Length:  | 90   |
| Offset:   | 76 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow |
| Natural Cycle:  | 65   |
| Control Type:   | Actuated-Coordinated   |
| Maximum v/c Ratio:  | 0.54   |
| Intersection Signal Delay:  | 5.6  |
| Intersection LOS:   | A  |
| Intersection Capacity Utilization                                 | 59.0%  |
| ICU Level of Service  | B  |
| Analysis Period (min)   | 15   |
| m Volume for 95th percentile queue is metered by upstream signal. |  |

Splits and Phases: 228: Walmart



Lanes, Volumes, Timings  
3: N Rd. (CT-140)

07/07/2020

|                                   | →            | ↘     | ↙    | ←                      | ↖    | ↗     |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group                        | EBT          | EBR   | WBL  | WBT                    | NBL  | NBR   |
| Lane Configurations               | ↑↑↑          |       |      | ↑↑                     |      | ↗     |
| Traffic Volume (vph)              | 1351         | 0     | 0    | 952                    | 0    | 97    |
| Future Volume (vph)               | 1351         | 0     | 0    | 952                    | 0    | 97    |
| Ideal Flow (vphpl)                | 1900         | 1900  | 1900 | 1900                   | 1900 | 1900  |
| Storage Length (ft)               |              | 0     | 0    |                        | 0    | 0     |
| Storage Lanes                     |              | 0     | 0    |                        | 0    | 1     |
| Taper Length (ft)                 |              |       | 25   |                        | 25   |       |
| Lane Util. Factor                 | 0.91         | 1.00  | 1.00 | 0.95                   | 1.00 | 1.00  |
| Frt                               |              |       |      |                        |      | 0.865 |
| <b>Flt Protected</b>              |              |       |      |                        |      |       |
| Satd. Flow (prot)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| <b>Flt Permitted</b>              |              |       |      |                        |      |       |
| Satd. Flow (perm)                 | 5085         | 0     | 0    | 3539                   | 0    | 1611  |
| Link Speed (mph)                  | 35           |       |      | 35                     | 30   |       |
| Link Distance (ft)                | 323          |       |      | 381                    | 386  |       |
| Travel Time (s)                   | 6.3          |       |      | 7.4                    | 8.8  |       |
| Peak Hour Factor                  | 0.92         | 0.92  | 0.92 | 0.92                   | 0.92 | 0.92  |
| Adj. Flow (vph)                   | 1468         | 0     | 0    | 1035                   | 0    | 105   |
| <b>Shared Lane Traffic (%)</b>    |              |       |      |                        |      |       |
| Lane Group Flow (vph)             | 1468         | 0     | 0    | 1035                   | 0    | 105   |
| Enter Blocked Intersection        | No           | No    | No   | No                     | No   | No    |
| Lane Alignment                    | Left         | Right | Left | Left                   | Left | Right |
| Median Width(ft)                  | 0            |       |      | 0                      | 0    |       |
| Link Offset(ft)                   | 0            |       |      | 0                      | 0    |       |
| Crosswalk Width(ft)               | 16           |       |      | 16                     | 16   |       |
| <b>Two way Left Turn Lane</b>     |              |       |      |                        |      |       |
| Headway Factor                    | 1.00         | 1.00  | 1.00 | 1.00                   | 1.00 | 1.00  |
| Turning Speed (mph)               |              | 9     | 15   |                        | 15   | 9     |
| Sign Control                      | Free         |       |      | Free                   | Stop |       |
| <b>Intersection Summary</b>       |              |       |      |                        |      |       |
| Area Type:                        | Other        |       |      |                        |      |       |
| Control Type:                     | Unsignalized |       |      |                        |      |       |
| Intersection Capacity Utilization | 38.8%        |       |      | ICU Level of Service A |      |       |
| Analysis Period (min)             | 15           |       |      |                        |      |       |

Lanes, Volumes, Timings

7: Eversource

07/07/2020

| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 110   | 0     | 140   | 10    | 10    | 20    | 44    | 907   | 0     | 1     | 593   | 44    |
| Future Volume (vph)        | 110   | 0     | 140   | 10    | 10    | 20    | 44    | 907   | 0     | 1     | 593   | 44    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 150   |       | 0     | 150   |       | 0     |
| Storage Lanes              | 1     |       | 0     | 0     |       | 0     | 1     |       | 0     | 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 |       |       | 0.932 |       |       |       |       |       |       | 0.990 |
| Flt Protected              | 0.950 |       |       |       | 0.988 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 0     | 0     | 1715  | 0     | 1770  | 1863  | 0     | 1770  | 1844  | 0     |
| Flt Permitted              | 0.893 |       |       |       | 0.834 |       | 0.315 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1663  | 1583  | 0     | 0     | 1448  | 0     | 587   | 1863  | 0     | 1770  | 1844  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 375   |       |       | 22    |       |       |       |       |       |       | 9     |
| Link Speed (mph)           |       | 30    |       |       | 30    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 335   |       |       | 295   |       |       | 682   |       |       |       | 908   |
| Travel Time (s)            |       | 7.6   |       |       | 6.7   |       |       | 10.3  |       |       |       | 13.8  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 120   | 0     | 152   | 11    | 11    | 22    | 48    | 986   | 0     | 1     | 645   | 48    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 120   | 152   | 0     | 0     | 44    | 0     | 48    | 986   | 0     | 1     | 693   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 20    |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       | 1     | 2     |       |
| Detector Template          | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       | Left  | Thru  |       |
| Leading Detector (ft)      | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       | 20    | 100   |       |
| Trailing Detector (ft)     | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Position(ft)    | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 0     |       |
| Detector 1 Size(ft)        | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       | 20    | 6     |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex |       | 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   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       | 94    |       |       | 94    |       |       | 94    |       |       | 94    |       |
| Detector 2 Size(ft)        |       | 6     |       |       | 6     |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |       | 0.0   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    |       | pm+pt | NA    |       | Prot  | NA    |       |
| Protected Phases           |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases           | 4     |       |       | 8     |       |       | 2     |       |       |       | 6     |       |

Lanes, Volumes, Timings

7: Eversource

07/07/2020

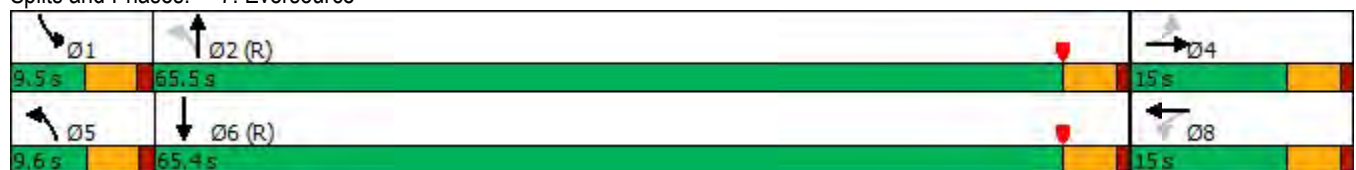


| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Detector Phase          | 4     | 4     |     | 8     | 8     |     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |     |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     | 5.0   | 5.0   |     |
| Minimum Split (s)       | 9.5   | 9.5   |     | 9.5   | 9.5   |     | 9.5   | 22.5  |     | 9.5   | 22.5  |     |
| Total Split (s)         | 15.0  | 15.0  |     | 15.0  | 15.0  |     | 9.6   | 65.5  |     | 9.5   | 65.4  |     |
| Total Split (%)         | 16.7% | 16.7% |     | 16.7% | 16.7% |     | 10.7% | 72.8% |     | 10.6% | 72.7% |     |
| Maximum Green (s)       | 10.5  | 10.5  |     | 10.5  | 10.5  |     | 5.1   | 61.0  |     | 5.0   | 60.9  |     |
| Yellow Time (s)         | 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   |     |
| 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                |       |       |     |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 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 |     | None  | C-Max |     |
| Act Effct Green (s)     | 9.8   | 9.8   |     |       | 9.8   |     | 70.3  | 69.3  |     | 5.2   | 65.5  |     |
| Actuated g/C Ratio      | 0.11  | 0.11  |     |       | 0.11  |     | 0.78  | 0.77  |     | 0.06  | 0.73  |     |
| v/c Ratio               | 0.67  | 0.30  |     |       | 0.25  |     | 0.09  | 0.69  |     | 0.01  | 0.52  |     |
| Control Delay           | 56.9  | 1.5   |     |       | 25.9  |     | 2.5   | 7.4   |     | 41.0  | 7.6   |     |
| Queue Delay             | 0.0   | 0.0   |     |       | 0.0   |     | 0.0   | 0.1   |     | 0.0   | 0.0   |     |
| Total Delay             | 56.9  | 1.5   |     |       | 25.9  |     | 2.5   | 7.5   |     | 41.0  | 7.6   |     |
| LOS                     | E     | A     |     |       | C     |     | A     | A     |     | D     | A     |     |
| Approach Delay          |       | 26.0  |     |       | 25.9  |     |       | 7.2   |     |       | 7.6   |     |
| Approach LOS            |       | C     |     |       | C     |     |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 10.5  | 10.5  |     | 10.5  | 10.5  |     | 5.1   | 61.0  |     | 5.0   | 60.9  |     |
| 90th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 10.5  | 10.5  |     | 10.5  | 10.5  |     | 5.1   | 70.5  |     | 0.0   | 60.9  |     |
| 70th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Max   | Coord |     | Skip  | Coord |     |
| 50th %ile Green (s)     | 10.5  | 10.5  |     | 10.5  | 10.5  |     | 5.1   | 70.5  |     | 0.0   | 60.9  |     |
| 50th %ile Term Code     | Max   | Max   |     | Hold  | Hold  |     | Max   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 10.1  | 10.1  |     | 10.1  | 10.1  |     | 0.0   | 70.9  |     | 0.0   | 70.9  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 7.3   | 7.3   |     | 7.3   | 7.3   |     | 0.0   | 73.7  |     | 0.0   | 73.7  |     |
| 10th %ile Term Code     | Gap   | Gap   |     | Hold  | Hold  |     | Skip  | Coord |     | Skip  | Coord |     |
| Stops (vph)             | 101   | 0     |     |       | 24    |     | 7     | 346   |     | 2     | 232   |     |
| Fuel Used(gal)          | 2     | 0     |     |       | 0     |     | 0     | 10    |     | 0     | 8     |     |
| CO Emissions (g/hr)     | 148   | 29    |     |       | 30    |     | 21    | 676   |     | 3     | 533   |     |
| NOx Emissions (g/hr)    | 29    | 6     |     |       | 6     |     | 4     | 132   |     | 1     | 104   |     |
| VOC Emissions (g/hr)    | 34    | 7     |     |       | 7     |     | 5     | 157   |     | 1     | 124   |     |
| Dilemma Vehicles (#)    | 0     | 0     |     |       | 0     |     | 0     | 61    |     | 0     | 81    |     |
| Queue Length 50th (ft)  | 66    | 0     |     |       | 11    |     | 3     | 72    |     | 1     | 145   |     |
| Queue Length 95th (ft)  | #136  | 0     |     |       | 43    |     | m9    | 434   |     | m0    | m159  |     |
| Internal Link Dist (ft) |       | 255   |     |       | 215   |     |       | 602   |     |       | 828   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 150   |       |     | 150   |       |     |
| Base Capacity (vph)     | 194   | 515   |     |       | 188   |     | 527   | 1434  |     | 102   | 1343  |     |
| Starvation Cap Reductn  | 0     | 0     |     |       | 0     |     | 0     | 42    |     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     |     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.62  | 0.30  |     |       | 0.23  |     | 0.09  | 0.71  |     | 0.01  | 0.52  |     |

Intersection Summary

|                                    |   |
|------------------------------------|---|
| Area Type:                         | Other   |
| Cycle Length:                      | 90  |
| Actuated Cycle Length:             | 90  |
| Offset:                            | 24 (27%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow   |
| Natural Cycle:                     | 70  |
| Control Type:                      | Actuated-Coordinated  |
| Maximum v/c Ratio:                 | 0.69  |
| Intersection Signal Delay:         | 10.3  |
| Intersection LOS:                  | B   |
| Intersection Capacity Utilization: | 68.0%   |
| ICU Level of Service:              | C   |
| Analysis Period (min):             | 15  |
| #                                  | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                  | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 7: Eversource



Lanes, Volumes, Timings

13: Site 1

07/07/2020



| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 10    | 40    | 47    | 764  | 570   | 12    |
| Future Volume (vph)        | 10    | 40    | 47    | 764  | 570   | 12    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Frt                        | 0.892 |       |       |      | 0.997 |       |
| Flt Protected              | 0.990 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1645  | 0     | 1770  | 1863 | 1857  | 0     |
| Flt Permitted              | 0.990 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1645  | 0     | 1770  | 1863 | 1857  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 203   |       |       | 517  | 266   |       |
| Travel Time (s)            | 4.6   |       |       | 7.8  | 4.0   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 11    | 43    | 51    | 830  | 620   | 13    |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 54    | 0     | 51    | 830  | 633   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 23   | 23    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 50.2%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
17: Site 2

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




















| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 3     | 14    | 22    | 945  | 852   | 5     |
| Future Volume (vph)        | 3     | 14    | 22    | 945  | 852   | 5     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Storage Length (ft)        | 0     | 0     | 100   |      |       | 0     |
| Storage Lanes              | 1     | 0     | 1     |      |       | 0     |
| Taper Length (ft)          | 25    |       | 25    |      |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Frt                        | 0.887 |       |       |      | 0.999 |       |
| Flt Protected              | 0.992 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1639  | 0     | 1770  | 1863 | 1861  | 0     |
| Flt Permitted              | 0.992 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1639  | 0     | 1770  | 1863 | 1861  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 236   |       |       | 390  | 828   |       |
| Travel Time (s)            | 5.4   |       |       | 5.9  | 12.5  |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 3     | 15    | 24    | 1027 | 926   | 5     |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 18    | 0     | 24    | 1027 | 931   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

Intersection Summary

|                                   |                        |
|-----------------------------------|------------------------|
| Area Type:                        | Other                  |
| Control Type:                     | Unsignalized           |
| Intersection Capacity Utilization | 59.7%                  |
|                                   | ICU Level of Service B |
| Analysis Period (min)             | 15                     |

Lanes, Volumes, Timings  
21: Thompson Rd

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|                            |  |  |  |  |  |    |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |  |   |  |   |  |  |  |  |  |    |  |  |
| Traffic Volume (vph)       | 40  | 0   | 27  | 121   | 0   | 165   | 27  | 1404  | 35  | 125   | 1428  | 40  |
| Future Volume (vph)        | 40  | 0   | 27  | 121   | 0   | 165   | 27  | 1404  | 35  | 125   | 1428  | 40  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 100   | 0   |   | 0   | 0   |   | 0   |
| Storage Lanes              | 1   |   | 1   | 0   |   | 1   | 1   |   | 0   | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Frt                        |   |   | 0.850   |   |   | 0.850   |   | 0.996   |   |   | 0.996   |   |
| Flt Protected              | 0.950   |   |   | 0.950   |   | 0.950   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 1770  | 0   | 1583  | 0   | 1517  | 1495  | 1770  | 3332  | 0   | 1770  | 3395  | 0   |
| Flt Permitted              | 0.625   |   |   | 0.950   |   | 0.140   |   |   |   | 0.950   |   |   |
| Satd. Flow (perm)          | 1164  | 0   | 1583  | 0   | 1517  | 1495  | 261   | 3332  | 0   | 1770  | 3395  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 182   |   |   | 119   |   | 4   |   |   | 7   |   |
| Link Speed (mph)           |   | 30  |   |   | 25  |   |   | 45  |   |   | 45  |   |
| Link Distance (ft)         |   | 283   |   |   | 1258  |   |   | 264   |   |   | 430   |   |
| Travel Time (s)            |   | 6.4   |   |   | 34.3  |   |   | 4.0   |   |   | 6.5   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 2%  | 2%  | 2%  | 19%   | 2%  | 8%  | 2%  | 8%  | 4%  | 2%  | 6%  | 2%  |
| Adj. Flow (vph)            | 43  | 0   | 29  | 132   | 0   | 179   | 29  | 1526  | 38  | 136   | 1552  | 43  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 43  | 0   | 29  | 0   | 132   | 179   | 29  | 1564  | 0   | 136   | 1595  | 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)           |   | 12  |   |   | 30  |   |   | 12  |   |   | 20  |   |
| 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   | 15  |   | 9   |
| Number of Detectors        | 1   |   | 1   | 1   | 2   | 1   | 1   | 2   |   | 1   | 0   |   |
| Detector Template          | Left  |   | Right   |   | Thru  |   | Left  |   |   |   |   |   |
| Leading Detector (ft)      | 20  |   | 20  | 34  | 100   | 34  | 20  | 100   |   | 34  | 0   |   |
| 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  |   | 20  | 34  | 6   | 34  | 20  | 6   |   | 34  | 6   |   |
| 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   | 8.0   | 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                  | D.Pm  |   | Perm  | Prot  | NA  | custom  | Perm  | NA  |   | Prot  | NA  |   |
| Protected Phases           |   |   |   | 4   | 8   | 5   |   | 6   |   | 5   | 1 2 5   |   |

| Lane Group                 | Ø1 | Ø2 |
|----------------------------|----|----|
| 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  | 2  |

Lanes, Volumes, Timings  
21: Thompson Rd

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| Lane Group              | EBL   | EBT  | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT  | SBR |
|-------------------------|-------|------|-------|-------|-------|-------|-------|-------|-----|-------|------|-----|
| Permitted Phases        | 4     |      | 4     |       |       | 4     | 6     |       |     |       |      |     |
| Detector Phase          | 4     |      | 4     | 4     | 8     | 4     | 6     | 6     |     | 5     |      |     |
| Switch Phase            |       |      |       |       |       |       |       |       |     |       |      |     |
| Minimum Initial (s)     | 7.0   |      | 7.0   | 7.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 5.0   |      |     |
| Minimum Split (s)       | 12.6  |      | 12.6  | 12.6  | 22.5  | 10.2  | 21.2  | 21.2  |     | 10.2  |      |     |
| Total Split (s)         | 22.5  |      | 22.5  | 22.5  | 22.5  | 13.4  | 54.1  | 54.1  |     | 13.4  |      |     |
| Total Split (%)         | 25.0% |      | 25.0% | 25.0% | 25.0% | 14.9% | 60.1% | 60.1% |     | 14.9% |      |     |
| Maximum Green (s)       | 16.9  |      | 16.9  | 16.9  | 18.0  | 8.2   | 47.9  | 47.9  |     | 8.2   |      |     |
| Yellow Time (s)         | 3.0   |      | 3.0   | 3.0   | 3.5   | 3.0   | 4.8   | 4.8   |     | 3.0   |      |     |
| All-Red Time (s)        | 2.6   |      | 2.6   | 2.6   | 1.0   | 2.2   | 1.4   | 1.4   |     | 2.2   |      |     |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |      |     |
| Total Lost Time (s)     | 5.6   |      | 5.6   |       | 4.5   | 5.2   | 6.2   | 6.2   |     | 5.2   |      |     |
| Lead/Lag                |       |      |       |       |       | Lead  | Lag   | Lag   |     | Lead  |      |     |
| Lead-Lag Optimize?      |       |      |       |       |       |       |       |       |     |       |      |     |
| Vehicle Extension (s)   | 1.5   |      | 1.5   | 1.5   | 3.0   | 1.5   | 2.5   | 2.5   |     | 1.5   |      |     |
| Recall Mode             | None  |      | None  | None  | None  | None  | C-Min | C-Min |     | None  |      |     |
| Walk Time (s)           |       |      |       |       | 7.0   |       |       |       |     |       |      |     |
| Flash Dont Walk (s)     |       |      |       |       | 11.0  |       |       |       |     |       |      |     |
| Pedestrian Calls (#/hr) |       |      |       |       | 0     |       |       |       |     |       |      |     |
| Act Effct Green (s)     | 16.9  |      | 16.9  |       | 18.0  | 30.6  | 48.0  | 48.0  |     | 8.1   | 60.9 |     |
| Actuated g/C Ratio      | 0.19  |      | 0.19  |       | 0.20  | 0.34  | 0.53  | 0.53  |     | 0.09  | 0.68 |     |
| v/c Ratio               | 0.20  |      | 0.07  |       | 0.44  | 0.31  | 0.21  | 0.88  |     | 0.86  | 0.69 |     |
| Control Delay           | 33.6  |      | 0.3   |       | 36.8  | 9.7   | 13.6  | 18.5  |     | 69.3  | 7.6  |     |
| Queue Delay             | 0.0   |      | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.4   |     | 0.0   | 0.1  |     |
| Total Delay             | 33.6  |      | 0.3   |       | 36.8  | 9.7   | 13.6  | 18.9  |     | 69.3  | 7.7  |     |
| LOS                     | C     |      | A     |       | D     | A     | B     | B     |     | E     | A    |     |
| Approach Delay          |       | 20.2 |       |       | 21.2  |       |       | 18.8  |     |       | 12.5 |     |
| Approach LOS            |       | C    |       |       | C     |       |       | B     |     |       | B    |     |
| 90th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 8.2   | 47.9  | 47.9  |     | 8.2   |      |     |
| 90th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 70th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 8.2   | 47.9  | 47.9  |     | 8.2   |      |     |
| 70th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 50th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 8.2   | 47.9  | 47.9  |     | 8.2   |      |     |
| 50th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 30th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 8.2   | 47.9  | 47.9  |     | 8.2   |      |     |
| 30th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Max   | Coord | Coord |     | Max   |      |     |
| 10th %ile Green (s)     | 16.9  |      | 16.9  | 16.9  | 18.0  | 7.5   | 48.6  | 48.6  |     | 7.5   |      |     |
| 10th %ile Term Code     | Hold  |      | Hold  | Hold  | Max   | Gap   | Coord | Coord |     | Gap   |      |     |
| Stops (vph)             | 34    |      | 0     |       | 104   | 46    | 13    | 1019  |     | 109   | 332  |     |
| Fuel Used(gal)          | 1     |      | 0     |       | 3     | 2     | 0     | 25    |     | 3     | 11   |     |
| CO Emissions (g/hr)     | 38    |      | 4     |       | 182   | 159   | 26    | 1748  |     | 242   | 734  |     |
| NOx Emissions (g/hr)    | 7     |      | 1     |       | 35    | 31    | 5     | 340   |     | 47    | 143  |     |
| VOC Emissions (g/hr)    | 9     |      | 1     |       | 42    | 37    | 6     | 405   |     | 56    | 170  |     |
| Dilemma Vehicles (#)    | 0     |      | 0     |       | 0     | 0     | 0     | 102   |     | 0     | 162  |     |
| Queue Length 50th (ft)  | 21    |      | 0     |       | 66    | 23    | 7     | 341   |     | 84    | 104  |     |
| Queue Length 95th (ft)  | 51    |      | 0     |       | 122   | 70    | m8    | m213  |     | m94   | m120 |     |
| Internal Link Dist (ft) |       | 203  |       |       | 1178  |       |       | 184   |     |       | 350  |     |
| Turn Bay Length (ft)    |       |      |       |       |       | 100   |       |       |     |       |      |     |
| Base Capacity (vph)     | 218   |      | 445   |       | 303   | 586   | 138   | 1780  |     | 161   | 2299 |     |

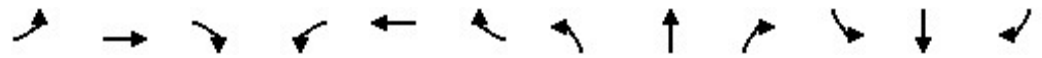
Lanes, Volumes, Timings  
21: Thompson Rd

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| Lane Group              | Ø1   | Ø2    |
|-------------------------|------|-------|
| Permitted Phases        |      |       |
| Detector Phase          |      |       |
| Switch Phase            |      |       |
| Minimum Initial (s)     | 5.0  | 15.0  |
| Minimum Split (s)       | 11.6 | 21.2  |
| Total Split (s)         | 20.6 | 46.9  |
| Total Split (%)         | 23%  | 52%   |
| Maximum Green (s)       | 14.0 | 40.7  |
| Yellow Time (s)         | 3.0  | 4.8   |
| All-Red Time (s)        | 3.6  | 1.4   |
| Lost Time Adjust (s)    |      |       |
| Total Lost Time (s)     |      |       |
| Lead/Lag                | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |
| Vehicle Extension (s)   | 1.5  | 2.5   |
| Recall Mode             | None | C-Min |
| 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)     | 14.0 | 40.7  |
| 90th %ile Term Code     | Max  | Coord |
| 70th %ile Green (s)     | 14.0 | 40.7  |
| 70th %ile Term Code     | Max  | Coord |
| 50th %ile Green (s)     | 14.0 | 40.7  |
| 50th %ile Term Code     | Max  | Coord |
| 30th %ile Green (s)     | 12.4 | 42.3  |
| 30th %ile Term Code     | Gap  | Coord |
| 10th %ile Green (s)     | 8.7  | 46.0  |
| 10th %ile Term Code     | Gap  | Coord |
| 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)     |      |       |

Lanes, Volumes, Timings  
21: Thompson Rd

07/07/2020

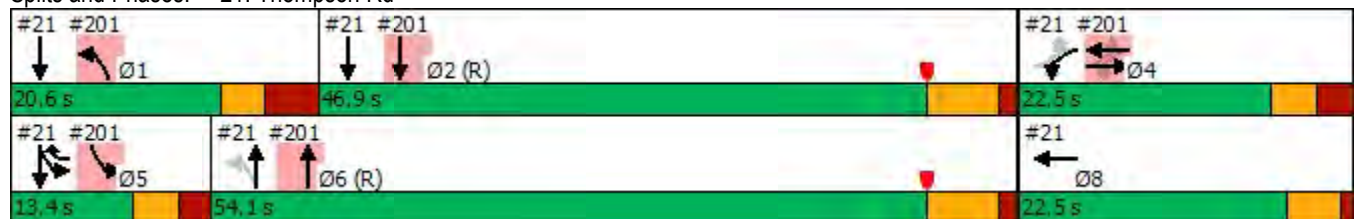


| Lane Group             | EBL  | EBT | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|------|-----|------|-----|------|------|------|------|-----|------|------|-----|
| Starvation Cap Reductn | 0    |     | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 57   |     |
| Spillback Cap Reductn  | 0    |     | 0    |     | 0    | 1    | 0    | 32   |     | 0    | 0    |     |
| Storage Cap Reductn    | 0    |     | 0    |     | 0    | 0    | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      | 0.20 |     | 0.07 |     | 0.44 | 0.31 | 0.21 | 0.89 |     | 0.84 | 0.71 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 81.0%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: Thompson Rd



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| Lane Group             | Ø1 | Ø2 |
|------------------------|----|----|
| Starvation Cap Reductn |    |    |
| Spillback Cap Reductn  |    |    |
| Storage Cap Reductn    |    |    |
| Reduced v/c Ratio      |    |    |
| Intersection Summary   |    |    |

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Lanes, Volumes, Timings

23: Site 4

07/07/2020



| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT   | SBR   |
|----------------------------|-------|-------|-------|------|-------|-------|
| Lane Configurations        |       |       |       |      |       |       |
| Traffic Volume (vph)       | 38    | 25    | 30    | 1428 | 1530  | 46    |
| Future Volume (vph)        | 38    | 25    | 30    | 1428 | 1530  | 46    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Storage Length (ft)        | 0     | 0     | 100   |      |       | 0     |
| Storage Lanes              | 1     | 1     | 1     |      |       | 0     |
| Taper Length (ft)          | 25    |       | 25    |      |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Frt                        |       | 0.850 |       |      | 0.996 |       |
| Flt Protected              | 0.950 |       | 0.950 |      |       |       |
| Satd. Flow (prot)          | 1770  | 1583  | 1770  | 1863 | 1855  | 0     |
| Flt Permitted              | 0.950 |       | 0.950 |      |       |       |
| Satd. Flow (perm)          | 1770  | 1583  | 1770  | 1863 | 1855  | 0     |
| Link Speed (mph)           | 30    |       |       | 45   | 45    |       |
| Link Distance (ft)         | 274   |       |       | 934  | 476   |       |
| Travel Time (s)            | 6.2   |       |       | 14.2 | 7.2   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  |
| Adj. Flow (vph)            | 41    | 27    | 33    | 1552 | 1663  | 50    |
| Shared Lane Traffic (%)    |       |       |       |      |       |       |
| Lane Group Flow (vph)      | 41    | 27    | 33    | 1552 | 1713  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No   | No    | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left  | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12    |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0     |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16    |       |
| Two way Left Turn Lane     |       |       |       |      |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |       | 9     |
| Sign Control               | Stop  |       |       | Free | Free  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 93.3%        |
| ICU Level of Service              | F            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings

27:

07/07/2020



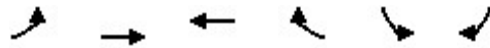
| Lane Group                 | WBL  | WBR   | NBT  | NBR   | SBL  | SBT  |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations        |      | ↗     | ↗    | ↗     |      | ↗    |
| Traffic Volume (vph)       | 0    | 82    | 1444 | 10    | 0    | 1689 |
| Future Volume (vph)        | 0    | 82    | 1444 | 10    | 0    | 1689 |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Storage Length (ft)        | 0    | 0     |      | 150   | 0    |      |
| Storage Lanes              | 0    | 1     |      | 1     | 0    |      |
| Taper Length (ft)          | 25   |       |      |       | 25   |      |
| Lane Util. Factor          | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Frt                        |      | 0.865 |      | 0.850 |      |      |
| Flt Protected              |      |       |      |       |      |      |
| Satd. Flow (prot)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Flt Permitted              |      |       |      |       |      |      |
| Satd. Flow (perm)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Link Speed (mph)           | 30   |       | 45   |       |      | 45   |
| Link Distance (ft)         | 314  |       | 334  |       |      | 1978 |
| Travel Time (s)            | 7.1  |       | 5.1  |       |      | 30.0 |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92 |
| Adj. Flow (vph)            | 0    | 89    | 1570 | 11    | 0    | 1836 |
| Shared Lane Traffic (%)    |      |       |      |       |      |      |
| Lane Group Flow (vph)      | 0    | 89    | 1570 | 11    | 0    | 1836 |
| Enter Blocked Intersection | No   | No    | No   | No    | No   | No   |
| Lane Alignment             | Left | Right | Left | Right | Left | Left |
| Median Width(ft)           | 0    |       | 12   |       |      | 12   |
| Link Offset(ft)            | 0    |       | 0    |       |      | 0    |
| Crosswalk Width(ft)        | 16   |       | 16   |       |      | 16   |
| Two way Left Turn Lane     |      |       |      |       |      |      |
| Headway Factor             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Turning Speed (mph)        | 15   | 9     |      | 9     | 15   |      |
| Sign Control               | Stop |       | Free |       |      | Free |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 92.2%        |
| ICU Level of Service              | F            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
29: Tromley Rd

07/07/2020



| Lane Group                 | EBL   | EBT  | WBT   | WBR   | SBL   | SBR   |
|----------------------------|-------|------|-------|-------|-------|-------|
| Lane Configurations        |       |      |       |       |       |       |
| Traffic Volume (vph)       | 44    | 214  | 116   | 5     | 15    | 124   |
| Future Volume (vph)        | 44    | 214  | 116   | 5     | 15    | 124   |
| Ideal Flow (vphpl)         | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 100   |      |       | 0     | 0     | 0     |
| Storage Lanes              | 1     |      |       | 0     | 1     | 0     |
| Taper Length (ft)          | 25    |      |       |       | 25    |       |
| Lane Util. Factor          | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |       |      | 0.995 |       | 0.879 |       |
| Flt Protected              | 0.950 |      |       |       | 0.995 |       |
| Satd. Flow (prot)          | 1770  | 1863 | 1853  | 0     | 1629  | 0     |
| Flt Permitted              | 0.950 |      |       |       | 0.995 |       |
| Satd. Flow (perm)          | 1770  | 1863 | 1853  | 0     | 1629  | 0     |
| Link Speed (mph)           |       | 35   | 35    |       | 30    |       |
| Link Distance (ft)         |       | 479  | 988   |       | 197   |       |
| Travel Time (s)            |       | 9.3  | 19.2  |       | 4.5   |       |
| Peak Hour Factor           | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 48    | 233  | 126   | 5     | 16    | 135   |
| Shared Lane Traffic (%)    |       |      |       |       |       |       |
| Lane Group Flow (vph)      | 48    | 233  | 131   | 0     | 151   | 0     |
| Enter Blocked Intersection | No    | No   | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left | Left  | Right | Left  | Right |
| Median Width(ft)           |       | 12   | 12    |       | 12    |       |
| Link Offset(ft)            |       | 0    | 0     |       | 0     |       |
| Crosswalk Width(ft)        |       | 16   | 16    |       | 16    |       |
| Two way Left Turn Lane     |       |      |       |       |       |       |
| Headway Factor             | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |      |       | 9     | 15    | 9     |
| Sign Control               |       | Free | Free  |       | Stop  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 28.2%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings

32:

07/07/2020



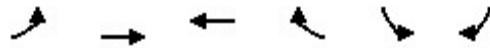
| Lane Group                 | WBL  | WBR   | NBT  | NBR   | SBL  | SBT  |
|----------------------------|------|-------|------|-------|------|------|
| Lane Configurations        |      | ↗     | ↗    | ↗     |      | ↗    |
| Traffic Volume (vph)       | 0    | 87    | 1230 | 15    | 0    | 1501 |
| Future Volume (vph)        | 0    | 87    | 1230 | 15    | 0    | 1501 |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Storage Length (ft)        | 0    | 0     |      | 100   | 0    |      |
| Storage Lanes              | 0    | 1     |      | 1     | 0    |      |
| Taper Length (ft)          | 25   |       |      |       | 25   |      |
| Lane Util. Factor          | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Frt                        |      | 0.865 |      | 0.850 |      |      |
| Flt Protected              |      |       |      |       |      |      |
| Satd. Flow (prot)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Flt Permitted              |      |       |      |       |      |      |
| Satd. Flow (perm)          | 0    | 1611  | 1863 | 1583  | 0    | 1863 |
| Link Speed (mph)           | 30   |       | 45   |       |      | 45   |
| Link Distance (ft)         | 231  |       | 308  |       |      | 1040 |
| Travel Time (s)            | 5.3  |       | 4.7  |       |      | 15.8 |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92 | 0.92  | 0.92 | 0.92 |
| Adj. Flow (vph)            | 0    | 95    | 1337 | 16    | 0    | 1632 |
| Shared Lane Traffic (%)    |      |       |      |       |      |      |
| Lane Group Flow (vph)      | 0    | 95    | 1337 | 16    | 0    | 1632 |
| Enter Blocked Intersection | No   | No    | No   | No    | No   | No   |
| Lane Alignment             | Left | Right | Left | Right | Left | Left |
| Median Width(ft)           | 0    |       | 8    |       |      | 8    |
| 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   |      |
| Sign Control               | Stop |       | Free |       |      | Free |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 82.3%        |
| ICU Level of Service              | E            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
34: Phelps Rd (CT-191)

07/07/2020



| Lane Group                 | EBL   | EBT  | WBT   | WBR   | SBL   | SBR   |
|----------------------------|-------|------|-------|-------|-------|-------|
| Lane Configurations        |       |      |       |       |       |       |
| Traffic Volume (vph)       | 41    | 110  | 53    | 3     | 15    | 119   |
| Future Volume (vph)        | 41    | 110  | 53    | 3     | 15    | 119   |
| Ideal Flow (vphpl)         | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 100   |      |       | 0     | 0     | 0     |
| Storage Lanes              | 1     |      |       | 0     | 1     | 0     |
| Taper Length (ft)          | 25    |      |       |       | 25    |       |
| Lane Util. Factor          | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |       |      | 0.993 |       | 0.880 |       |
| Flt Protected              | 0.950 |      |       |       | 0.995 |       |
| Satd. Flow (prot)          | 1770  | 1863 | 1850  | 0     | 1631  | 0     |
| Flt Permitted              | 0.950 |      |       |       | 0.995 |       |
| Satd. Flow (perm)          | 1770  | 1863 | 1850  | 0     | 1631  | 0     |
| Link Speed (mph)           |       | 40   | 30    |       | 30    |       |
| Link Distance (ft)         |       | 419  | 959   |       | 137   |       |
| Travel Time (s)            |       | 7.1  | 21.8  |       | 3.1   |       |
| Peak Hour Factor           | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 45    | 120  | 58    | 3     | 16    | 129   |
| Shared Lane Traffic (%)    |       |      |       |       |       |       |
| Lane Group Flow (vph)      | 45    | 120  | 61    | 0     | 145   | 0     |
| Enter Blocked Intersection | No    | No   | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left | Left  | Right | Left  | Right |
| Median Width(ft)           |       | 12   | 12    |       | 12    |       |
| Link Offset(ft)            |       | 0    | 0     |       | 0     |       |
| Crosswalk Width(ft)        |       | 16   | 16    |       | 16    |       |
| Two way Left Turn Lane     |       |      |       |       |       |       |
| Headway Factor             | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |      |       | 9     | 15    | 9     |
| Sign Control               |       | Free | Free  |       | Stop  |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 23.8%        |
| ICU Level of Service              | A            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings

38:

07/07/2020



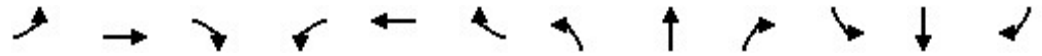
| Lane Group                 | EBL   | EBR   | NBL   | NBT  | SBT  | SBR   |
|----------------------------|-------|-------|-------|------|------|-------|
| Lane Configurations        |       |       |       |      |      |       |
| Traffic Volume (vph)       | 13    | 11    | 4     | 1219 | 1528 | 5     |
| Future Volume (vph)        | 13    | 11    | 4     | 1219 | 1528 | 5     |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Storage Length (ft)        | 0     | 50    | 100   |      |      | 100   |
| Storage Lanes              | 1     | 1     | 1     |      |      | 1     |
| Taper Length (ft)          | 25    |       | 25    |      |      |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Frt                        |       | 0.850 |       |      |      | 0.850 |
| Flt Protected              | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)          | 1770  | 1583  | 1770  | 1863 | 1863 | 1583  |
| Flt Permitted              | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (perm)          | 1770  | 1583  | 1770  | 1863 | 1863 | 1583  |
| Link Speed (mph)           | 30    |       |       | 45   | 45   |       |
| Link Distance (ft)         | 783   |       |       | 1377 | 2677 |       |
| Travel Time (s)            | 17.8  |       |       | 20.9 | 40.6 |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  |
| Adj. Flow (vph)            | 14    | 12    | 4     | 1325 | 1661 | 5     |
| Shared Lane Traffic (%)    |       |       |       |      |      |       |
| Lane Group Flow (vph)      | 14    | 12    | 4     | 1325 | 1661 | 5     |
| Enter Blocked Intersection | No    | No    | No    | No   | No   | No    |
| Lane Alignment             | Left  | Right | Left  | Left | Left | Right |
| Median Width(ft)           | 12    |       |       | 12   | 12   |       |
| Link Offset(ft)            | 0     |       |       | 0    | 0    |       |
| Crosswalk Width(ft)        | 16    |       |       | 16   | 16   |       |
| Two way Left Turn Lane     |       |       |       |      |      |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Turning Speed (mph)        | 15    | 9     | 15    |      |      | 9     |
| Sign Control               | Stop  |       |       | Free | Free |       |

Intersection Summary

|                                   |              |
|-----------------------------------|--------------|
| Area Type:                        | Other        |
| Control Type:                     | Unsignalized |
| Intersection Capacity Utilization | 90.4%        |
| ICU Level of Service              | E            |
| Analysis Period (min)             | 15           |

Lanes, Volumes, Timings  
 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↔     |       | ↖     | ↕     |       | ↗     | ↕     | ↗     |
| Traffic Volume (vph)       | 58    | 5     | 141   | 47    | 2     | 60    | 164   | 1396  | 49    | 62    | 1406  | 11    |
| Future Volume (vph)        | 58    | 5     | 141   | 47    | 2     | 60    | 164   | 1396  | 49    | 62    | 1406  | 11    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 100   | 0     |       | 0     | 0     |       | 0     | 700   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 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  | 0.95  | 0.95  | 1.00  | 0.95  | 0.95  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.926 |       |       | 0.995 |       |       |       | 0.999 |
| Flt Protected              |       | 0.956 |       |       | 0.979 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1736  | 1509  | 0     | 1722  | 0     | 1530  | 3362  | 0     | 1805  | 3404  | 0     |
| Flt Permitted              |       | 0.669 |       |       | 0.835 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 0     | 1215  | 1509  | 0     | 1469  | 0     | 1530  | 3362  | 0     | 1804  | 3404  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 182   |       | 60    |       |       | 6     |       |       |       | 1     |
| Link Speed (mph)           |       | 30    |       |       | 25    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 731   |       |       | 393   |       |       | 430   |       |       |       | 1397  |
| Travel Time (s)            |       | 16.6  |       |       | 10.7  |       |       | 6.5   |       |       |       | 21.2  |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 5%    | 0%    | 7%    | 0%    | 0%    | 0%    | 18%   | 7%    | 0%    | 0%    | 6%    | 0%    |
| Adj. Flow (vph)            | 63    | 5     | 153   | 51    | 2     | 65    | 178   | 1517  | 53    | 67    | 1528  | 12    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 68    | 153   | 0     | 118   | 0     | 178   | 1570  | 0     | 67    | 1540  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Right | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 24    |       |       |       | 30    |
| 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 0     |       | 1     | 2     |       |
| Detector Template          | Left  |       |       | Left  |       |       | Left  |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 29    | 29    | 20    | 29    |       | 34    | 0     |       | 29    | 306   |       |
| Trailing Detector (ft)     | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Position(ft)    | 0     | -5    | -5    | 0     | -5    |       | 0     | 0     |       | -5    | 150   |       |
| Detector 1 Size(ft)        | 20    | 34    | 34    | 20    | 34    |       | 34    | 6     |       | 34    | 6     |       |
| 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   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       |       |       |       |       | 300   |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       |       |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       |       |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       |       |       |       |       | 0.0   |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

|                            |    |
|----------------------------|----|
| Lane Group                 | Ø8 |
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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)      |    |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    |     | Prot  | NA    |     | Prot  | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |     | 1     | 6     |     | 5     | 2     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       |     |       |       |     |       |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     |       |     | 5     | 2     |     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |     | 5.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |     | 11.6  | 21.2  |     | 10.2  | 21.2  |     |
| Total Split (s)         | 22.5  | 22.5  | 22.5  | 22.5  | 22.5  |     | 20.6  | 54.1  |     | 13.4  | 46.9  |     |
| Total Split (%)         | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |     | 22.9% | 60.1% |     | 14.9% | 52.1% |     |
| Maximum Green (s)       | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 14.0  | 47.9  |     | 8.2   | 40.7  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 2.6   | 2.6   | 2.6   | 2.6   | 2.6   |     | 3.6   | 1.4   |     | 2.2   | 1.4   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.6   | 5.6   |       | 5.6   |     | 6.6   | 6.2   |     | 5.2   | 6.2   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |     |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |     |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |     |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 16.9  | 16.9  |       | 16.9  |     | 12.6  | 48.0  |     | 8.1   | 42.1  |     |
| Actuated g/C Ratio      |       | 0.19  | 0.19  |       | 0.19  |     | 0.14  | 0.53  |     | 0.09  | 0.47  |     |
| v/c Ratio               |       | 0.30  | 0.35  |       | 0.36  |     | 0.83  | 0.87  |     | 0.42  | 0.97  |     |
| Control Delay           |       | 35.7  | 5.7   |       | 20.6  |     | 69.6  | 11.0  |     | 46.3  | 38.3  |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 1.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 35.7  | 5.7   |       | 20.6  |     | 69.6  | 12.0  |     | 46.3  | 38.3  |     |
| LOS                     |       | D     | A     |       | C     |     | E     | B     |     | D     | D     |     |
| Approach Delay          |       | 14.9  |       |       | 20.6  |     |       | 17.9  |     |       | 38.7  |     |
| Approach LOS            |       | B     |       |       | C     |     |       | B     |     |       | D     |     |
| 90th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 14.0  | 47.9  |     | 8.2   | 40.7  |     |
| 90th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 14.0  | 47.9  |     | 8.2   | 40.7  |     |
| 70th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 50th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 14.0  | 47.9  |     | 8.2   | 40.7  |     |
| 50th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Max   | Coord |     | Max   | Coord |     |
| 30th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 12.4  | 47.9  |     | 8.2   | 42.3  |     |
| 30th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Gap   | Coord |     | Max   | Coord |     |
| 10th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |     | 8.7   | 48.6  |     | 7.5   | 46.0  |     |
| 10th %ile Term Code     | Hold  | Hold  | Hold  | Hold  | Hold  |     | Gap   | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 54    | 13    |       | 51    |     | 157   | 393   |     | 60    | 1128  |     |
| Fuel Used(gal)          |       | 1     | 1     |       | 1     |     | 5     | 12    |     | 2     | 38    |     |
| CO Emissions (g/hr)     |       | 78    | 73    |       | 71    |     | 331   | 849   |     | 132   | 2652  |     |
| NOx Emissions (g/hr)    |       | 15    | 14    |       | 14    |     | 64    | 165   |     | 26    | 516   |     |
| VOC Emissions (g/hr)    |       | 18    | 17    |       | 16    |     | 77    | 197   |     | 31    | 615   |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 107   |     | 0     | 98    |     |
| Queue Length 50th (ft)  |       | 34    | 0     |       | 28    |     | 110   | 85    |     | 40    | ~416  |     |
| Queue Length 95th (ft)  |       | 73    | 35    |       | 77    |     | m132  | 131   |     | m52   | m#592 |     |
| Internal Link Dist (ft) |       | 651   |       |       | 313   |     |       | 350   |     |       | 1317  |     |

Lanes, Volumes, Timings  
 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

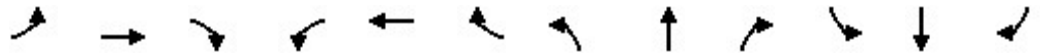
07/07/2020

|                         |      |
|-------------------------|------|
| Lane Group              | Ø8   |
| Turn Type               |      |
| Protected Phases        | 8    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 5.0  |
| Minimum Split (s)       | 22.5 |
| Total Split (s)         | 22.5 |
| Total Split (%)         | 25%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 3.5  |
| All-Red Time (s)        | 1.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                |      |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 11.0 |
| Pedestrian Calls (#/hr) | 0    |
| 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)     | 18.0 |
| 90th %ile Term Code     | Max  |
| 70th %ile Green (s)     | 18.0 |
| 70th %ile Term Code     | Max  |
| 50th %ile Green (s)     | 18.0 |
| 50th %ile Term Code     | Max  |
| 30th %ile Green (s)     | 18.0 |
| 30th %ile Term Code     | Max  |
| 10th %ile Green (s)     | 18.0 |
| 10th %ile Term Code     | Max  |
| 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) |      |

Lanes, Volumes, Timings

201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza

07/07/2020

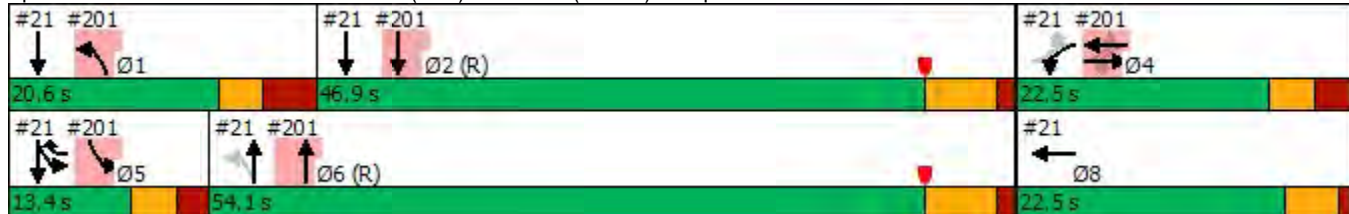


| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|-----|------|------|-----|------|-----|------|------|-----|------|------|-----|
| Turn Bay Length (ft)   |     |      | 100  |     |      |     |      |      |     | 700  |      |     |
| Base Capacity (vph)    |     | 228  | 431  |     | 324  |     | 238  | 1797 |     | 164  | 1591 |     |
| Starvation Cap Reductn |     | 0    | 0    |     | 0    |     | 0    | 76   |     | 0    | 0    |     |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      |     | 0.30 | 0.35 |     | 0.36 |     | 0.75 | 0.91 |     | 0.41 | 0.97 |     |

Intersection Summary

|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow   |
| Natural Cycle:                    | 90  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.97  |
| Intersection Signal Delay:        | 26.8  |
| Intersection LOS:                 | C   |
| Intersection Capacity Utilization | 76.7%   |
| ICU Level of Service              | D   |
| Analysis Period (min)             | 15  |
| ~                                 | Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 201: South Main St (Rt-5) & Main St (Rt-510)/Prospect Hill Plaza














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|                        |    |
|------------------------|----|
| Lane Group             | Ø8 |
| Turn Bay Length (ft)   |    |
| Base Capacity (vph)    |    |
| Starvation Cap Reductn |    |
| Spillback Cap Reductn  |    |
| Storage Cap Reductn    |    |
| Reduced v/c Ratio      |    |
| Intersection Summary   |    |

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Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020

|                            |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|
| Lane Group                 | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
| Lane Configurations        |  |   |  |  |  |  |
| Traffic Volume (vph)       | 110   | 62  | 1183  | 65  | 92  | 1409  |
| Future Volume (vph)        | 110   | 62  | 1183  | 65  | 92  | 1409  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 12  | 12  | 8   | 12  |
| Storage Length (ft)        | 0   | 0   |   | 250   | 75  |   |
| 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  |
| Ped Bike Factor            |   |   |   |   | 1.00  |   |
| Frt                        | 0.952   |   |   | 0.850   |   |   |
| Flt Protected              | 0.969   |   |   |   | 0.950   |   |
| Satd. Flow (prot)          | 1680  | 0   | 1743  | 1615  | 1564  | 1776  |
| Flt Permitted              | 0.969   |   |   |   | 0.074   |   |
| Satd. Flow (perm)          | 1680  | 0   | 1743  | 1615  | 122   | 1776  |
| Right Turn on Red          |   | Yes   |   | Yes   |   |   |
| Satd. Flow (RTOR)          | 24  |   |   | 71  |   |   |
| Link Speed (mph)           | 30  |   | 45  |   |   | 45  |
| Link Distance (ft)         | 419   |   | 1115  |   |   | 308   |
| Travel Time (s)            | 9.5   |   | 16.9  |   |   | 4.7   |
| Confl. Peds. (#/hr)        |   |   |   |   | 11  |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 4%  | 5%  | 9%  | 0%  | 0%  | 7%  |
| Adj. Flow (vph)            | 120   | 67  | 1286  | 71  | 100   | 1532  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 187   | 0   | 1286  | 71  | 100   | 1532  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Right   | Left  | Right   | Left  | Left  |
| Median Width(ft)           | 24  |   | 0   |   |   | 8   |
| 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  | 1.20  | 1.00  |
| Turning Speed (mph)        | 15  | 9   |   | 9   | 15  |   |
| Number of Detectors        | 1   |   | 0   | 0   | 0   | 0   |
| Detector Template          |   |   |   |   |   |   |
| Leading Detector (ft)      | 25  |   | 0   | 0   | 0   | 0   |
| Trailing Detector (ft)     | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | -5  |   | 0   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 30  |   | 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   |
| Turn Type                  | Prot  |   | NA  | pm+ov   | D.P+P   | NA  |
| Protected Phases           | 4   |   | 2   | 4   | 1   | 12  |
| Permitted Phases           |   |   |   | 2   | 2   |   |
| Detector Phase             | 4   |   |   |   |   |   |

Lanes, Volumes, Timings  
205: Phelps Rd (CT-191)

07/07/2020



| Lane Group              | WBL   | WBR | NBT   | NBR   | SBL   | SBT  |
|-------------------------|-------|-----|-------|-------|-------|------|
| Switch Phase            |       |     |       |       |       |      |
| Minimum Initial (s)     | 5.0   |     | 15.0  | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.4   |     | 22.8  | 9.4   | 9.0   |      |
| Total Split (s)         | 11.0  |     | 62.0  | 11.0  | 17.0  |      |
| Total Split (%)         | 12.2% |     | 68.9% | 12.2% | 18.9% |      |
| Maximum Green (s)       | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| Yellow Time (s)         | 3.0   |     | 4.8   | 3.0   | 3.0   |      |
| All-Red Time (s)        | 1.4   |     | 3.0   | 1.4   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0   |     | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.4   |     | 7.8   | 4.4   | 4.0   |      |
| Lead/Lag                |       |     | Lag   |       | Lead  |      |
| Lead-Lag Optimize?      |       |     |       |       |       |      |
| Vehicle Extension (s)   | 1.5   |     | 3.0   | 1.5   | 3.0   |      |
| Recall Mode             | None  |     | C-Max | None  | Max   |      |
| Act Effct Green (s)     | 6.6   |     | 54.2  | 68.6  | 71.0  | 75.0 |
| Actuated g/C Ratio      | 0.07  |     | 0.60  | 0.76  | 0.79  | 0.83 |
| v/c Ratio               | 1.29  |     | 1.23  | 0.06  | 0.33  | 1.04 |
| Control Delay           | 204.5 |     | 128.4 | 1.2   | 9.8   | 29.5 |
| Queue Delay             | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Delay             | 204.5 |     | 128.4 | 1.2   | 9.8   | 29.5 |
| LOS                     | F     |     | F     | A     | A     | C    |
| Approach Delay          | 204.5 |     | 121.7 |       |       | 28.3 |
| Approach LOS            | F     |     | F     |       |       | C    |
| 90th %ile Green (s)     | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| 90th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 70th %ile Green (s)     | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| 70th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 50th %ile Green (s)     | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| 50th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 30th %ile Green (s)     | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| 30th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| 10th %ile Green (s)     | 6.6   |     | 54.2  | 6.6   | 13.0  |      |
| 10th %ile Term Code     | Max   |     | Coord | Max   | MaxR  |      |
| Stops (vph)             | 111   |     | 753   | 6     | 39    | 455  |
| Fuel Used(gal)          | 8     |     | 53    | 1     | 1     | 17   |
| CO Emissions (g/hr)     | 583   |     | 3713  | 56    | 60    | 1185 |
| NOx Emissions (g/hr)    | 113   |     | 722   | 11    | 12    | 230  |
| VOC Emissions (g/hr)    | 135   |     | 861   | 13    | 14    | 275  |
| Dilemma Vehicles (#)    | 0     |     | 13    | 0     | 0     | 98   |
| Queue Length 50th (ft)  | ~124  |     | ~948  | 2     | 8     | ~942 |
| Queue Length 95th (ft)  | #257  |     | #1138 | m9    | m19   | m429 |
| Internal Link Dist (ft) | 339   |     | 1035  |       |       | 228  |
| Turn Bay Length (ft)    |       |     |       | 250   | 75    |      |
| Base Capacity (vph)     | 145   |     | 1049  | 1247  | 304   | 1480 |
| 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       | 1.29  |     | 1.23  | 0.06  | 0.33  | 1.04 |

Lanes, Volumes, Timings  
 205: Phelps Rd (CT-191)

07/07/2020

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 74 (82%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.29  
 Intersection Signal Delay: 78.6 Intersection LOS: E  
 Intersection Capacity Utilization 91.0% ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 205: Phelps Rd (CT-191)



Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

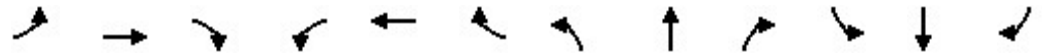
07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        | ↖     | ↖     | ↖↖    |       | ↖↖    |       | ↖↖    | ↖↖    |       | ↖     | ↖↖    | ↖     |
| Traffic Volume (vph)       | 570   | 367   | 1055  | 75    | 283   | 116   | 867   | 570   | 81    | 136   | 346   | 527   |
| Future Volume (vph)        | 570   | 367   | 1055  | 75    | 283   | 116   | 867   | 570   | 81    | 136   | 346   | 527   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 350   |       | 290   | 0     |       | 200   | 400   |       | 0     | 205   |       | 130   |
| Storage Lanes              | 1     |       | 2     | 0     |       | 1     | 2     |       | 0     | 2     |       | 1     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 0.95  | 0.95  | 0.88  | 0.95  | 0.95  | 0.95  | 0.97  | 0.95  | 0.95  | 1.00  | 0.95  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       | 1.00  |       | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.963 |       |       | 0.981 |       |       |       | 0.850 |
| Flt Protected              | 0.950 | 0.989 |       |       | 0.992 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1603  | 1731  | 2733  | 0     | 3146  | 0     | 3273  | 3289  | 0     | 1703  | 3374  | 1583  |
| Flt Permitted              | 0.950 | 0.989 |       |       | 0.992 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 1603  | 1731  | 2733  | 0     | 3146  | 0     | 3273  | 3289  | 0     | 1700  | 3374  | 1583  |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 372   |       | 39    |       |       | 17    |       |       |       | 177   |
| Link Speed (mph)           |       | 45    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 734   |       |       | 813   |       |       | 1397  |       |       |       | 571   |
| Travel Time (s)            |       | 11.1  |       |       | 15.8  |       |       | 21.2  |       |       |       | 8.7   |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 2%    | 4%    | 0%    | 10%   | 15%   | 7%    | 7%    | 10%   | 6%    | 7%    | 2%    |
| Adj. Flow (vph)            | 620   | 399   | 1147  | 82    | 308   | 126   | 942   | 620   | 88    | 148   | 376   | 573   |
| Shared Lane Traffic (%)    | 19%   |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 502   | 517   | 1147  | 0     | 516   | 0     | 942   | 708   | 0     | 148   | 376   | 573   |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 33    |       |       | 12    |       |       | 32    |       |       |       | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 2     |       | 1     | 2     | 0     |
| Detector Template          |       |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 34    | 29    | 20    | 48    |       | 34    | 326   |       | 39    | 326   | 0     |
| Trailing Detector (ft)     | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Position(ft)    | -5    | 0     | -10   | 0     | 0     |       | 0     | 150   |       | 5     | 150   | 0     |
| Detector 1 Size(ft)        | 34    | 34    | 39    | 20    | 48    |       | 34    | 6     |       | 34    | 6     | 20    |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 8.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 320   |       |       | 320   |       |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       | 6     |       |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       | Cl+Ex |       |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 2 Extend (s)      |       |       |       |       |       |       |       | 0.0   |       |       | 0.0   |       |

Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

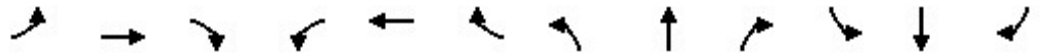
07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Turn Type               | Split | NA    | pm+ov | Split | NA    |     | Prot  | NA    |     | Prot  | NA    | pm+ov |
| Protected Phases        | 4     | 4     | 1     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 4     |
| Permitted Phases        |       |       | 4     |       |       |     |       |       |     |       | 2     | 2     |
| Detector Phase          | 4     | 4     | 4     | 8     | 8     |     | 1     | 6     |     | 5     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |       |     |       |       |       |
| Minimum Initial (s)     | 9.0   | 9.0   | 5.0   | 9.0   | 9.0   |     | 5.0   | 15.0  |     | 5.0   | 11.0  | 9.0   |
| Minimum Split (s)       | 15.5  | 15.5  | 10.9  | 15.7  | 15.7  |     | 10.9  | 21.0  |     | 10.0  | 21.0  | 15.5  |
| Total Split (s)         | 27.0  | 27.0  | 23.0  | 17.0  | 17.0  |     | 23.0  | 32.0  |     | 14.0  | 23.0  | 27.0  |
| Total Split (%)         | 30.0% | 30.0% | 25.6% | 18.9% | 18.9% |     | 25.6% | 35.6% |     | 15.6% | 25.6% | 30.0% |
| Maximum Green (s)       | 20.5  | 20.5  | 17.1  | 10.3  | 10.3  |     | 17.1  | 26.0  |     | 9.0   | 17.0  | 20.5  |
| Yellow Time (s)         | 3.3   | 3.3   | 3.0   | 4.1   | 4.1   |     | 3.0   | 4.8   |     | 3.0   | 4.8   | 3.3   |
| All-Red Time (s)        | 3.2   | 3.2   | 2.9   | 2.6   | 2.6   |     | 2.9   | 1.2   |     | 2.0   | 1.2   | 3.2   |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 6.5   | 6.5   | 5.9   |       | 6.7   |     | 5.9   | 6.0   |     | 5.0   | 6.0   | 6.5   |
| Lead/Lag                |       |       | Lead  |       |       |     | Lead  | Lag   |     | Lead  | Lag   |       |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |     | 2.0   | 2.5   |     | 2.0   | 2.5   | 3.0   |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Min |     | None  | C-Min | None  |
| Act Effct Green (s)     | 21.6  | 21.6  | 39.3  |       | 10.3  |     | 17.1  | 25.0  |     | 9.0   | 15.9  | 43.5  |
| Actuated g/C Ratio      | 0.24  | 0.24  | 0.44  |       | 0.11  |     | 0.19  | 0.28  |     | 0.10  | 0.18  | 0.48  |
| v/c Ratio               | 1.31  | 1.25  | 0.82  |       | 1.31  |     | 1.52  | 0.77  |     | 0.88  | 0.63  | 0.67  |
| Control Delay           | 187.3 | 162.1 | 13.5  |       | 188.6 |     | 269.3 | 22.1  |     | 69.3  | 43.5  | 13.4  |
| Queue Delay             | 0.0   | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.1   |
| Total Delay             | 187.3 | 162.1 | 13.5  |       | 188.6 |     | 269.3 | 22.1  |     | 69.3  | 43.5  | 13.5  |
| LOS                     | F     | F     | B     |       | F     |     | F     | C     |     | E     | D     | B     |
| Approach Delay          |       | 89.2  |       |       | 188.6 |     |       | 163.2 |     |       | 31.3  |       |
| Approach LOS            |       | F     |       |       | F     |     |       | F     |     |       | C     |       |
| 90th %ile Green (s)     | 20.5  | 20.5  | 17.1  | 10.3  | 10.3  |     | 17.1  | 26.0  |     | 9.0   | 17.0  | 20.5  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 70th %ile Green (s)     | 20.5  | 20.5  | 17.1  | 10.3  | 10.3  |     | 17.1  | 26.0  |     | 9.0   | 17.0  | 20.5  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 50th %ile Green (s)     | 20.5  | 20.5  | 17.1  | 10.3  | 10.3  |     | 17.1  | 26.0  |     | 9.0   | 17.0  | 20.5  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 30th %ile Green (s)     | 20.5  | 20.5  | 17.1  | 10.3  | 10.3  |     | 17.1  | 26.0  |     | 9.0   | 17.0  | 20.5  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord | Max   |
| 10th %ile Green (s)     | 25.9  | 25.9  | 17.1  | 10.3  | 10.3  |     | 17.1  | 20.8  |     | 8.8   | 11.6  | 25.9  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Gap   | Coord | Max   |
| Stops (vph)             | 344   | 363   | 600   |       | 343   |     | 620   | 468   |     | 113   | 310   | 287   |
| Fuel Used(gal)          | 24    | 22    | 15    |       | 24    |     | 63    | 15    |     | 4     | 8     | 7     |
| CO Emissions (g/hr)     | 1684  | 1572  | 1075  |       | 1650  |     | 4411  | 1024  |     | 268   | 573   | 487   |
| NOx Emissions (g/hr)    | 328   | 306   | 209   |       | 321   |     | 858   | 199   |     | 52    | 112   | 95    |
| VOC Emissions (g/hr)    | 390   | 364   | 249   |       | 382   |     | 1022  | 237   |     | 62    | 133   | 113   |
| Dilemma Vehicles (#)    | 0     | 20    | 0     |       | 20    |     | 0     | 57    |     | 0     | 26    | 0     |
| Queue Length 50th (ft)  | ~402  | ~402  | 105   |       | ~191  |     | ~381  | 131   |     | 78    | 112   | 119   |
| Queue Length 95th (ft)  | #603  | #606  | 157   |       | #294  |     | m#469 | m173  |     | m#127 | m144  | m182  |
| Internal Link Dist (ft) |       | 654   |       |       | 733   |     |       | 1317  |     |       | 491   |       |
| Turn Bay Length (ft)    | 350   |       | 290   |       |       |     | 400   |       |     | 205   |       | 130   |
| Base Capacity (vph)     | 384   | 415   | 1402  |       | 394   |     | 621   | 962   |     | 170   | 637   | 853   |
| Starvation Cap Reductn  | 0     | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     | 12    |

Lanes, Volumes, Timings  
 209: I-91 Access/Egress/Newberry Rd

07/07/2020



| Lane Group            | EBL  | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|-----------------------|------|------|------|-----|------|-----|------|------|-----|------|------|------|
| Spillback Cap Reductn | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn   | 0    | 0    | 0    |     | 0    |     | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio     | 1.31 | 1.25 | 0.82 |     | 1.31 |     | 1.52 | 0.74 |     | 0.87 | 0.59 | 0.68 |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 10 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 140  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.52  
 Intersection Signal Delay: 109.5      Intersection LOS: F  
 Intersection Capacity Utilization 94.4%      ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 209: I-91 Access/Egress/Newberry Rd



Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph)       | 200   | 1035  | 213   | 146   | 445   | 94    | 312   | 517   | 188   | 147   | 279   | 195   |
| Future Volume (vph)        | 200   | 1035  | 213   | 146   | 445   | 94    | 312   | 517   | 188   | 147   | 279   | 195   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11    | 11    | 11    | 11    | 11    | 11    | 10    | 11    | 12    | 11    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 260   |       | 475   | 300   |       | 200   | 200   |       | 0     |
| Storage Lanes              | 1     |       | 1     | 1     |       | 1     | 2     |       | 1     | 1     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 0.97  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |       |       |       |       |       |       |       |       | 0.99  | 1.00  |       |       |
| Frt                        |       |       | 0.850 |       | 0.974 |       |       |       | 0.850 |       | 0.938 |       |
| Flt Protected              | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 1558  | 3172  | 1516  | 1504  | 3246  | 0     | 3083  | 1640  | 1442  | 1517  | 1517  | 0     |
| Flt Permitted              | 0.271 |       |       | 0.154 |       |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (perm)          | 444   | 3172  | 1516  | 244   | 3246  | 0     | 3083  | 1640  | 1423  | 1515  | 1517  | 0     |
| Right Turn on Red          |       |       | No    |       |       | No    |       |       | No    |       |       | No    |
| Satd. Flow (RTOR)          |       |       |       |       |       |       |       |       |       |       |       |       |
| Link Speed (mph)           |       | 35    |       |       | 45    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 381   |       |       | 922   |       |       | 908   |       |       | 517   |       |
| Travel Time (s)            |       | 7.4   |       |       | 14.0  |       |       | 13.8  |       |       | 7.8   |       |
| Confl. Peds. (#/hr)        |       |       |       |       |       |       |       |       | 1     | 1     |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 12%   | 10%   | 3%    | 16%   | 4%    | 8%    | 6%    | 12%   | 12%   | 15%   | 8%    | 31%   |
| Adj. Flow (vph)            | 217   | 1125  | 232   | 159   | 484   | 102   | 339   | 562   | 204   | 160   | 303   | 212   |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 217   | 1125  | 232   | 159   | 586   | 0     | 339   | 562   | 204   | 160   | 515   | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 11    |       |       | 11    |       |       | 20    |       |       | 20    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.04  | 1.09  | 1.04  | 1.00  | 1.04  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 12    | 15    |       | 12    |
| Number of Detectors        | 1     | 1     | 0     | 1     | 1     |       | 1     | 1     | 1     | 1     | 1     |       |
| Detector Template          |       |       |       |       |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 29    | 256   | 0     | 30    | 315   |       | 29    | 29    | 29    | 29    | 29    |       |
| Trailing Detector (ft)     | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Position(ft)    | -5    | 250   | 0     | -5    | 310   |       | -5    | -5    | -5    | -5    | -5    |       |
| Detector 1 Size(ft)        | 34    | 6     | 20    | 35    | 5     |       | 34    | 34    | 34    | 34    | 34    |       |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Turn Type                  | pm+pt | NA    | pm+ov | pm+pt | NA    |       | Prot  | NA    | pm+ov | Prot  | NA    |       |
| Protected Phases           | 5     | 2     | 3     | 1     | 6     |       | 3     | 8     | 1     | 7     | 4     |       |
| Permitted Phases           | 2     |       | 2     | 6     |       |       |       |       | 8     |       |       |       |
| Detector Phase             | 5     | 2     | 2     | 1     | 6     |       | 3     | 8     | 8     | 7     | 4     |       |

Lanes, Volumes, Timings  
210: N Rd. (CT-140)/N Rd. (CT140)

07/07/2020

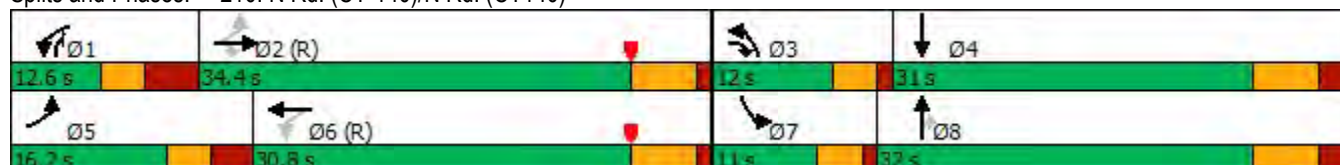


| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|
| Switch Phase            |       |       |       |       |       |     |       |       |       |       |       |     |
| Minimum Initial (s)     | 6.0   | 15.0  | 4.0   | 6.0   | 15.0  |     | 4.0   | 9.0   | 6.0   | 4.0   | 5.0   |     |
| Minimum Split (s)       | 11.8  | 20.5  | 8.0   | 12.6  | 20.5  |     | 8.0   | 15.8  | 12.6  | 8.0   | 11.8  |     |
| Total Split (s)         | 16.2  | 34.4  | 12.0  | 12.6  | 30.8  |     | 12.0  | 32.0  | 12.6  | 11.0  | 31.0  |     |
| Total Split (%)         | 18.0% | 38.2% | 13.3% | 14.0% | 34.2% |     | 13.3% | 35.6% | 14.0% | 12.2% | 34.4% |     |
| Maximum Green (s)       | 10.4  | 28.9  | 8.0   | 6.0   | 25.3  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| Yellow Time (s)         | 3.0   | 4.5   | 3.0   | 3.0   | 4.5   |     | 3.0   | 4.4   | 3.0   | 3.0   | 4.4   |     |
| All-Red Time (s)        | 2.8   | 1.0   | 1.0   | 3.6   | 1.0   |     | 1.0   | 2.4   | 3.6   | 1.0   | 2.4   |     |
| Lost Time Adjust (s)    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Lost Time (s)     | 5.8   | 5.5   | 4.0   | 6.6   | 5.5   |     | 4.0   | 6.8   | 6.6   | 4.0   | 6.8   |     |
| Lead/Lag                | Lead  | Lag   | Lead  | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |       |       |       |     |
| Vehicle Extension (s)   | 1.5   | 4.0   | 1.5   | 1.5   | 4.0   |     | 1.5   | 2.5   | 1.5   | 1.5   | 2.5   |     |
| Recall Mode             | None  | C-Min | None  | None  | C-Min |     | None  | None  | None  | None  | None  |     |
| Act Effct Green (s)     | 38.4  | 28.9  | 42.4  | 30.8  | 25.9  |     | 8.0   | 25.2  | 31.4  | 7.0   | 24.2  |     |
| Actuated g/C Ratio      | 0.43  | 0.32  | 0.47  | 0.34  | 0.29  |     | 0.09  | 0.28  | 0.35  | 0.08  | 0.27  |     |
| v/c Ratio               | 0.70  | 1.11  | 0.32  | 0.95  | 0.63  |     | 1.24  | 1.22  | 0.41  | 1.37  | 1.27  |     |
| Control Delay           | 23.4  | 85.3  | 14.0  | 82.3  | 31.7  |     | 164.7 | 145.2 | 19.6  | 245.3 | 168.6 |     |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay             | 23.4  | 85.3  | 14.0  | 82.3  | 31.7  |     | 164.7 | 145.2 | 19.6  | 245.3 | 168.6 |     |
| LOS                     | C     | F     | B     | F     | C     |     | F     | F     | B     | F     | F     |     |
| Approach Delay          |       | 66.3  |       |       | 42.5  |     |       | 128.0 |       |       | 186.8 |     |
| Approach LOS            |       | E     |       |       | D     |     |       | F     |       |       | F     |     |
| 90th %ile Green (s)     | 10.4  | 28.9  | 8.0   | 6.0   | 25.3  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| 90th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 70th %ile Green (s)     | 10.4  | 28.9  | 8.0   | 6.0   | 25.3  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| 70th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 50th %ile Green (s)     | 10.4  | 28.9  | 8.0   | 6.0   | 25.3  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| 50th %ile Term Code     | Max   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 30th %ile Green (s)     | 10.3  | 28.9  | 8.0   | 6.0   | 25.4  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| 30th %ile Term Code     | Gap   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| 10th %ile Green (s)     | 7.6   | 28.9  | 8.0   | 6.0   | 28.1  |     | 8.0   | 25.2  | 6.0   | 7.0   | 24.2  |     |
| 10th %ile Term Code     | Gap   | Coord | Max   | Max   | Coord |     | Max   | Max   | Max   | Max   | Max   |     |
| Stops (vph)             | 106   | 832   | 119   | 86    | 455   |     | 250   | 402   | 119   | 110   | 374   |     |
| Fuel Used(gal)          | 2     | 27    | 2     | 4     | 12    |     | 15    | 23    | 3     | 9     | 23    |     |
| CO Emissions (g/hr)     | 161   | 1893  | 146   | 307   | 864   |     | 1077  | 1631  | 233   | 643   | 1573  |     |
| NOx Emissions (g/hr)    | 31    | 368   | 28    | 60    | 168   |     | 210   | 317   | 45    | 125   | 306   |     |
| VOC Emissions (g/hr)    | 37    | 439   | 34    | 71    | 200   |     | 250   | 378   | 54    | 149   | 365   |     |
| Dilemma Vehicles (#)    | 0     | 55    | 0     | 0     | 30    |     | 0     | 29    | 0     | 0     | 20    |     |
| Queue Length 50th (ft)  | 57    | ~376  | 74    | 54    | 153   |     | ~124  | ~394  | 63    | ~121  | ~372  |     |
| Queue Length 95th (ft)  | m91   | #510  | m116  | #174  | 210   |     | #212  | #595  | m122  | #244  | #564  |     |
| Internal Link Dist (ft) |       | 301   |       |       | 842   |     |       | 828   |       |       | 437   |     |
| Turn Bay Length (ft)    |       |       |       | 260   |       |     | 300   |       | 200   | 200   |       |     |
| Base Capacity (vph)     | 321   | 1018  | 714   | 167   | 933   |     | 274   | 459   | 497   | 117   | 407   |     |
| Starvation Cap Reductn  | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Spillback Cap Reductn   | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Storage Cap Reductn     | 0     | 0     | 0     | 0     | 0     |     | 0     | 0     | 0     | 0     | 0     |     |
| Reduced v/c Ratio       | 0.68  | 1.11  | 0.32  | 0.95  | 0.63  |     | 1.24  | 1.22  | 0.41  | 1.37  | 1.27  |     |

Intersection Summary


















|                                    |   |
|------------------------------------|---|
| Area Type:                         | Other   |
| Cycle Length:                      | 90  |
| Actuated Cycle Length:             | 90  |
| Offset:                            | 36 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  |
| Natural Cycle:                     | 140   |
| Control Type:                      | Actuated-Coordinated  |
| Maximum v/c Ratio:                 | 1.37  |
| Intersection Signal Delay:         | 98.4  |
| Intersection LOS:                  | F   |
| Intersection Capacity Utilization: | 91.3%   |
| ICU Level of Service:              | F   |
| Analysis Period (min):             | 15  |
| ~                                  | Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |
| #                                  | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                  | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 210: N Rd. (CT-140)/N Rd. (CT140)



Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

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|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |   |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 0   | 0   | 3   | 150   | 0   | 18  | 0  | 1205  | 210   | 9   | 1530  | 3   |
| Future Volume (vph)        | 0   | 0   | 3   | 150   | 0   | 18  | 0  | 1205  | 210   | 9   | 1530  | 3   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Fr <sub>t</sub>            |   |   | 0.865   |   | 0.985   |   |  | 0.978   |   |   |   |   |
| Fl <sub>t</sub> Protected  |   |   |   |   | 0.957   |   |  |   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 0   | 1096  | 0   | 1754  | 0   | 0  | 3305  | 0   | 0   | 3341  | 0   |
| Fl <sub>t</sub> Permitted  |   |   |   |   | 0.957   |   |  |   |   |   | 0.942   |   |
| Satd. Flow (perm)          | 0   | 0   | 1096  | 0   | 1754  | 0   | 0  | 3305  | 0   | 0   | 3147  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 50  |   | 33  |   |  | 57  |   |   |   |   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |  | 50  |   |   |   | 45  |
| Link Distance (ft)         |   | 417   |   |   | 1615  |   |  | 1146  |   |   |   | 576   |
| Travel Time (s)            |   | 9.5   |   |   | 36.7  |   |  | 15.6  |   |   |   | 8.7   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Growth Factor              | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 50%  | 100%  | 100%  | 100%  | 100%  | 100%  |
| Heavy Vehicles (%)         | 0%  | 0%  | 50%   | 1%  | 0%  | 11%   | 14%  | 8%  | 0%  | 6%  | 8%  | 50%   |
| Adj. Flow (vph)            | 0   | 0   | 3   | 163   | 0   | 20  | 0  | 1310  | 228   | 10  | 1663  | 3   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 0   | 3   | 0   | 183   | 0   | 0  | 1538  | 0   | 0   | 1676  | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |  | 26  |   |   | 26  |   |
| 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   | 15  |   | 9   |
| Number of Detectors        |   |   | 0   | 1   | 1   |   |  | 0   |   | 1   | 0   |   |
| Detector Template          |   |   |   | Left  |   |   |  |   |   | Left  |   |   |
| Leading Detector (ft)      |   |   | 0   | 20  | 25  |   |  | 0   |   | 20  | 0   |   |
| Trailing Detector (ft)     |   |   | 0   | 0   | 0   |   |  | 0   |   | 0   | 0   |   |
| Detector 1 Position(ft)    |   |   | 0   | 0   | 0   |   |  | 0   |   | 0   | 0   |   |
| Detector 1 Size(ft)        |   |   | 20  | 20  | 25  |   |  | 0   |   | 20  | 0   |   |
| Detector 1 Type            |   |   | Extend  | 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   |   |
| Detector 1 Queue (s)       |   |   | 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   |   |
| Turn Type                  |   |   | Perm  | Perm  | NA  |   |  | NA  |   | Perm  | NA  |   |
| Protected Phases           |   |   |   |   | 4   |   |  | 2   |   |   |   | 2   |
| Permitted Phases           |   |   | 4   | 4   |   |   |  |   |   | 2   |   |   |
| Detector Phase             |   |   | 4   | 4   | 4   |   |  |   |   |   |   |   |
| Switch Phase               |   |   |   |   |   |   |  |   |   |   |   |   |
| Minimum Initial (s)        |   |   | 9.0   | 9.0   | 9.0   |   |  | 15.0  |   | 15.0  | 15.0  |   |
| Minimum Split (s)          |   |   | 13.0  | 13.0  | 13.0  |   |  | 20.7  |   | 20.7  | 20.7  |   |
| Total Split (s)            |   |   | 19.0  | 19.0  | 19.0  |   |  | 71.0  |   | 71.0  | 71.0  |   |
| Total Split (%)            |   |   | 21.1%   | 21.1%   | 21.1%   |   |  | 78.9%   |   | 78.9%   | 78.9%   |   |

Lanes, Volumes, Timings  
211: Crow Park Rd / Scantic Rd

07/07/2020



| Lane Group              | EBL | EBT | EBR  | WBL  | WBT  | WBR | NBL | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-----|-----|------|------|------|-----|-----|-------|-----|-------|-------|-----|
| Maximum Green (s)       |     |     | 15.0 | 15.0 | 15.0 |     |     | 65.3  |     | 65.3  | 65.3  |     |
| Yellow Time (s)         |     |     | 3.0  | 3.0  | 3.0  |     |     | 4.7   |     | 4.7   | 4.7   |     |
| 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   |     |
| Total Lost Time (s)     |     |     | 4.0  |      | 4.0  |     |     | 5.7   |     |       | 5.7   |     |
| Lead/Lag                |     |     |      |      |      |     |     |       |     |       |       |     |
| Lead-Lag Optimize?      |     |     |      |      |      |     |     |       |     |       |       |     |
| Vehicle Extension (s)   |     |     | 3.0  | 3.0  | 3.0  |     |     | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             |     |     | None | None | None |     |     | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |     |     | 12.6 |      | 12.6 |     |     | 67.7  |     |       | 67.7  |     |
| Actuated g/C Ratio      |     |     | 0.14 |      | 0.14 |     |     | 0.75  |     |       | 0.75  |     |
| v/c Ratio               |     |     | 0.02 |      | 0.67 |     |     | 0.61  |     |       | 0.71  |     |
| Control Delay           |     |     | 0.0  |      | 42.1 |     |     | 6.5   |     |       | 7.0   |     |
| Queue Delay             |     |     | 0.0  |      | 0.0  |     |     | 0.0   |     |       | 0.0   |     |
| Total Delay             |     |     | 0.0  |      | 42.1 |     |     | 6.5   |     |       | 7.0   |     |
| LOS                     |     |     | A    |      | D    |     |     | A     |     |       | A     |     |
| Approach Delay          |     |     |      |      | 42.1 |     |     | 6.5   |     |       | 7.0   |     |
| Approach LOS            |     |     |      |      | D    |     |     | A     |     |       | A     |     |
| 90th %ile Green (s)     |     |     | 15.0 | 15.0 | 15.0 |     |     | 65.3  |     | 65.3  | 65.3  |     |
| 90th %ile Term Code     |     |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     |     |     | 15.0 | 15.0 | 15.0 |     |     | 65.3  |     | 65.3  | 65.3  |     |
| 70th %ile Term Code     |     |     | Max  | Max  | Max  |     |     | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     |     |     | 13.1 | 13.1 | 13.1 |     |     | 67.2  |     | 67.2  | 67.2  |     |
| 50th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     |     |     | 10.8 | 10.8 | 10.8 |     |     | 69.5  |     | 69.5  | 69.5  |     |
| 30th %ile Term Code     |     |     | Gap  | Gap  | Gap  |     |     | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     |     |     | 9.0  | 9.0  | 9.0  |     |     | 71.3  |     | 71.3  | 71.3  |     |
| 10th %ile Term Code     |     |     | Min  | Min  | Min  |     |     | Coord |     | Coord | Coord |     |
| Stops (vph)             |     |     | 0    |      | 129  |     |     | 582   |     |       | 639   |     |
| Fuel Used(gal)          |     |     | 0    |      | 4    |     |     | 21    |     |       | 30    |     |
| CO Emissions (g/hr)     |     |     | 1    |      | 298  |     |     | 1474  |     |       | 2075  |     |
| NOx Emissions (g/hr)    |     |     | 0    |      | 58   |     |     | 287   |     |       | 404   |     |
| VOC Emissions (g/hr)    |     |     | 0    |      | 69   |     |     | 342   |     |       | 481   |     |
| Dilemma Vehicles (#)    |     |     | 0    |      | 0    |     |     | 79    |     |       | 74    |     |
| Queue Length 50th (ft)  |     |     | 0    |      | 81   |     |     | 168   |     |       | 225   |     |
| Queue Length 95th (ft)  |     |     | 0    |      | 147  |     |     | 244   |     |       | m204  |     |
| Internal Link Dist (ft) |     | 337 |      |      | 1535 |     |     | 1066  |     |       | 496   |     |
| Turn Bay Length (ft)    |     |     |      |      |      |     |     |       |     |       |       |     |
| Base Capacity (vph)     |     |     | 224  |      | 319  |     |     | 2501  |     |       | 2368  |     |
| Starvation Cap Reductn  |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Spillback Cap Reductn   |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Storage Cap Reductn     |     |     | 0    |      | 0    |     |     | 0     |     |       | 0     |     |
| Reduced v/c Ratio       |     |     | 0.01 |      | 0.57 |     |     | 0.61  |     |       | 0.71  |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 44 (49%), Referenced to phase 2:NBSB, Start of Yellow



Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↖     | ↗     |       | ↖     | ↗     | ↖     | ↗     |       | ↖     | ↗     |       |
| Traffic Volume (vph)       | 15    | 12    | 4     | 76    | 19    | 145   | 4     | 1294  | 22    | 224   | 1422  | 43    |
| Future Volume (vph)        | 15    | 12    | 4     | 76    | 19    | 145   | 4     | 1294  | 22    | 224   | 1422  | 43    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 12    | 12    | 12    | 12    | 12    | 12    |
| Storage Length (ft)        | 0     |       | 80    | 0     |       | 30    | 120   |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 1.00  | 0.97  |       | 0.99  |       |       |       |       |       |       |       |
| Frt                        |       |       | 0.850 |       |       | 0.850 |       | 0.997 |       |       | 0.996 |       |
| Flt Protected              |       | 0.973 |       |       | 0.962 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1780  | 1313  | 0     | 1828  | 1400  | 1703  | 1734  | 0     | 1687  | 1801  | 0     |
| Flt Permitted              |       | 0.676 |       |       | 0.750 |       | 0.092 |       |       | 0.084 |       |       |
| Satd. Flow (perm)          | 0     | 1232  | 1276  | 0     | 1416  | 1400  | 165   | 1734  | 0     | 149   | 1801  | 0     |
| Right Turn on Red          |       |       | No    |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       |       |       |       | 143   |       | 1     |       |       |       | 2     |
| Link Speed (mph)           |       | 25    |       |       | 35    |       |       | 45    |       |       |       | 45    |
| Link Distance (ft)         |       | 551   |       |       | 479   |       |       | 2227  |       |       |       | 334   |
| Travel Time (s)            |       | 15.0  |       |       | 9.3   |       |       | 33.7  |       |       |       | 5.1   |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       |       |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 7%    | 0%    | 23%   | 0%    | 0%    | 0%    | 6%    | 9%    | 25%   | 7%    | 5%    | 7%    |
| Adj. Flow (vph)            | 16    | 13    | 4     | 83    | 21    | 158   | 4     | 1407  | 24    | 243   | 1546  | 47    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 29    | 4     | 0     | 104   | 158   | 4     | 1431  | 0     | 243   | 1593  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 12    |       |       | 12    |       |       | 12    |       |       |       | 12    |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 3     |       | 1     |       | 3     |
| Detector Template          | Left  |       |       | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 20    | 15    | 20    | 25    | 20    | 33    | 326   |       | 33    |       | 326   |
| Trailing Detector (ft)     | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    |       | 0     |
| Detector 1 Position(ft)    | 0     | 0     | 0     | 0     | 0     | 0     | -5    | 0     |       | -5    |       | 0     |
| Detector 1 Size(ft)        | 20    | 20    | 15    | 20    | 25    | 20    | 38    | 6     |       | 38    |       | 6     |
| Detector 1 Type            | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |       | Cl+Ex |       | Cl+Ex |
| Detector 1 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 2.0   | 8.0   | 0.0   | 8.0   | 8.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Detector 2 Position(ft)    |       |       |       |       |       |       |       | 144   |       |       |       | 94    |
| Detector 2 Size(ft)        |       |       |       |       |       |       |       | 6     |       |       |       | 6     |
| Detector 2 Type            |       |       |       |       |       |       |       | Cl+Ex |       |       |       | Cl+Ex |
| Detector 2 Channel         |       |       |       |       |       |       |       |       |       |       |       |       |

| Lane Group                 | Ø3 |
|----------------------------|----|
| Lane Configurations        |    |
| Traffic Volume (vph)       |    |
| Future Volume (vph)        |    |
| Ideal Flow (vphpl)         |    |
| Lane Width (ft)            |    |
| Storage Length (ft)        |    |
| Storage Lanes              |    |
| Taper Length (ft)          |    |
| Lane Util. Factor          |    |
| Ped Bike 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)            |    |
| Confl. Peds. (#/hr)        |    |
| 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         |    |

Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Detector 3 Position(ft) |       |       |       |       |       |       |       | 320   |     |       | 320   |     |
| Detector 3 Size(ft)     |       |       |       |       |       |       |       | 6     |     |       | 6     |     |
| Detector 3 Type         |       |       |       |       |       |       |       | Cl+Ex |     |       | Cl+Ex |     |
| Detector 3 Channel      |       |       |       |       |       |       |       |       |     |       |       |     |
| Detector 3 Extend (s)   |       |       |       |       |       |       |       | 0.0   |     |       | 0.0   |     |
| Turn Type               | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    |     | pm+pt | NA    |     |
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     |     | 1     | 6     |     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |       |     | 6     |       |     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |     | 1     | 6     |     |
| Switch Phase            |       |       |       |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 4.0   | 15.0  |     | 5.0   | 15.0  |     |
| Minimum Split (s)       | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 9.5   | 8.0   | 22.8  |     | 9.0   | 22.8  |     |
| Total Split (s)         | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 8.0   | 49.0  |     | 9.0   | 50.0  |     |
| Total Split (%)         | 11.1% | 11.1% | 11.1% | 11.1% | 11.1% | 11.1% | 8.9%  | 54.4% |     | 10.0% | 55.6% |     |
| Maximum Green (s)       | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 41.2  |     | 5.0   | 42.2  |     |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.0   | 3.0   |     | 1.0   | 3.0   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.5   | 4.5   |       | 4.5   | 4.5   | 3.0   | 7.8   |     | 4.0   | 7.8   |     |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 1.5   | 2.5   |     | 1.5   | 2.5   |     |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Min |     | None  | C-Min |     |
| Walk Time (s)           |       |       |       |       |       |       |       |       |     |       |       |     |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |     |       |       |     |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |     |       |       |     |
| Act Effct Green (s)     |       | 5.5   | 5.5   |       | 5.5   | 5.5   | 55.8  | 46.8  |     | 71.9  | 66.7  |     |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  | 0.06  | 0.62  | 0.52  |     | 0.80  | 0.74  |     |
| v/c Ratio               |       | 0.39  | 0.05  |       | 1.21  | 0.72  | 0.02  | 1.59  |     | 0.59  | 1.19  |     |
| Control Delay           |       | 55.8  | 41.5  |       | 203.4 | 29.5  | 1.2   | 281.0 |     | 25.5  | 100.4 |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 55.8  | 41.5  |       | 203.4 | 29.5  | 1.2   | 281.0 |     | 25.5  | 100.4 |     |
| LOS                     |       | E     | D     |       | F     | C     | A     | F     |     | C     | F     |     |
| Approach Delay          |       | 54.1  |       |       | 98.5  |       |       | 280.2 |     |       | 90.5  |     |
| Approach LOS            |       | D     |       |       | F     |       |       | F     |     |       | F     |     |
| 90th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 4.4   | 41.2  |     | 7.0   | 44.8  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 51.3  |     | 16.9  | 72.2  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 50th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 51.0  |     | 17.2  | 72.2  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 30th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 49.2  |     | 19.0  | 72.2  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| 10th %ile Green (s)     | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 0.0   | 41.4  |     | 26.8  | 72.2  |     |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip  | Coord |     | Gap   | Coord |     |
| Stops (vph)             |       | 28    | 7     |       | 71    | 28    | 1     | 776   |     | 199   | 446   |     |
| Fuel Used(gal)          |       | 1     | 0     |       | 5     | 2     | 0     | 113   |     | 4     | 39    |     |
| CO Emissions (g/hr)     |       | 38    | 6     |       | 338   | 111   | 7     | 7894  |     | 288   | 2705  |     |

|                         |      |
|-------------------------|------|
| Lane Group              | Ø3   |
| Detector 2 Extend (s)   |      |
| Detector 3 Position(ft) |      |
| Detector 3 Size(ft)     |      |
| Detector 3 Type         |      |
| Detector 3 Channel      |      |
| Detector 3 Extend (s)   |      |
| Turn Type               |      |
| Protected Phases        | 3    |
| Permitted Phases        |      |
| Detector Phase          |      |
| Switch Phase            |      |
| Minimum Initial (s)     | 7.0  |
| Minimum Split (s)       | 22.0 |
| Total Split (s)         | 22.0 |
| Total Split (%)         | 24%  |
| Maximum Green (s)       | 18.0 |
| Yellow Time (s)         | 4.0  |
| All-Red Time (s)        | 0.0  |
| Lost Time Adjust (s)    |      |
| Total Lost Time (s)     |      |
| Lead/Lag                | Lag  |
| Lead-Lag Optimize?      |      |
| Vehicle Extension (s)   | 3.0  |
| Recall Mode             | None |
| Walk Time (s)           | 7.0  |
| Flash Dont Walk (s)     | 9.0  |
| Pedestrian Calls (#/hr) | 10   |
| 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)     | 16.0 |
| 90th %ile Term Code     | Ped  |
| 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)     |      |

Lanes, Volumes, Timings  
213: Tromley Rd

07/07/2020

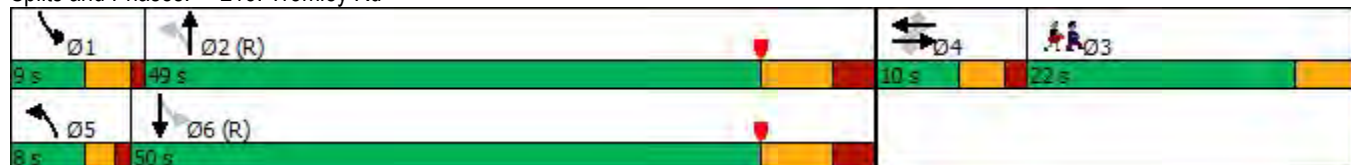


| Lane Group              | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT   | NBR | SBL  | SBT   | SBR |
|-------------------------|-----|------|------|-----|------|------|------|-------|-----|------|-------|-----|
| NOx Emissions (g/hr)    |     | 7    | 1    |     | 66   | 22   | 1    | 1536  |     | 56   | 526   |     |
| VOC Emissions (g/hr)    |     | 9    | 1    |     | 78   | 26   | 2    | 1829  |     | 67   | 627   |     |
| Dilemma Vehicles (#)    |     | 0    | 0    |     | 4    | 0    | 0    | 28    |     | 0    | 5     |     |
| Queue Length 50th (ft)  |     | 16   | 2    |     | ~73  | 8    | 0    | ~1115 |     | 68   | ~1071 |     |
| Queue Length 95th (ft)  |     | #46  | 13   |     | #174 | #97  | m0   | m#950 |     | m55  | m#966 |     |
| Internal Link Dist (ft) |     | 471  |      |     | 399  |      |      | 2147  |     |      | 254   |     |
| Turn Bay Length (ft)    |     |      | 80   |     |      | 30   | 120  |       |     | 200  |       |     |
| Base Capacity (vph)     |     | 75   | 77   |     | 86   | 219  | 189  | 902   |     | 415  | 1335  |     |
| Starvation Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Spillback Cap Reductn   |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Storage Cap Reductn     |     | 0    | 0    |     | 0    | 0    | 0    | 0     |     | 0    | 0     |     |
| Reduced v/c Ratio       |     | 0.39 | 0.05 |     | 1.21 | 0.72 | 0.02 | 1.59  |     | 0.59 | 1.19  |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 38 (42%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.59  
 Intersection Signal Delay: 167.1 Intersection LOS: F  
 Intersection Capacity Utilization 107.3% ICU Level of Service G  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 213: Tromley Rd






















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|                         |    |
|-------------------------|----|
| Lane Group              | Ø3 |
| 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)     |    |
| Starvation Cap Reductn  |    |
| Spillback Cap Reductn   |    |
| Storage Cap Reductn     |    |
| Reduced v/c Ratio       |    |
| Intersection Summary    |    |

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Lanes, Volumes, Timings  
214: DD/Abbe Rd

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 13  | 0   | 22  | 2   | 2   | 12  | 5   | 1203  | 24  | 22  | 1509  | 23  |
| Future Volume (vph)        | 13  | 0   | 22  | 2   | 2   | 12  | 5   | 1203  | 24  | 22  | 1509  | 23  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12  | 12  | 8   | 12  | 12  | 12  | 8   | 12  | 12  | 8   | 12  | 8   |
| Storage Length (ft)        | 0   |   | 30  | 0   |   | 0   | 50  |   | 0   | 0   |   | 50  |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                        |   |   | 0.850   |   | 0.897   |   |   | 0.997   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.994   |   | 0.950   |   |   |   | 0.999   |   |
| Satd. Flow (prot)          | 0   | 1641  | 1386  | 0   | 1499  | 0   | 1384  | 1773  | 0   | 0   | 1748  | 1386  |
| Flt Permitted              |   |   |   |   | 0.955   |   | 0.053   |   |   |   | 0.964   |   |
| Satd. Flow (perm)          | 0   | 1727  | 1386  | 0   | 1440  | 0   | 77  | 1773  | 0   | 0   | 1686  | 1386  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 48  |   | 13  |   |   | 4   |   |   |   | 16  |
| Link Speed (mph)           |   | 25  |   |   | 35  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 801   |   |   | 1499  |   |   | 2677  |   |   |   | 1892  |
| Travel Time (s)            |   | 21.8  |   |   | 29.2  |   |   | 40.6  |   |   |   | 28.7  |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 10%   | 0%  | 1%  | 0%  | 0%  | 17%   | 13%   | 7%  | 0%  | 50%   | 8%  | 1%  |
| Adj. Flow (vph)            | 14  | 0   | 24  | 2   | 2   | 13  | 5   | 1308  | 26  | 24  | 1640  | 25  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 14  | 24  | 0   | 17  | 0   | 5   | 1334  | 0   | 0   | 1664  | 25  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 10  |   |   | 0   |   |   | 8   |   |   | 8   |   |
| 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  | 1.20  | 1.00  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.20  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15  |   | 9   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   |   | 0   | 0   |   | 0   | 0   | 1   |
| Detector Template          | Left  |   | Right   | Left  |   |   |   |   |   |   |   | Right   |
| Leading Detector (ft)      | 20  | 20  | 20  | 20  | 29  |   | 0   | 0   |   | 0   | 0   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | -5  |   | 0   | 0   |   | 0   | 0   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | -5  |   | 0   | 0   |   | 0   | 0   | 0   |
| Detector 1 Size(ft)        | 20  | 20  | 20  | 20  | 34  |   | 20  | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Turn Type                  | Perm  | NA  | Perm  | Perm  | NA  |   | Perm  | NA  |   | Perm  | NA  | Perm  |
| Protected Phases           |   | 4   |   |   | 4   |   |   | 2   |   |   |   | 2   |
| Permitted Phases           | 4   |   | 4   | 4   |   |   | 2   |   |   | 2   |   | 2   |
| Detector Phase             | 4   | 4   | 4   | 4   | 4   |   |   |   |   |   |   | 2   |
| Switch Phase               |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |   | 15.0  | 15.0  |   | 15.0  | 15.0  | 15.0  |

Lanes, Volumes, Timings  
214: DD/Abbe Rd

07/07/2020



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-------|
| Minimum Split (s)       | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |     | 22.0  | 22.0  |     | 22.0  | 22.0  | 22.0  |
| Total Split (s)         | 9.3   | 9.3   | 9.3   | 9.3   | 9.3   |     | 80.7  | 80.7  |     | 80.7  | 80.7  | 80.7  |
| Total Split (%)         | 10.3% | 10.3% | 10.3% | 10.3% | 10.3% |     | 89.7% | 89.7% |     | 89.7% | 89.7% | 89.7% |
| Maximum Green (s)       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 73.7  | 73.7  |     | 73.7  | 73.7  | 73.7  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 4.8   | 4.8   |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.3   | 1.3   | 1.3   | 1.3   | 1.3   |     | 2.2   | 2.2   |     | 2.2   | 2.2   | 2.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.3   | 4.3   |       | 4.3   |     | 7.0   | 7.0   |     |       | 7.0   | 7.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lag   | Lag   |     | Lead  | Lead  |     | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 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 | C-Max |
| Act Effct Green (s)     |       | 5.0   | 5.0   |       | 5.0   |     | 80.2  | 80.2  |     |       | 80.2  | 80.2  |
| Actuated g/C Ratio      |       | 0.06  | 0.06  |       | 0.06  |     | 0.89  | 0.89  |     |       | 0.89  | 0.89  |
| v/c Ratio               |       | 0.15  | 0.20  |       | 0.18  |     | 0.07  | 0.84  |     |       | 1.11  | 0.02  |
| Control Delay           |       | 44.2  | 8.4   |       | 28.3  |     | 3.6   | 15.1  |     |       | 62.7  | 1.2   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     |       | 0.0   | 0.0   |
| Total Delay             |       | 44.2  | 8.4   |       | 28.3  |     | 3.6   | 15.1  |     |       | 62.7  | 1.2   |
| LOS                     |       | D     | A     |       | C     |     | A     | B     |     |       | E     | A     |
| Approach Delay          |       | 21.5  |       |       | 28.3  |     |       | 15.1  |     |       | 61.8  |       |
| Approach LOS            |       | C     |       |       | C     |     |       | B     |     |       | E     |       |
| 90th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 73.7  | 73.7  |     | 73.7  | 73.7  | 73.7  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 73.7  | 73.7  |     | 73.7  | 73.7  | 73.7  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |     | 73.7  | 73.7  |     | 73.7  | 73.7  | 73.7  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Coord | Coord |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 83.0  | 83.0  |     | 83.0  | 83.0  | 83.0  |
| 30th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  |     | Coord | Coord |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     | 83.0  | 83.0  |     | 83.0  | 83.0  | 83.0  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  |     | Coord | Coord |     | Coord | Coord | Coord |
| Stops (vph)             |       | 15    | 3     |       | 10    |     | 1     | 632   |     |       | 666   | 3     |
| Fuel Used(gal)          |       | 0     | 0     |       | 0     |     | 0     | 33    |     |       | 47    | 0     |
| CO Emissions (g/hr)     |       | 18    | 14    |       | 24    |     | 7     | 2304  |     |       | 3259  | 23    |
| NOx Emissions (g/hr)    |       | 4     | 3     |       | 5     |     | 1     | 448   |     |       | 634   | 4     |
| VOC Emissions (g/hr)    |       | 4     | 3     |       | 6     |     | 2     | 534   |     |       | 755   | 5     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 1     |     | 0     | 43    |     |       | 49    | 0     |
| Queue Length 50th (ft)  |       | 8     | 0     |       | 2     |     | 0     | 327   |     |       | ~1167 | 1     |
| Queue Length 95th (ft)  |       | 27    | 11    |       | 23    |     | m1    | #630  |     |       | m#986 | m1    |
| Internal Link Dist (ft) |       | 721   |       |       | 1419  |     |       | 2597  |     |       | 1812  |       |
| Turn Bay Length (ft)    |       |       | 30    |       |       |     | 50    |       |     |       |       | 50    |
| Base Capacity (vph)     |       | 95    | 122   |       | 92    |     | 69    | 1580  |     |       | 1502  | 1237  |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     |       | 0     | 0     |
| Reduced v/c Ratio       |       | 0.15  | 0.20  |       | 0.18  |     | 0.07  | 0.84  |     |       | 1.11  | 0.02  |

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings

214: DD/Abbe Rd

07/07/2020

Cycle Length: 90  
Actuated Cycle Length: 90  
Offset: 4 (4%), Referenced to phase 2:NBSB, Start of Yellow  
Natural Cycle: 150  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 1.11  
Intersection Signal Delay: 40.8 Intersection LOS: D  
Intersection Capacity Utilization 110.6% ICU Level of Service H  
Analysis Period (min) 15  
~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.  
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.  
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 214: DD/Abbe Rd



Lanes, Volumes, Timings  
215: S Water St

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     | ↗     |       | ↔     |       | ↖     | ↗     |       | ↖     | ↗     |       |
| Traffic Volume (vph)       | 110   | 6     | 168   | 5     | 4     | 14    | 169   | 1334  | 13    | 26    | 1515  | 14    |
| Future Volume (vph)        | 110   | 6     | 168   | 5     | 4     | 14    | 169   | 1334  | 13    | 26    | 1515  | 14    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 300   | 0     |       | 0     | 150   |       | 0     | 320   |       | 0     |
| Storage Lanes              | 0     |       | 1     | 0     |       | 0     | 1     |       | 0     | 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 |       | 0.916 |       |       | 0.999 |       |       | 0.999 |       |
| Flt Protected              |       | 0.955 |       |       | 0.990 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1814  | 1599  | 0     | 1723  | 0     | 1719  | 1759  | 0     | 1805  | 1775  | 0     |
| Flt Permitted              |       | 0.720 |       |       | 0.790 |       | 0.062 |       |       | 0.065 |       |       |
| Satd. Flow (perm)          | 0     | 1368  | 1599  | 0     | 1375  | 0     | 112   | 1759  | 0     | 124   | 1775  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       |       | 122   |       | 15    |       |       | 1     |       |       | 1     |       |
| Link Speed (mph)           |       | 30    |       |       | 30    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 1143  |       |       | 286   |       |       | 1978  |       |       | 934   |       |
| Travel Time (s)            |       | 26.0  |       |       | 6.5   |       |       | 30.0  |       |       | 14.2  |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%    | 0%    | 1%    | 0%    | 0%    | 0%    | 5%    | 8%    | 0%    | 0%    | 7%    | 0%    |
| Adj. Flow (vph)            | 120   | 7     | 183   | 5     | 4     | 15    | 184   | 1450  | 14    | 28    | 1647  | 15    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 127   | 183   | 0     | 24    | 0     | 184   | 1464  | 0     | 28    | 1662  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 12    |       |       | 12    |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     | 1     | 1     | 1     |       | 1     | 0     |       | 1     | 0     |       |
| Detector Template          | Left  |       | Right | Left  |       |       |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 45    | 20    | 20    | 45    |       | 15    | 0     |       | 15    | 0     |       |
| Trailing Detector (ft)     | 0     | -5    | 0     | 0     | -5    |       | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Position(ft)    | 0     | -5    | 0     | 0     | -5    |       | -5    | 0     |       | -5    | 0     |       |
| Detector 1 Size(ft)        | 20    | 50    | 20    | 20    | 50    |       | 20    | 6     |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    | Perm  | Perm  | NA    |       | pm+pt | NA    |       | pm+pt | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       | 1     | 6     |       | 5     | 2     |       |
| Permitted Phases           | 4     |       | 4     | 4     |       |       | 6     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     | 4     | 4     | 4     |       | 1     |       |       | 5     |       |       |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |       | 5.0   | 15.0  |       | 5.0   | 15.0  |       |
| Minimum Split (s)          | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  |       | 9.0   | 22.3  |       | 9.0   | 22.3  |       |

Lanes, Volumes, Timings  
215: S Water St

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |     | 9.0   | 69.0  |     | 9.0   | 69.0  |     |
| Total Split (%)         | 13.3% | 13.3% | 13.3% | 13.3% | 13.3% |     | 10.0% | 76.7% |     | 10.0% | 76.7% |     |
| Maximum Green (s)       | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 61.7  |     | 5.0   | 61.7  |     |
| Yellow Time (s)         | 3.3   | 3.3   | 3.3   | 3.3   | 3.3   |     | 3.0   | 4.8   |     | 3.0   | 4.8   |     |
| All-Red Time (s)        | 1.8   | 1.8   | 1.8   | 1.8   | 1.8   |     | 1.0   | 2.5   |     | 1.0   | 2.5   |     |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 5.1   | 5.1   |       | 5.1   |     | 4.0   | 7.3   |     | 4.0   | 7.3   |     |
| Lead/Lag                |       |       |       |       |       |     | Lead  | Lag   |     | Lead  | Lag   |     |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |     | 1.5   | 3.0   |     | 1.5   | 3.0   |     |
| Recall Mode             | None  | None  | None  | None  | None  |     | None  | C-Max |     | None  | C-Max |     |
| Act Effct Green (s)     |       | 6.9   | 6.9   |       | 6.9   |     | 72.4  | 67.1  |     | 70.0  | 61.7  |     |
| Actuated g/C Ratio      |       | 0.08  | 0.08  |       | 0.08  |     | 0.80  | 0.75  |     | 0.78  | 0.69  |     |
| v/c Ratio               |       | 1.22  | 0.78  |       | 0.20  |     | 1.03  | 1.12  |     | 0.15  | 1.37  |     |
| Control Delay           |       | 197.8 | 39.1  |       | 27.9  |     | 61.9  | 67.2  |     | 3.9   | 192.9 |     |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 197.8 | 39.1  |       | 27.9  |     | 61.9  | 67.2  |     | 3.9   | 192.9 |     |
| LOS                     |       | F     | D     |       | C     |     | E     | E     |     | A     | F     |     |
| Approach Delay          |       | 104.1 |       |       | 27.9  |     |       | 66.6  |     |       | 189.7 |     |
| Approach LOS            |       | F     |       |       | C     |     |       | E     |     |       | F     |     |
| 90th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 61.7  |     | 5.0   | 61.7  |     |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 70th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 61.7  |     | 5.0   | 61.7  |     |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Max   | Coord |     |
| 50th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 70.7  |     | 0.0   | 61.7  |     |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 30th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 70.7  |     | 0.0   | 61.7  |     |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| 10th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 6.9   | 6.9   |     | 5.0   | 70.7  |     | 0.0   | 61.7  |     |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   | Coord |     | Skip  | Coord |     |
| Stops (vph)             |       | 87    | 56    |       | 15    |     | 167   | 521   |     | 9     | 1062  |     |
| Fuel Used(gal)          |       | 6     | 3     |       | 0     |     | 6     | 42    |     | 0     | 83    |     |
| CO Emissions (g/hr)     |       | 436   | 220   |       | 18    |     | 446   | 2950  |     | 20    | 5768  |     |
| NOx Emissions (g/hr)    |       | 85    | 43    |       | 3     |     | 87    | 574   |     | 4     | 1122  |     |
| VOC Emissions (g/hr)    |       | 101   | 51    |       | 4     |     | 103   | 684   |     | 5     | 1337  |     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 9     |     | 0     | 120   |     |
| Queue Length 50th (ft)  |       | ~89   | 34    |       | 5     |     | ~65   | ~961  |     | 4     | ~1233 |     |
| Queue Length 95th (ft)  |       | #200  | #140  |       | 29    |     | m45   | m85   |     | m5    | #1502 |     |
| Internal Link Dist (ft) |       | 1063  |       |       | 206   |     |       | 1898  |     |       | 854   |     |
| Turn Bay Length (ft)    |       |       | 300   |       |       |     | 150   |       |     | 320   |       |     |
| Base Capacity (vph)     |       | 104   | 235   |       | 119   |     | 179   | 1312  |     | 189   | 1217  |     |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     | 0     |       | 0     |     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 1.22  | 0.78  |       | 0.20  |     | 1.03  | 1.12  |     | 0.15  | 1.37  |     |

Intersection Summary

Area Type: Other  
Cycle Length: 90



Lanes, Volumes, Timings  
216: Stoughton Rd

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↕     | ↕     | ↕     |       | ↕     | ↕     |       |
| Traffic Volume (vph)       | 8     | 3     | 3     | 67    | 0     | 25    | 5     | 1160  | 68    | 41    | 1484  | 12    |
| Future Volume (vph)        | 8     | 3     | 3     | 67    | 0     | 25    | 5     | 1160  | 68    | 41    | 1484  | 12    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 12    | 12    | 12    | 12    | 12    | 8     | 8     | 12    | 12    | 8     | 12    | 12    |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 50    | 50    |       | 0     | 50    |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 1     |       | 0     | 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  |
| Ped Bike Factor            |       | 0.99  |       |       | 0.99  | 0.97  |       |       |       |       |       |       |
| Frt                        |       | 0.973 |       |       |       | 0.850 |       | 0.992 |       |       | 0.999 |       |
| Flt Protected              |       | 0.971 |       |       | 0.950 |       | 0.950 |       |       | 0.950 |       |       |
| Satd. Flow (prot)          | 0     | 1785  | 0     | 0     | 1612  | 1400  | 1564  | 1744  | 0     | 1448  | 1775  | 0     |
| Flt Permitted              |       | 0.774 |       |       | 0.800 |       | 0.054 |       |       | 0.108 |       |       |
| Satd. Flow (perm)          | 0     | 1416  | 0     | 0     | 1345  | 1359  | 89    | 1744  | 0     | 165   | 1775  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 3     |       |       |       | 41    |       | 14    |       |       | 2     |       |
| Link Speed (mph)           |       | 30    |       |       | 35    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 411   |       |       | 816   |       |       | 1892  |       |       | 693   |       |
| Travel Time (s)            |       | 9.3   |       |       | 15.9  |       |       | 28.7  |       |       | 10.5  |       |
| Confl. Peds. (#/hr)        | 1     |       | 1     | 1     |       | 1     |       |       |       |       |       |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%    | 0%    | 0%    | 12%   | 0%    | 0%    | 0%    | 8%    | 9%    | 8%    | 7%    | 0%    |
| Adj. Flow (vph)            | 9     | 3     | 3     | 73    | 0     | 27    | 5     | 1261  | 74    | 45    | 1613  | 13    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 15    | 0     | 0     | 73    | 27    | 5     | 1335  | 0     | 45    | 1626  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 8     |       |       | 8     |       |
| 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  | 1.20  | 1.20  | 1.00  | 1.00  | 1.20  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 0     | 0     |       | 0     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right |       |       |       |       |       |       |
| Leading Detector (ft)      | 20    | 12    |       | 20    | 36    | 20    | 0     | 0     |       | 0     | 0     |       |
| 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    | 12    |       | 20    | 36    | 20    | 20    | 36    |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       | 2     |       |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |

Lanes, Volumes, Timings  
216: Stoughton Rd

07/07/2020



| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Switch Phase            |       |       |     |       |       |       |       |       |     |       |       |     |
| Minimum Initial (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 15.0  | 15.0  |     | 15.0  | 15.0  |     |
| Minimum Split (s)       | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 21.4  | 21.4  |     | 21.4  | 21.4  |     |
| Total Split (s)         | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 81.0  | 81.0  |     | 81.0  | 81.0  |     |
| Total Split (%)         | 10.0% | 10.0% |     | 10.0% | 10.0% | 10.0% | 90.0% | 90.0% |     | 90.0% | 90.0% |     |
| Maximum Green (s)       | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.0   | 1.0   |     | 1.0   | 1.0   | 1.0   | 1.6   | 1.6   |     | 1.6   | 1.6   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Lost Time (s)     |       | 4.0   |     |       | 4.0   | 4.0   | 6.4   | 6.4   |     | 6.4   | 6.4   |     |
| Lead/Lag                | Lag   | Lag   |     | Lag   | Lag   | Lag   | Lead  | Lead  |     | Lead  | Lead  |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 1.5   | 1.5   |     | 1.5   | 1.5   | 1.5   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 5.0   |     |       | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| Actuated g/C Ratio      |       | 0.06  |     |       | 0.06  | 0.06  | 0.83  | 0.83  |     | 0.83  | 0.83  |     |
| v/c Ratio               |       | 0.19  |     |       | 0.99  | 0.24  | 0.07  | 0.92  |     | 0.33  | 1.11  |     |
| Control Delay           |       | 41.1  |     |       | 147.8 | 13.3  | 2.6   | 11.2  |     | 5.0   | 65.7  |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   | 0.0   |     |
| Total Delay             |       | 41.1  |     |       | 147.8 | 13.3  | 2.6   | 11.2  |     | 5.0   | 65.7  |     |
| LOS                     |       | D     |     |       | F     | B     | A     | B     |     | A     | E     |     |
| Approach Delay          |       | 41.1  |     |       | 111.5 |       |       | 11.2  |     |       | 64.1  |     |
| Approach LOS            |       | D     |     |       | F     |       |       | B     |     |       | E     |     |
| 90th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 50th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 30th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 5.0   | 5.0   |     | 5.0   | 5.0   | 5.0   | 74.6  | 74.6  |     | 74.6  | 74.6  |     |
| 10th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 14    |     |       | 50    | 6     | 1     | 268   |     | 2     | 801   |     |
| Fuel Used(gal)          |       | 0     |     |       | 3     | 0     | 0     | 21    |     | 0     | 40    |     |
| CO Emissions (g/hr)     |       | 17    |     |       | 195   | 18    | 5     | 1483  |     | 29    | 2766  |     |
| NOx Emissions (g/hr)    |       | 3     |     |       | 38    | 4     | 1     | 289   |     | 6     | 538   |     |
| VOC Emissions (g/hr)    |       | 4     |     |       | 45    | 4     | 1     | 344   |     | 7     | 641   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 3     | 0     | 0     | 81    |     | 0     | 23    |     |
| Queue Length 50th (ft)  |       | 7     |     |       | 42    | 0     | 0     | 141   |     | 1     | ~1084 |     |
| Queue Length 95th (ft)  |       | 27    |     |       | #130  | 18    | m1    | #974  |     | m1    | #1348 |     |
| Internal Link Dist (ft) |       | 331   |     |       | 736   |       |       | 1812  |     |       | 613   |     |
| Turn Bay Length (ft)    |       |       |     |       |       | 50    | 50    |       |     | 50    |       |     |
| Base Capacity (vph)     |       | 81    |     |       | 74    | 114   | 73    | 1447  |     | 136   | 1471  |     |
| Starvation Cap Reductn  |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Spillback Cap Reductn   |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Storage Cap Reductn     |       | 0     |     |       | 0     | 0     | 0     | 0     |     | 0     | 0     |     |
| Reduced v/c Ratio       |       | 0.19  |     |       | 0.99  | 0.24  | 0.07  | 0.92  |     | 0.33  | 1.11  |     |

Lanes, Volumes, Timings  
 216: Stoughton Rd

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Intersection Summary

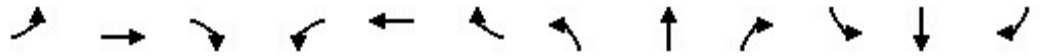
|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 22 (24%), Referenced to phase 2:NBSB, Start of Yellow   |
| Natural Cycle:                    | 140   |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 1.11  |
| Intersection Signal Delay:        | 42.8  |
| Intersection LOS:                 | D   |
| Intersection Capacity Utilization | 95.0%   |
| ICU Level of Service              | F   |
| Analysis Period (min)             | 15  |
| ~                                 | Volume exceeds capacity, queue is theoretically infinite.<br>Queue shown is maximum after two cycles.     |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 216: Stoughton Rd



Lanes, Volumes, Timings  
219: Bridge St (CT-140)

07/07/2020



| Lane Group                 | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT  | NBR   | SBL   | SBT   | SBR   |
|----------------------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations        |      | ↗     |       | ↖     | ↖     |       |      |      |       |       | ↖     | ↖     |
| Traffic Volume (vph)       | 0    | 554   | 124   | 413   | 488   | 0     | 0    | 0    | 0     | 240   | 0     | 235   |
| Future Volume (vph)        | 0    | 554   | 124   | 413   | 488   | 0     | 0    | 0    | 0     | 240   | 0     | 235   |
| Ideal Flow (vphpl)         | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0    |       | 0     | 0     |       | 0     | 0    |      | 0     | 0     |       | 50    |
| Storage Lanes              | 0    |       | 0     | 1     |       | 0     | 0    |      | 0     | 0     |       | 1     |
| 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                        |      | 0.975 |       |       |       |       |      |      |       |       |       | 0.850 |
| Flt Protected              |      |       |       | 0.950 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (prot)          | 0    | 1816  | 0     | 1770  | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Flt Permitted              |      |       |       | 0.102 |       |       |      |      |       |       | 0.950 |       |
| Satd. Flow (perm)          | 0    | 1816  | 0     | 190   | 1863  | 0     | 0    | 0    | 0     | 0     | 1770  | 1583  |
| Right Turn on Red          |      |       | Yes   |       |       | Yes   |      |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |      | 16    |       |       |       |       |      |      |       |       |       | 141   |
| Link Speed (mph)           |      | 30    |       |       | 35    |       |      | 30   |       |       |       | 30    |
| Link Distance (ft)         |      | 684   |       |       | 478   |       |      | 428  |       |       |       | 360   |
| Travel Time (s)            |      | 15.5  |       |       | 9.3   |       |      | 9.7  |       |       |       | 8.2   |
| Peak Hour Factor           | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 0    | 602   | 135   | 449   | 530   | 0     | 0    | 0    | 0     | 261   | 0     | 255   |
| Shared Lane Traffic (%)    |      |       |       |       |       |       |      |      |       |       |       |       |
| Lane Group Flow (vph)      | 0    | 737   | 0     | 449   | 530   | 0     | 0    | 0    | 0     | 0     | 261   | 255   |
| Enter Blocked Intersection | No   | No    | No    | No    | No    | No    | No   | No   | No    | No    | No    | No    |
| Lane Alignment             | Left | Left  | Right | Left  | Left  | Right | Left | Left | Right | Left  | Left  | Right |
| Median Width(ft)           |      | 0     |       |       | 12    |       |      | 0    |       |       |       | 0     |
| Link Offset(ft)            |      | 0     |       |       | 0     |       |      | 0    |       |       |       | 0     |
| Crosswalk Width(ft)        |      | 16    |       |       | 16    |       |      | 16   |       |       |       | 16    |
| Two way Left Turn Lane     |      |       |       |       |       |       |      |      |       |       |       |       |
| Headway Factor             | 1.00 | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        |      | 0     |       | 1     | 0     |       |      |      |       | 1     | 1     | 1     |
| Detector Template          |      |       |       |       |       |       |      |      |       | Left  |       |       |
| Leading Detector (ft)      |      | 0     |       | 36    | 0     |       |      |      |       | 20    | 15    | 15    |
| Trailing Detector (ft)     |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Position(ft)    |      | 0     |       | 0     | 0     |       |      |      |       | 0     | 0     | 0     |
| Detector 1 Size(ft)        |      | 6     |       | 36    | 6     |       |      |      |       | 20    | 15    | 15    |
| Detector 1 Type            |      | 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   |
| Detector 1 Queue (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       |      | 0.0   |       | 0.0   | 0.0   |       |      |      |       | 0.0   | 6.0   | 6.0   |
| Turn Type                  |      | NA    |       | D,P+P | NA    |       |      |      |       | Split | NA    | Prot  |
| Protected Phases           |      | 2     |       | 3     | 3 2   |       |      |      |       | 4     | 4     | 4     |
| Permitted Phases           |      |       |       | 2     |       |       |      |      |       |       |       |       |
| Detector Phase             |      |       |       | 3     |       |       |      |      |       | 4     | 4     | 4     |
| Switch Phase               |      |       |       |       |       |       |      |      |       |       |       |       |
| Minimum Initial (s)        |      | 20.0  |       | 5.0   |       |       |      |      |       | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)          |      | 25.5  |       | 9.9   |       |       |      |      |       | 10.3  | 10.3  | 10.3  |
| Total Split (s)            |      | 44.7  |       | 25.0  |       |       |      |      |       | 20.3  | 20.3  | 20.3  |

Lanes, Volumes, Timings  
219: Bridge St (CT-140)

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| Lane Group              | EBL | EBT   | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR   |
|-------------------------|-----|-------|-----|-------|------|-----|-----|-----|-----|-------|-------|-------|
| Total Split (%)         |     | 49.7% |     | 27.8% |      |     |     |     |     | 22.6% | 22.6% | 22.6% |
| Maximum Green (s)       |     | 39.2  |     | 20.1  |      |     |     |     |     | 15.0  | 15.0  | 15.0  |
| Yellow Time (s)         |     | 4.5   |     | 3.9   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        |     | 1.0   |     | 1.0   |      |     |     |     |     | 2.3   | 2.3   | 2.3   |
| Lost Time Adjust (s)    |     | 0.0   |     | 0.0   |      |     |     |     |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |     | 5.5   |     | 4.9   |      |     |     |     |     |       | 5.3   | 5.3   |
| Lead/Lag                |     | Lead  |     | Lag   |      |     |     |     |     |       |       |       |
| Lead-Lag Optimize?      |     |       |     |       |      |     |     |     |     |       |       |       |
| Vehicle Extension (s)   |     | 3.0   |     | 2.0   |      |     |     |     |     | 3.0   | 3.0   | 3.0   |
| Recall Mode             |     | C-Max |     | None  |      |     |     |     |     | None  | None  | None  |
| Act Effct Green (s)     |     | 39.8  |     | 60.1  | 65.0 |     |     |     |     |       | 14.8  | 14.8  |
| Actuated g/C Ratio      |     | 0.44  |     | 0.67  | 0.72 |     |     |     |     |       | 0.16  | 0.16  |
| v/c Ratio               |     | 0.91  |     | 0.95  | 0.39 |     |     |     |     |       | 0.90  | 0.67  |
| Control Delay           |     | 40.3  |     | 63.5  | 9.3  |     |     |     |     |       | 70.6  | 25.7  |
| Queue Delay             |     | 0.0   |     | 0.0   | 2.6  |     |     |     |     |       | 0.0   | 0.0   |
| Total Delay             |     | 40.3  |     | 63.5  | 11.9 |     |     |     |     |       | 70.6  | 25.7  |
| LOS                     |     | D     |     | E     | B    |     |     |     |     |       | E     | C     |
| Approach Delay          |     | 40.3  |     |       | 35.5 |     |     |     |     |       | 48.4  |       |
| Approach LOS            |     | D     |     |       | D    |     |     |     |     |       | D     |       |
| 90th %ile Green (s)     |     | 39.2  |     | 20.1  |      |     |     |     |     | 15.0  | 15.0  | 15.0  |
| 90th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 70th %ile Green (s)     |     | 39.2  |     | 20.1  |      |     |     |     |     | 15.0  | 15.0  | 15.0  |
| 70th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 50th %ile Green (s)     |     | 39.2  |     | 20.1  |      |     |     |     |     | 15.0  | 15.0  | 15.0  |
| 50th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 30th %ile Green (s)     |     | 39.2  |     | 20.1  |      |     |     |     |     | 15.0  | 15.0  | 15.0  |
| 30th %ile Term Code     |     | Coord |     | Max   |      |     |     |     |     | Max   | Max   | Max   |
| 10th %ile Green (s)     |     | 42.4  |     | 17.9  |      |     |     |     |     | 14.0  | 14.0  | 14.0  |
| 10th %ile Term Code     |     | Coord |     | Gap   |      |     |     |     |     | Gap   | Gap   | Gap   |
| Stops (vph)             |     | 557   |     | 592   | 331  |     |     |     |     |       | 210   | 104   |
| Fuel Used(gal)          |     | 12    |     | 11    | 5    |     |     |     |     |       | 5     | 2     |
| CO Emissions (g/hr)     |     | 857   |     | 784   | 356  |     |     |     |     |       | 369   | 172   |
| NOx Emissions (g/hr)    |     | 167   |     | 153   | 69   |     |     |     |     |       | 72    | 34    |
| VOC Emissions (g/hr)    |     | 199   |     | 182   | 83   |     |     |     |     |       | 86    | 40    |
| Dilemma Vehicles (#)    |     | 0     |     | 0     | 51   |     |     |     |     |       | 0     | 0     |
| Queue Length 50th (ft)  |     | 376   |     | 208   | 200  |     |     |     |     |       | 147   | 59    |
| Queue Length 95th (ft)  |     | #615  |     | #400  | 287  |     |     |     |     |       | #285  | 142   |
| Internal Link Dist (ft) |     | 604   |     |       | 398  |     |     | 348 |     |       | 280   |       |
| Turn Bay Length (ft)    |     |       |     |       |      |     |     |     |     |       |       | 50    |
| Base Capacity (vph)     |     | 813   |     | 480   | 1345 |     |     |     |     |       | 295   | 381   |
| Starvation Cap Reductn  |     | 0     |     | 0     | 671  |     |     |     |     |       | 0     | 0     |
| Spillback Cap Reductn   |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Storage Cap Reductn     |     | 0     |     | 0     | 0    |     |     |     |     |       | 0     | 0     |
| Reduced v/c Ratio       |     | 0.91  |     | 0.94  | 0.79 |     |     |     |     |       | 0.88  | 0.67  |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

# Lanes, Volumes, Timings

## 219: Bridge St (CT-140)

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Offset: 86 (96%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 40.1

Intersection LOS: D

Intersection Capacity Utilization 86.0%

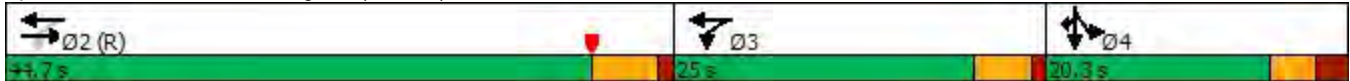
ICU Level of Service E

Analysis Period (min) 15

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













Queue shown is maximum after two cycles.

Splits and Phases: 219: Bridge St (CT-140)



Lanes, Volumes, Timings  
220: Bridge St (CT-140)

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|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   | ↔↑  |   |   | ↑↑  |   |  | ↔   | ↔↔  |   |   |   |
| Traffic Volume (vph)       | 178   | 616   | 0   | 0   | 685   | 267   | 216  | 0   | 735   | 0   | 0   | 0   |
| Future Volume (vph)        | 178   | 616   | 0   | 0   | 685   | 267   | 216  | 0   | 735   | 0   | 0   | 0   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 250  |   | 300   | 0   |   | 0   |
| Storage Lanes              | 0   |   | 0   | 0   |   | 0   | 1  |   | 1   | 0   |   | 0   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25   |   |   | 25  |   |   |
| Lane Util. Factor          | 0.95  | 0.95  | 1.00  | 1.00  | 0.95  | 0.95  | 1.00   | 1.00  | 0.88  | 1.00  | 1.00  | 1.00  |
| Frt                        |   |   |   |   | 0.958   |   |  |   | 0.850   |   |   |   |
| Flt Protected              |   | 0.989   |   |   |   |   |  | 0.950   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 3500  | 0   | 0   | 3391  | 0   | 0  | 1770  | 2787  | 0   | 0   | 0   |
| Flt Permitted              |   | 0.538   |   |   |   |   |  | 0.950   |   |   |   |   |
| Satd. Flow (perm)          | 0   | 1904  | 0   | 0   | 3391  | 0   | 0  | 1770  | 2787  | 0   | 0   | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   |   |   | 78  |   |  |   | 281   |   |   |   |
| Link Speed (mph)           |   | 35  |   |   | 35  |   |  | 30  |   |   |   | 30  |
| Link Distance (ft)         |   | 478   |   |   | 323   |   |  | 585   |   |   |   | 321   |
| Travel Time (s)            |   | 9.3   |   |   | 6.3   |   |  | 13.3  |   |   |   | 7.3   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Adj. Flow (vph)            | 193   | 670   | 0   | 0   | 745   | 290   | 235  | 0   | 799   | 0   | 0   | 0   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 863   | 0   | 0   | 1035  | 0   | 0  | 235   | 799   | 0   | 0   | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 6   |   |  | 0   |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |  | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |  | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |  |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 2   |   |   | 0   |   | 1  | 1   | 1   |   |   |   |
| Detector Template          | Left  | Thru  |   |   |   |   | Left   |   |   |   |   |   |
| Leading Detector (ft)      | 20  | 100   |   |   | 0   |   | 20   | 6   | 21  |   |   |   |
| Trailing Detector (ft)     | 0   | 0   |   |   | 0   |   | 0  | 0   | -3  |   |   |   |
| Detector 1 Position(ft)    | 0   | 0   |   |   | 0   |   | 0  | 0   | -3  |   |   |   |
| Detector 1 Size(ft)        | 20  | 6   |   |   | 6   |   | 20   | 6   | 24  |   |   |   |
| Detector 1 Type            | 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   |   |   |   |
| Detector 1 Queue (s)       | 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   | 9.0   |   |   |   |
| Detector 2 Position(ft)    |   | 94  |   |   |   |   |  |   |   |   |   |   |
| Detector 2 Size(ft)        |   | 6   |   |   |   |   |  |   |   |   |   |   |
| Detector 2 Type            |   | Cl+Ex   |   |   |   |   |  |   |   |   |   |   |
| Detector 2 Channel         |   |   |   |   |   |   |  |   |   |   |   |   |
| Detector 2 Extend (s)      |   | 0.0   |   |   |   |   |  |   |   |   |   |   |
| Turn Type                  | custom  | NA  |   |   | NA  |   | Split  | NA  | custom  |   |   |   |
| Protected Phases           | 3   | 2 3   |   |   | 2 5   |   | 4  | 4   | 4 5   |   |   |   |
| Permitted Phases           | 2   |   |   |   |   |   |  |   |   |   |   |   |

| Lane Group                 | Ø2 | Ø5 |
|----------------------------|----|----|
| 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           |    |    |
| 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           | 2  | 5  |
| Permitted Phases           |    |    |

Lanes, Volumes, Timings  
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| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|-----|-------|-------|------|-----|-----|-----|
| Detector Phase          | 3     | 3    |     |     |      |     | 4     | 4     | 5    |     |     |     |
| Switch Phase            |       |      |     |     |      |     |       |       |      |     |     |     |
| Minimum Initial (s)     | 5.0   |      |     |     |      |     | 7.0   | 7.0   |      |     |     |     |
| Minimum Split (s)       | 10.4  |      |     |     |      |     | 12.1  | 12.1  |      |     |     |     |
| Total Split (s)         | 24.1  |      |     |     |      |     | 22.0  | 22.0  |      |     |     |     |
| Total Split (%)         | 26.8% |      |     |     |      |     | 24.4% | 24.4% |      |     |     |     |
| Maximum Green (s)       | 18.7  |      |     |     |      |     | 16.9  | 16.9  |      |     |     |     |
| Yellow Time (s)         | 4.1   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| All-Red Time (s)        | 1.3   |      |     |     |      |     | 2.1   | 2.1   |      |     |     |     |
| Lost Time Adjust (s)    |       |      |     |     |      |     |       | 0.0   |      |     |     |     |
| Total Lost Time (s)     |       |      |     |     |      |     |       | 5.1   |      |     |     |     |
| Lead/Lag                | Lag   |      |     |     |      |     | Lead  | Lead  |      |     |     |     |
| Lead-Lag Optimize?      |       |      |     |     |      |     |       |       |      |     |     |     |
| Vehicle Extension (s)   | 2.5   |      |     |     |      |     | 3.0   | 3.0   |      |     |     |     |
| Recall Mode             | Max   |      |     |     |      |     | None  | None  |      |     |     |     |
| Act Effct Green (s)     |       | 43.6 |     |     | 38.9 |     |       | 15.4  | 28.3 |     |     |     |
| Actuated g/C Ratio      |       | 0.48 |     |     | 0.43 |     |       | 0.17  | 0.31 |     |     |     |
| v/c Ratio               |       | 0.70 |     |     | 0.69 |     |       | 0.78  | 0.75 |     |     |     |
| Control Delay           |       | 8.9  |     |     | 11.3 |     |       | 53.8  | 21.8 |     |     |     |
| Queue Delay             |       | 0.0  |     |     | 0.0  |     |       | 0.0   | 0.0  |     |     |     |
| Total Delay             |       | 8.9  |     |     | 11.4 |     |       | 53.8  | 21.8 |     |     |     |
| LOS                     |       | A    |     |     | B    |     |       | D     | C    |     |     |     |
| Approach Delay          |       | 8.9  |     |     | 11.4 |     |       | 29.1  |      |     |     |     |
| Approach LOS            |       | A    |     |     | B    |     |       | C     |      |     |     |     |
| 90th %ile Green (s)     | 18.7  |      |     |     |      |     | 16.9  | 16.9  |      |     |     |     |
| 90th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 70th %ile Green (s)     | 18.7  |      |     |     |      |     | 16.9  | 16.9  |      |     |     |     |
| 70th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 50th %ile Green (s)     | 18.7  |      |     |     |      |     | 16.9  | 16.9  |      |     |     |     |
| 50th %ile Term Code     | MaxR  |      |     |     |      |     | Max   | Max   |      |     |     |     |
| 30th %ile Green (s)     | 18.7  |      |     |     |      |     | 14.9  | 14.9  |      |     |     |     |
| 30th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| 10th %ile Green (s)     | 18.7  |      |     |     |      |     | 11.3  | 11.3  |      |     |     |     |
| 10th %ile Term Code     | MaxR  |      |     |     |      |     | Gap   | Gap   |      |     |     |     |
| Stops (vph)             |       | 373  |     |     | 711  |     |       | 197   | 428  |     |     |     |
| Fuel Used(gal)          |       | 7    |     |     | 10   |     |       | 4     | 9    |     |     |     |
| CO Emissions (g/hr)     |       | 489  |     |     | 682  |     |       | 310   | 628  |     |     |     |
| NOx Emissions (g/hr)    |       | 95   |     |     | 133  |     |       | 60    | 122  |     |     |     |
| VOC Emissions (g/hr)    |       | 113  |     |     | 158  |     |       | 72    | 145  |     |     |     |
| Dilemma Vehicles (#)    |       | 133  |     |     | 15   |     |       | 0     | 0    |     |     |     |
| Queue Length 50th (ft)  |       | 12   |     |     | 182  |     |       | 126   | 150  |     |     |     |
| Queue Length 95th (ft)  |       | m108 |     |     | m98  |     |       | #226  | 204  |     |     |     |
| Internal Link Dist (ft) |       | 398  |     |     | 243  |     |       | 505   |      |     | 241 |     |
| Turn Bay Length (ft)    |       |      |     |     |      |     |       |       | 300  |     |     |     |
| Base Capacity (vph)     |       | 1234 |     |     | 1510 |     |       | 332   | 1182 |     |     |     |
| Starvation Cap Reductn  |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Spillback Cap Reductn   |       | 0    |     |     | 18   |     |       | 0     | 0    |     |     |     |
| Storage Cap Reductn     |       | 0    |     |     | 0    |     |       | 0     | 0    |     |     |     |
| Reduced v/c Ratio       |       | 0.70 |     |     | 0.69 |     |       | 0.71  | 0.68 |     |     |     |

Lanes, Volumes, Timings  
 220: Bridge St (CT-140)

07/07/2020

| Lane Group              | Ø2    | Ø5   |
|-------------------------|-------|------|
| Detector Phase          |       |      |
| Switch Phase            |       |      |
| Minimum Initial (s)     | 15.0  | 5.0  |
| Minimum Split (s)       | 21.5  | 10.7 |
| Total Split (s)         | 26.9  | 17.0 |
| Total Split (%)         | 30%   | 19%  |
| Maximum Green (s)       | 20.4  | 11.3 |
| Yellow Time (s)         | 4.5   | 4.5  |
| All-Red Time (s)        | 2.0   | 1.2  |
| Lost Time Adjust (s)    |       |      |
| Total Lost Time (s)     |       |      |
| Lead/Lag                | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |
| Vehicle Extension (s)   | 3.0   | 1.5  |
| Recall Mode             | C-Max | None |
| 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)     | 20.4  | 11.3 |
| 90th %ile Term Code     | Coord | Max  |
| 70th %ile Green (s)     | 22.6  | 9.1  |
| 70th %ile Term Code     | Coord | Gap  |
| 50th %ile Green (s)     | 26.1  | 5.6  |
| 50th %ile Term Code     | Coord | Gap  |
| 30th %ile Green (s)     | 28.7  | 5.0  |
| 30th %ile Term Code     | Coord | Min  |
| 10th %ile Green (s)     | 32.3  | 5.0  |
| 10th %ile Term Code     | Coord | Min  |
| 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)     |       |      |
| Starvation Cap Reductn  |       |      |
| Spillback Cap Reductn   |       |      |
| Storage Cap Reductn     |       |      |
| Reduced v/c Ratio       |       |      |

Lanes, Volumes, Timings  
 220: Bridge St (CT-140)

07/07/2020

Intersection Summary

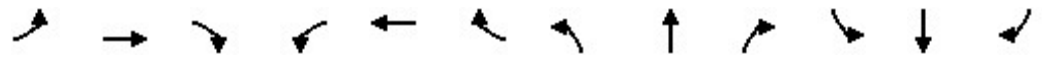
|                                   |   |
|-----------------------------------|---|
| Area Type:                        | Other   |
| Cycle Length:                     | 90  |
| Actuated Cycle Length:            | 90  |
| Offset:                           | 66 (73%), Referenced to phase 2:EBWB, Start of Yellow   |
| Natural Cycle:                    | 70  |
| Control Type:                     | Actuated-Coordinated  |
| Maximum v/c Ratio:                | 0.78  |
| Intersection Signal Delay:        | 16.9  |
| Intersection LOS:                 | B   |
| Intersection Capacity Utilization | 76.7%   |
| ICU Level of Service              | D   |
| Analysis Period (min)             | 15  |
| #                                 | 95th percentile volume exceeds capacity, queue may be longer.<br>Queue shown is maximum after two cycles. |
| m                                 | Volume for 95th percentile queue is metered by upstream signal.   |

Splits and Phases: 220: Bridge St (CT-140)



Lanes, Volumes, Timings  
222: Southern Auto Auction

07/07/2020



| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations        |       | ↕     |       |       | ↕     | ↕     |       | ↕     |       |       | ↕     |       |
| Traffic Volume (vph)       | 12    | 4     | 17    | 52    | 8     | 56    | 16    | 1178  | 15    | 30    | 1468  | 15    |
| Future Volume (vph)        | 12    | 4     | 17    | 52    | 8     | 56    | 16    | 1178  | 15    | 30    | 1468  | 15    |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0     |       | 0     | 0     |       | 0     | 0     |       | 0     | 200   |       | 0     |
| Storage Lanes              | 0     |       | 0     | 0     |       | 1     | 0     |       | 0     | 0     |       | 0     |
| Taper Length (ft)          | 25    |       |       | 25    |       |       | 25    |       |       | 25    |       |       |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Frt                        |       | 0.931 |       |       |       | 0.850 |       | 0.998 |       |       | 0.999 |       |
| Flt Protected              |       | 0.982 |       |       | 0.959 |       |       | 0.999 |       |       | 0.999 |       |
| Satd. Flow (prot)          | 0     | 1258  | 0     | 0     | 1665  | 1482  | 0     | 3305  | 0     | 0     | 3279  | 0     |
| Flt Permitted              |       | 0.858 |       |       | 0.730 |       |       | 0.913 |       |       | 0.892 |       |
| Satd. Flow (perm)          | 0     | 1099  | 0     | 0     | 1267  | 1482  | 0     | 3020  | 0     | 0     | 2928  | 0     |
| Right Turn on Red          |       |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)          |       | 18    |       |       |       | 61    |       | 4     |       |       | 3     |       |
| Link Speed (mph)           |       | 25    |       |       | 25    |       |       | 45    |       |       | 45    |       |
| Link Distance (ft)         |       | 484   |       |       | 1094  |       |       | 527   |       |       | 557   |       |
| Travel Time (s)            |       | 13.2  |       |       | 29.8  |       |       | 8.0   |       |       | 8.4   |       |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 100%  | 8%    | 0%    | 10%   | 6%    | 9%    | 8%    | 9%    | 2%    | 3%    | 10%   | 11%   |
| Adj. Flow (vph)            | 13    | 4     | 18    | 57    | 9     | 61    | 17    | 1280  | 16    | 33    | 1596  | 16    |
| Shared Lane Traffic (%)    |       |       |       |       |       |       |       |       |       |       |       |       |
| Lane Group Flow (vph)      | 0     | 35    | 0     | 0     | 66    | 61    | 0     | 1313  | 0     | 0     | 1645  | 0     |
| Enter Blocked Intersection | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Lane Alignment             | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right | Left  | Left  | Right |
| Median Width(ft)           |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Link Offset(ft)            |       | 0     |       |       | 0     |       |       | 0     |       |       | 0     |       |
| Crosswalk Width(ft)        |       | 16    |       |       | 16    |       |       | 16    |       |       | 16    |       |
| Two way Left Turn Lane     |       |       |       |       |       |       |       |       |       |       |       |       |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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     | 15    |       | 9     |
| Number of Detectors        | 1     | 1     |       | 1     | 1     | 1     | 1     | 0     |       | 1     | 0     |       |
| Detector Template          | Left  |       |       | Left  |       | Right | Left  |       |       | Left  |       |       |
| Leading Detector (ft)      | 20    | 15    |       | 20    | 20    | 20    | 20    | 0     |       | 20    | 0     |       |
| 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    | 15    |       | 20    | 20    | 20    | 20    | 6     |       | 20    | 6     |       |
| 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   |       |
| Turn Type                  | Perm  | NA    |       | Perm  | NA    | Perm  | Perm  | NA    |       | Perm  | NA    |       |
| Protected Phases           |       | 4     |       |       | 4     |       |       | 2     |       |       | 2     |       |
| Permitted Phases           | 4     |       |       | 4     |       | 4     | 2     |       |       | 2     |       |       |
| Detector Phase             | 4     | 4     |       | 4     | 4     | 4     |       |       |       |       |       |       |
| Switch Phase               |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)        | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Minimum Split (s)          | 11.7  | 11.7  |       | 11.7  | 11.7  | 11.7  | 21.8  | 21.8  |       | 21.8  | 21.8  |       |

Lanes, Volumes, Timings  
222: Southern Auto Auction

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR   | NBL   | NBT   | NBR | SBL   | SBT   | SBR |
|-------------------------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|
| Total Split (s)         | 16.5  | 16.5  |     | 16.5  | 16.5  | 16.5  | 73.5  | 73.5  |     | 73.5  | 73.5  |     |
| Total Split (%)         | 18.3% | 18.3% |     | 18.3% | 18.3% | 18.3% | 81.7% | 81.7% |     | 81.7% | 81.7% |     |
| Maximum Green (s)       | 11.8  | 11.8  |     | 11.8  | 11.8  | 11.8  | 66.7  | 66.7  |     | 66.7  | 66.7  |     |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 4.8   | 4.8   |     | 4.8   | 4.8   |     |
| All-Red Time (s)        | 1.7   | 1.7   |     | 1.7   | 1.7   | 1.7   | 2.0   | 2.0   |     | 2.0   | 2.0   |     |
| Lost Time Adjust (s)    |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Lost Time (s)     |       | 4.7   |     |       | 4.7   | 4.7   |       | 6.8   |     |       | 6.8   |     |
| Lead/Lag                |       |       |     |       |       |       |       |       |     |       |       |     |
| Lead-Lag Optimize?      |       |       |     |       |       |       |       |       |     |       |       |     |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   |     | 3.0   | 3.0   |     |
| Recall Mode             | None  | None  |     | None  | None  | None  | C-Max | C-Max |     | C-Max | C-Max |     |
| Act Effct Green (s)     |       | 9.2   |     |       | 9.2   | 9.2   |       | 73.0  |     |       | 73.0  |     |
| Actuated g/C Ratio      |       | 0.10  |     |       | 0.10  | 0.10  |       | 0.81  |     |       | 0.81  |     |
| v/c Ratio               |       | 0.27  |     |       | 0.51  | 0.30  |       | 0.54  |     |       | 0.69  |     |
| Control Delay           |       | 28.2  |     |       | 51.9  | 13.9  |       | 5.6   |     |       | 4.3   |     |
| Queue Delay             |       | 0.0   |     |       | 0.0   | 0.0   |       | 0.0   |     |       | 0.0   |     |
| Total Delay             |       | 28.2  |     |       | 51.9  | 13.9  |       | 5.6   |     |       | 4.3   |     |
| LOS                     |       | C     |     |       | D     | B     |       | A     |     |       | A     |     |
| Approach Delay          |       | 28.2  |     |       | 33.7  |       |       | 5.6   |     |       | 4.3   |     |
| Approach LOS            |       | C     |     |       | C     |       |       | A     |     |       | A     |     |
| 90th %ile Green (s)     | 11.8  | 11.8  |     | 11.8  | 11.8  | 11.8  | 66.7  | 66.7  |     | 66.7  | 66.7  |     |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Max   | Max   | Coord | Coord |     | Coord | Coord |     |
| 70th %ile Green (s)     | 10.9  | 10.9  |     | 10.9  | 10.9  | 10.9  | 67.6  | 67.6  |     | 67.6  | 67.6  |     |
| 70th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 50th %ile Green (s)     | 9.0   | 9.0   |     | 9.0   | 9.0   | 9.0   | 69.5  | 69.5  |     | 69.5  | 69.5  |     |
| 50th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 30th %ile Green (s)     | 7.2   | 7.2   |     | 7.2   | 7.2   | 7.2   | 71.3  | 71.3  |     | 71.3  | 71.3  |     |
| 30th %ile Term Code     | Gap   | Gap   |     | Gap   | Gap   | Gap   | Coord | Coord |     | Coord | Coord |     |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 83.2  | 83.2  |     | 83.2  | 83.2  |     |
| 10th %ile Term Code     | Skip  | Skip  |     | Skip  | Skip  | Skip  | Coord | Coord |     | Coord | Coord |     |
| Stops (vph)             |       | 20    |     |       | 56    | 15    |       | 500   |     |       | 476   |     |
| Fuel Used(gal)          |       | 0     |     |       | 1     | 1     |       | 17    |     |       | 24    |     |
| CO Emissions (g/hr)     |       | 27    |     |       | 100   | 52    |       | 1199  |     |       | 1655  |     |
| NOx Emissions (g/hr)    |       | 5     |     |       | 19    | 10    |       | 233   |     |       | 322   |     |
| VOC Emissions (g/hr)    |       | 6     |     |       | 23    | 12    |       | 278   |     |       | 384   |     |
| Dilemma Vehicles (#)    |       | 0     |     |       | 0     | 0     |       | 46    |     |       | 79    |     |
| Queue Length 50th (ft)  |       | 9     |     |       | 36    | 0     |       | 125   |     |       | 135   |     |
| Queue Length 95th (ft)  |       | 37    |     |       | 76    | 35    |       | m243  |     |       | m129  |     |
| Internal Link Dist (ft) |       | 404   |     |       | 1014  |       |       | 447   |     |       | 477   |     |
| Turn Bay Length (ft)    |       |       |     |       |       |       |       |       |     |       |       |     |
| Base Capacity (vph)     |       | 159   |     |       | 166   | 247   |       | 2451  |     |       | 2376  |     |
| 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       |       | 0.22  |     |       | 0.40  | 0.25  |       | 0.54  |     |       | 0.69  |     |




















Intersection Summary

Area Type: Other  
Cycle Length: 90



Lanes, Volumes, Timings  
225: MMCT Casino

07/07/2020

|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |   |  |  |   |   |  |  |
| Traffic Volume (vph)       | 102   | 0   | 108   | 10  | 0   | 10  | 24  | 839   | 0   | 20  | 679   | 44  |
| Future Volume (vph)        | 102   | 0   | 108   | 10  | 0   | 10  | 24  | 839   | 0   | 20  | 679   | 44  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 0   |   | 400   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 0   | 1   |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   |   |   |   |   | 1.00  |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   | 0.932   |   |   |   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.976   |   | 0.950   |   |   |   | 0.999   |   |
| Satd. Flow (prot)          | 0   | 1399  | 1615  | 0   | 1694  | 0   | 1203  | 1759  | 0   | 0   | 1745  | 1272  |
| Flt Permitted              |   | 0.743   |   |   | 0.866   |   | 0.283   |   |   |   | 0.964   |   |
| Satd. Flow (perm)          | 0   | 1094  | 1615  | 0   | 1503  | 0   | 358   | 1759  | 0   | 0   | 1683  | 1272  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 117   |   | 85  |   |   |   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 30  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 532   |   |   | 223   |   |   | 1555  |   |   |   | 682   |
| Travel Time (s)            |   | 14.5  |   |   | 5.1   |   |   | 23.6  |   |   |   | 10.3  |
| Confl. Peds. (#/hr)        |   |   |   |   |   |   | 1   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 29%   | 2%  | 0%  | 2%  | 2%  | 2%  | 50%   | 8%  | 2%  | 2%  | 9%  | 27%   |
| Adj. Flow (vph)            | 111   | 0   | 117   | 11  | 0   | 11  | 26  | 912   | 0   | 22  | 738   | 48  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 111   | 117   | 0   | 22  | 0   | 26  | 912   | 0   | 0   | 760   | 48  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |   | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 2   | 1   | 1   | 2   |   | 1   | 2   |   | 1   | 2   | 1   |
| Detector Template          | Left  | Thru  | Right   | Left  | Thru  |   | Left  |   |   | Left  |   | Right   |
| Leading Detector (ft)      | 20  | 100   | 20  | 20  | 100   |   | 20  | 293   |   | 20  | 283   | 20  |
| Trailing Detector (ft)     | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Position(ft)    | 0   | 0   | 0   | 0   | 0   |   | 0   | 200   |   | 0   | 200   | 0   |
| Detector 1 Size(ft)        | 20  | 6   | 20  | 20  | 6   |   | 20  | 6   |   | 20  | 6   | 20  |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   | 94  |   |   | 94  |   |   | 287   |   |   |   | 277   |
| Detector 2 Size(ft)        |   | 6   |   |   | 6   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   | Cl+Ex   |   |   | Cl+Ex   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |
| Detector 2 Extend (s)      |   | 0.0   |   |   | 0.0   |   |   | 0.0   |   |   |   | 0.0   |

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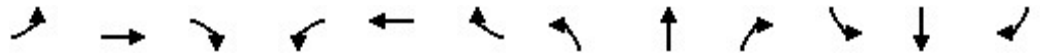


| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR | NBL   | NBT  | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-----|-------|------|-----|-------|-------|-------|
| Turn Type               | Perm  | NA    | Prot  | Perm  | NA    |     | D.P+P | NA   |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 4     | 4     |       | 4     |     | 1     | 1 2  |     |       | 2     |       |
| Permitted Phases        | 4     |       |       | 4     |       |     | 2     |      |     | 2     |       | 2     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     |     | 1     | 2    |     | 2     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |     |       |      |     |       |       |       |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |     | 4.5   |      |     | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |     | 9.0   |      |     | 21.0  | 21.0  | 21.0  |
| Total Split (s)         | 20.0  | 20.0  | 20.0  | 20.0  | 20.0  |     | 9.0   |      |     | 61.0  | 61.0  | 61.0  |
| Total Split (%)         | 22.2% | 22.2% | 22.2% | 22.2% | 22.2% |     | 10.0% |      |     | 67.8% | 67.8% | 67.8% |
| Maximum Green (s)       | 16.0  | 16.0  | 16.0  | 16.0  | 16.0  |     | 5.0   |      |     | 55.0  | 55.0  | 55.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |     | 3.0   |      |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |     | 1.0   |      |     | 1.2   | 1.2   | 1.2   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   |      |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.0   | 4.0   |       | 4.0   |     | 4.0   |      |     |       | 6.0   | 6.0   |
| Lead/Lag                |       |       |       |       |       |     | Lead  |      |     | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |     |       |      |     |       |       |       |
| 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  |     | None  |      |     | C-Min | C-Min | C-Min |
| Act Effct Green (s)     |       | 13.1  | 13.1  |       | 13.1  |     | 67.3  | 68.9 |     |       | 63.3  | 63.3  |
| Actuated g/C Ratio      |       | 0.15  | 0.15  |       | 0.15  |     | 0.75  | 0.77 |     |       | 0.70  | 0.70  |
| v/c Ratio               |       | 0.70  | 0.35  |       | 0.08  |     | 0.08  | 0.68 |     |       | 0.64  | 0.05  |
| Control Delay           |       | 58.8  | 9.6   |       | 0.5   |     | 2.0   | 5.6  |     |       | 7.9   | 0.2   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   |     | 0.0   | 0.1  |     |       | 0.0   | 0.0   |
| Total Delay             |       | 58.8  | 9.6   |       | 0.5   |     | 2.0   | 5.8  |     |       | 7.9   | 0.2   |
| LOS                     |       | E     | A     |       | A     |     | A     | A    |     |       | A     | A     |
| Approach Delay          |       | 33.6  |       |       | 0.5   |     |       | 5.7  |     |       | 7.4   |       |
| Approach LOS            |       | C     |       |       | A     |     |       | A    |     |       | A     |       |
| 90th %ile Green (s)     | 16.0  | 16.0  | 16.0  | 16.0  | 16.0  |     | 5.0   |      |     | 55.0  | 55.0  | 55.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   |      |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 16.0  | 16.0  | 16.0  | 16.0  | 16.0  |     | 5.0   |      |     | 55.0  | 55.0  | 55.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |     | Max   |      |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 14.3  | 14.3  | 14.3  | 14.3  | 14.3  |     | 0.0   |      |     | 65.7  | 65.7  | 65.7  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 11.6  | 11.6  | 11.6  | 11.6  | 11.6  |     | 0.0   |      |     | 68.4  | 68.4  | 68.4  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 7.6   | 7.6   | 7.6   | 7.6   | 7.6   |     | 0.0   |      |     | 72.4  | 72.4  | 72.4  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |     | Skip  |      |     | Coord | Coord | Coord |
| Stops (vph)             |       | 96    | 19    |       | 0     |     | 4     | 282  |     |       | 345   | 0     |
| Fuel Used(gal)          |       | 2     | 1     |       | 0     |     | 0     | 13   |     |       | 9     | 0     |
| CO Emissions (g/hr)     |       | 143   | 54    |       | 3     |     | 21    | 905  |     |       | 595   | 14    |
| NOx Emissions (g/hr)    |       | 28    | 11    |       | 1     |     | 4     | 176  |     |       | 116   | 3     |
| VOC Emissions (g/hr)    |       | 33    | 13    |       | 1     |     | 5     | 210  |     |       | 138   | 3     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     |     | 0     | 34   |     |       | 33    | 0     |
| Queue Length 50th (ft)  |       | 60    | 0     |       | 0     |     | 1     | 32   |     |       | 114   | 1     |
| Queue Length 95th (ft)  |       | #118  | 45    |       | 0     |     | m3    | 388  |     |       | 75    | m0    |
| Internal Link Dist (ft) |       | 452   |       |       | 143   |     |       | 1475 |     |       | 602   |       |
| Turn Bay Length (ft)    |       |       |       |       |       |     | 300   |      |     |       |       | 400   |
| Base Capacity (vph)     |       | 194   | 383   |       | 337   |     | 318   | 1346 |     |       | 1183  | 913   |
| Starvation Cap Reductn  |       | 0     | 0     |       | 0     |     | 0     | 0    |     |       | 0     | 0     |

Lanes, Volumes, Timings

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| Lane Group            | EBL | EBT  | EBR  | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|-----------------------|-----|------|------|-----|------|-----|------|------|-----|-----|------|------|
| Spillback Cap Reductn |     | 0    | 0    |     | 2    |     | 0    | 42   |     |     | 0    | 0    |
| Storage Cap Reductn   |     | 0    | 0    |     | 0    |     | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio     |     | 0.57 | 0.31 |     | 0.07 |     | 0.08 | 0.70 |     |     | 0.64 | 0.05 |

Intersection Summary





















Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 26 (29%), Referenced to phase 2:NBSB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 9.5      Intersection LOS: A  
 Intersection Capacity Utilization 72.1%      ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 225: MMCT Casino



Lanes, Volumes, Timings  
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|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |   |  |  |   |  |  |  |  |   |   |  |  |
| Traffic Volume (vph)       | 59  | 0   | 74  | 30  | 1   | 8   | 110  | 816   | 12  | 1   | 753   | 44  |
| Future Volume (vph)        | 59  | 0   | 74  | 30  | 1   | 8   | 110  | 816   | 12  | 1   | 753   | 44  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12   | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 50  | 360  |   | 0   | 0   |   | 370   |
| Storage Lanes              | 0   |   | 1   | 0   |   | 1   | 1  |   | 0   | 0   |   | 1   |
| Taper Length (ft)          | 25  |   |   | 25  |   |   | 25   |   |   | 25  |   |   |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   |   | 0.98  |   |   |   |  |   |   |   |   |   |
| Frt                        |   |   | 0.850   |   |   | 0.850   |  | 0.998   |   |   |   | 0.850   |
| Flt Protected              |   | 0.950   |   |   | 0.954   |   | 0.950  |   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 1543  | 1615  | 0   | 1596  | 1615  | 1583   | 1757  | 0   | 0   | 1793  | 1482  |
| Flt Permitted              |   | 0.735   |   |   | 0.686   |   | 0.265  |   |   |   | 0.999   |   |
| Satd. Flow (perm)          | 0   | 1194  | 1579  | 0   | 1147  | 1615  | 442  | 1757  | 0   | 0   | 1791  | 1482  |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |  |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   |   | 80  |   |   | 112   |  | 3   |   |   |   | 61  |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |  | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 626   |   |   | 337   |   |  | 828   |   |   |   | 1555  |
| Travel Time (s)            |   | 17.1  |   |   | 9.2   |   |  | 12.5  |   |   |   | 23.6  |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |  |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 17%   | 0%  | 0%  | 14%   | 0%  | 0%  | 14%  | 8%  | 3%  | 0%  | 6%  | 9%  |
| Adj. Flow (vph)            | 64  | 0   | 80  | 33  | 1   | 9   | 120  | 887   | 13  | 1   | 818   | 48  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 64  | 80  | 0   | 34  | 9   | 120  | 900   | 0   | 0   | 819   | 48  |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 5   |   |   | 0   |   |  | 12  |   |   |   | 0   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |  | 0   |   |   |   | 6   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |  | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |  |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   | 1   | 1   | 1   | 1   | 1  | 2   |   | 1   | 2   | 2   |
| Detector Template          | Left  |   |   | Left  |   |   |  |   |   | Left  |   |   |
| Leading Detector (ft)      | 20  | 29  | 29  | 20  | 14  | 14  | 24   | 366   |   | 20  | 366   | 366   |
| Trailing Detector (ft)     | 0   | -5  | -5  | 0   | -10   | -10   | -10  | 180   |   | 0   | 180   | 180   |
| Detector 1 Position(ft)    | 0   | -5  | -5  | 0   | -10   | -10   | -10  | 180   |   | 0   | 180   | 180   |
| Detector 1 Size(ft)        | 20  | 34  | 34  | 20  | 24  | 24  | 34   | 6   |   | 20  | 6   | 6   |
| Detector 1 Type            | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex   | Cl+Ex  | Cl+Ex   |   | Cl+Ex   | Cl+Ex   | Cl+Ex   |
| Detector 1 Channel         |   |   |   |   |   |   |  |   |   |   |   |   |
| Detector 1 Extend (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Queue (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 1 Delay (s)       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Detector 2 Position(ft)    |   |   |   |   |   |   |  | 360   |   |   | 360   | 360   |
| Detector 2 Size(ft)        |   |   |   |   |   |   |  | 6   |   |   | 6   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |  | Cl+Ex   |   |   | Cl+Ex   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |  |   |   |   |   |   |

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT  | NBR | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|------|-----|-------|-------|-------|
| Detector 2 Extend (s)   |       |       |       |       |       |       |       | 0.0  |     |       | 0.0   | 0.0   |
| Turn Type               | Perm  | NA    | pm+ov | Perm  | NA    | Perm  | D.P+P | NA   |     | Perm  | NA    | Perm  |
| Protected Phases        |       | 4     | 1     |       | 4     |       | 1     | 1 2  |     |       | 2     |       |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |      |     | 2     |       | 2     |
| Detector Phase          | 4     | 4     | 4     | 4     | 4     | 4     | 1     | 2    |     | 2     | 2     | 2     |
| Switch Phase            |       |       |       |       |       |       |       |      |     |       |       |       |
| Minimum Initial (s)     | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |     | 15.0  | 15.0  | 15.0  |
| Minimum Split (s)       | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   | 9.0   |      |     | 23.4  | 23.4  | 23.4  |
| Total Split (s)         | 15.0  | 15.0  | 9.0   | 15.0  | 15.0  | 15.0  | 9.0   |      |     | 66.0  | 66.0  | 66.0  |
| Total Split (%)         | 16.7% | 16.7% | 10.0% | 16.7% | 16.7% | 16.7% | 10.0% |      |     | 73.3% | 73.3% | 73.3% |
| Maximum Green (s)       | 11.0  | 11.0  | 5.0   | 11.0  | 11.0  | 11.0  | 5.0   |      |     | 57.8  | 57.8  | 57.8  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |     | 4.8   | 4.8   | 4.8   |
| All-Red Time (s)        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |     | 3.4   | 3.4   | 3.4   |
| Lost Time Adjust (s)    |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |      |     |       | 0.0   | 0.0   |
| Total Lost Time (s)     |       | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   |      |     |       | 8.2   | 8.2   |
| Lead/Lag                |       |       | Lead  |       |       |       | Lead  |      |     | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |      |     |       |       |       |
| Vehicle Extension (s)   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   | 1.5   |      |     | 2.5   | 2.5   | 2.5   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  |      |     | C-Min | C-Min | C-Min |
| Act Effct Green (s)     |       | 8.4   | 12.5  |       | 8.4   | 8.4   | 71.3  | 76.1 |     |       | 62.1  | 62.1  |
| Actuated g/C Ratio      |       | 0.09  | 0.14  |       | 0.09  | 0.09  | 0.79  | 0.85 |     |       | 0.69  | 0.69  |
| v/c Ratio               |       | 0.58  | 0.28  |       | 0.32  | 0.04  | 0.29  | 0.61 |     |       | 0.66  | 0.05  |
| Control Delay           |       | 58.8  | 9.7   |       | 45.0  | 0.2   | 4.8   | 8.5  |     |       | 5.0   | 0.2   |
| Queue Delay             |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0  |     |       | 0.0   | 0.0   |
| Total Delay             |       | 58.8  | 9.7   |       | 45.0  | 0.2   | 4.8   | 8.5  |     |       | 5.0   | 0.2   |
| LOS                     |       | E     | A     |       | D     | A     | A     | A    |     |       | A     | A     |
| Approach Delay          |       | 31.5  |       |       | 35.7  |       |       | 8.1  |     |       | 4.7   |       |
| Approach LOS            |       | C     |       |       | D     |       |       | A    |     |       | A     |       |
| 90th %ile Green (s)     | 11.0  | 11.0  | 5.0   | 11.0  | 11.0  | 11.0  | 5.0   |      |     | 57.8  | 57.8  | 57.8  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max   |      |     | Coord | Coord | Coord |
| 70th %ile Green (s)     | 10.8  | 10.8  | 5.2   | 10.8  | 10.8  | 10.8  | 5.2   |      |     | 57.8  | 57.8  | 57.8  |
| 70th %ile Term Code     | Gap   | Gap   | Max   | Gap   | Gap   | Gap   | Max   |      |     | Coord | Coord | Coord |
| 50th %ile Green (s)     | 8.8   | 8.8   | 5.4   | 8.8   | 8.8   | 8.8   | 5.4   |      |     | 59.6  | 59.6  | 59.6  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |      |     | Coord | Coord | Coord |
| 30th %ile Green (s)     | 6.8   | 6.8   | 4.9   | 6.8   | 6.8   | 6.8   | 4.9   |      |     | 62.1  | 62.1  | 62.1  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |      |     | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 4.5   | 0.0   | 0.0   | 0.0   | 4.5   |      |     | 73.3  | 73.3  | 73.3  |
| 10th %ile Term Code     | Skip  | Skip  | Min   | Skip  | Skip  | Skip  | Min   |      |     | Coord | Coord | Coord |
| Stops (vph)             |       | 56    | 16    |       | 30    | 0     | 31    | 497  |     |       | 152   | 1     |
| Fuel Used(gal)          |       | 1     | 1     |       | 0     | 0     | 1     | 12   |     |       | 10    | 0     |
| CO Emissions (g/hr)     |       | 86    | 42    |       | 34    | 2     | 76    | 843  |     |       | 717   | 32    |
| NOx Emissions (g/hr)    |       | 17    | 8     |       | 7     | 0     | 15    | 164  |     |       | 140   | 6     |
| VOC Emissions (g/hr)    |       | 20    | 10    |       | 8     | 0     | 18    | 195  |     |       | 166   | 7     |
| Dilemma Vehicles (#)    |       | 0     | 0     |       | 0     | 0     | 0     | 49   |     |       | 25    | 0     |
| Queue Length 50th (ft)  |       | 35    | 0     |       | 18    | 0     | 8     | 229  |     |       | 147   | 1     |
| Queue Length 95th (ft)  |       | 75    | 35    |       | 47    | 0     | 43    | 292  |     |       | 65    | m1    |
| Internal Link Dist (ft) |       | 546   |       |       | 257   |       |       | 748  |     |       | 1475  |       |
| Turn Bay Length (ft)    |       |       |       |       |       | 50    | 360   |      |     |       |       | 370   |
| Base Capacity (vph)     |       | 145   | 332   |       | 140   | 295   | 415   | 1486 |     |       | 1236  | 1041  |

Lanes, Volumes, Timings

226: Big Y/Ethos

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| Lane Group             | EBL | EBT  | EBR  | WBL | WBT  | WBR  | NBL  | NBT  | NBR | SBL | SBT  | SBR  |
|------------------------|-----|------|------|-----|------|------|------|------|-----|-----|------|------|
| Starvation Cap Reductn |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Spillback Cap Reductn  |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Storage Cap Reductn    |     | 0    | 0    |     | 0    | 0    | 0    | 0    |     |     | 0    | 0    |
| Reduced v/c Ratio      |     | 0.44 | 0.24 |     | 0.24 | 0.03 | 0.29 | 0.61 |     |     | 0.66 | 0.05 |

Intersection Summary























|   |   |
|---|---|
| Area Type:  | Other   |
| Cycle Length:   | 90  |
| Actuated Cycle Length:  | 90  |
| Offset:   | 48 (53%), Referenced to phase 2:NBSB, Start of Yellow |
| Natural Cycle:  | 60  |
| Control Type:   | Actuated-Coordinated                                  |
| Maximum v/c Ratio:  | 0.66  |
| Intersection Signal Delay:  | 8.9   |
| Intersection LOS:   | A   |
| Intersection Capacity Utilization                                 | 106.8%  |
| ICU Level of Service  | G   |
| Analysis Period (min)   | 15  |
| m Volume for 95th percentile queue is metered by upstream signal. |   |

Splits and Phases: 226: Big Y/Ethos



Lanes, Volumes, Timings  
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|                            |  |  |  |  |  |  |   |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group                 | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations        |  |  |   |  |  |   |  |  |  |  |  |  |
| Traffic Volume (vph)       | 47  | 11  | 77  | 224   | 31  | 124   | 123   | 796   | 338   | 108   | 704   | 54  |
| Future Volume (vph)        | 47  | 11  | 77  | 224   | 31  | 124   | 123   | 796   | 338   | 108   | 704   | 54  |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)            | 11  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| Storage Length (ft)        | 0   |   | 0   | 0   |   | 0   | 110   |   | 140   | 250   |   | 0   |
| Storage Lanes              | 1   |   | 0   | 1   |   | 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  | 0.95  | 1.00  | 1.00  | 1.00  | 1.00  |
| Ped Bike Factor            |   | 0.98  |   |   |   |   |   |   |   |   |   |   |
| Frt                        |   | 0.869   |   |   | 0.880   |   |   |   | 0.850   |   | 0.989   |   |
| Flt Protected              | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)          | 1745  | 1613  | 0   | 1736  | 1633  | 0   | 1805  | 3312  | 1524  | 1770  | 1764  | 0   |
| Flt Permitted              | 0.889   |   |   | 0.526   |   |   | 0.160   |   |   | 0.281   |   |   |
| Satd. Flow (perm)          | 1633  | 1613  | 0   | 961   | 1633  | 0   | 304   | 3312  | 1524  | 523   | 1764  | 0   |
| Right Turn on Red          |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)          |   | 84  |   |   | 135   |   |   |   | 367   |   |   | 7   |
| Link Speed (mph)           |   | 25  |   |   | 25  |   |   | 45  |   |   |   | 45  |
| Link Distance (ft)         |   | 349   |   |   | 546   |   |   | 571   |   |   |   | 400   |
| Travel Time (s)            |   | 9.5   |   |   | 14.9  |   |   | 8.7   |   |   |   | 6.1   |
| Confl. Bikes (#/hr)        |   |   | 1   |   |   |   |   |   |   |   |   |   |
| Peak Hour Factor           | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Heavy Vehicles (%)         | 0%  | 0%  | 0%  | 4%  | 0%  | 3%  | 0%  | 9%  | 6%  | 2%  | 7%  | 0%  |
| Adj. Flow (vph)            | 51  | 12  | 84  | 243   | 34  | 135   | 134   | 865   | 367   | 117   | 765   | 59  |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)      | 51  | 96  | 0   | 243   | 169   | 0   | 134   | 865   | 367   | 117   | 824   | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 12  |   |   | 12  |   |   | 12  |   |   |   | 12  |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |   | 0   |   |   |   | 0   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |   | 16  |   |   |   | 16  |
| Two way Left Turn Lane     |   |   |   |   |   |   |   |   |   |   |   |   |
| Headway Factor             | 1.04  | 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   | 15  |   | 9   |
| Number of Detectors        | 1   | 1   |   | 1   | 1   |   | 1   | 2   | 1   | 1   |   | 2   |
| Detector Template          |   |   |   |   |   |   |   |   | Right   |   |   | Thru  |
| Leading Detector (ft)      | 30  | 30  |   | 33  | 46  |   | 48  | 356   | 20  | 38  |   | 100   |
| Trailing Detector (ft)     | -5  | -5  |   | -5  | 0   |   | 0   | 165   | 0   | 0   |   | 0   |
| Detector 1 Position(ft)    | -5  | -5  |   | -5  | 0   |   | 0   | 165   | 0   | 0   |   | 0   |
| Detector 1 Size(ft)        | 35  | 35  |   | 38  | 46  |   | 48  | 6   | 20  | 38  |   | 6   |
| 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)    |   |   |   |   |   |   |   | 350   |   |   |   | 94  |
| Detector 2 Size(ft)        |   |   |   |   |   |   |   | 6   |   |   |   | 6   |
| Detector 2 Type            |   |   |   |   |   |   |   | Cl+Ex   |   |   |   | Cl+Ex   |
| Detector 2 Channel         |   |   |   |   |   |   |   |   |   |   |   |   |

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| Lane Group              | EBL   | EBT   | EBR | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT | SBR   |
|-------------------------|-------|-------|-----|-------|-------|-----|-------|-------|-------|-------|-----|-------|
| Detector 2 Extend (s)   |       |       |     |       |       |     |       | 0.0   |       |       |     | 0.0   |
| Turn Type               | pm+pt | NA    |     | pm+pt | NA    |     | pm+pt | NA    | Perm  | pm+pt | NA  |       |
| Protected Phases        | 7     | 4     |     | 3     | 8     |     | 5     | 2     |       | 1     |     | 6     |
| Permitted Phases        | 4     |       |     | 8     |       |     | 2     |       | 2     | 6     |     |       |
| Detector Phase          | 7     | 4     |     | 3     | 8     |     | 5     | 2     | 2     | 1     |     | 6     |
| Switch Phase            |       |       |     |       |       |     |       |       |       |       |     |       |
| Minimum Initial (s)     | 3.6   | 5.0   |     | 3.6   | 5.0   |     | 3.6   | 13.1  | 13.1  | 4.1   |     | 13.1  |
| Minimum Split (s)       | 8.1   | 9.7   |     | 8.1   | 9.7   |     | 8.1   | 24.3  | 24.3  | 8.1   |     | 21.3  |
| Total Split (s)         | 8.2   | 10.2  |     | 15.6  | 17.6  |     | 9.4   | 54.8  | 54.8  | 9.4   |     | 54.8  |
| Total Split (%)         | 9.1%  | 11.3% |     | 17.3% | 19.6% |     | 10.4% | 60.9% | 60.9% | 10.4% |     | 60.9% |
| Maximum Green (s)       | 5.1   | 5.5   |     | 12.5  | 12.9  |     | 6.3   | 48.5  | 48.5  | 6.3   |     | 48.5  |
| Yellow Time (s)         | 3.0   | 3.0   |     | 3.0   | 3.0   |     | 3.0   | 4.5   | 4.5   | 3.0   |     | 4.5   |
| All-Red Time (s)        | 0.1   | 1.7   |     | 0.1   | 1.7   |     | 0.1   | 1.8   | 1.8   | 0.1   |     | 1.8   |
| Lost Time Adjust (s)    | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Lost Time (s)     | 3.1   | 4.7   |     | 3.1   | 4.7   |     | 3.1   | 6.3   | 6.3   | 3.1   |     | 6.3   |
| Lead/Lag                | Lead  | Lag   |     | Lead  | Lag   |     | Lead  | Lag   | Lag   | Lead  |     | Lag   |
| Lead-Lag Optimize?      |       |       |     |       |       |     |       |       |       |       |     |       |
| Vehicle Extension (s)   | 2.0   | 2.0   |     | 2.0   | 2.0   |     | 2.0   | 2.5   | 2.5   | 2.0   |     | 2.5   |
| Recall Mode             | None  | None  |     | None  | None  |     | None  | C-Min | C-Min | None  |     | C-Min |
| Act Effct Green (s)     | 10.7  | 5.3   |     | 20.3  | 13.7  |     | 60.5  | 51.3  | 51.3  | 60.3  |     | 51.2  |
| Actuated g/C Ratio      | 0.12  | 0.06  |     | 0.23  | 0.15  |     | 0.67  | 0.57  | 0.57  | 0.67  |     | 0.57  |
| v/c Ratio               | 0.25  | 0.55  |     | 0.75  | 0.47  |     | 0.44  | 0.46  | 0.36  | 0.27  |     | 0.82  |
| Control Delay           | 30.0  | 25.1  |     | 46.5  | 14.8  |     | 6.7   | 6.1   | 0.5   | 6.8   |     | 20.3  |
| Queue Delay             | 0.0   | 0.0   |     | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   |     | 0.0   |
| Total Delay             | 30.0  | 25.1  |     | 46.5  | 14.8  |     | 6.7   | 6.1   | 0.5   | 6.8   |     | 20.3  |
| LOS                     | C     | C     |     | D     | B     |     | A     | A     | A     | A     |     | C     |
| Approach Delay          |       | 26.8  |     |       | 33.5  |     |       | 4.7   |       |       |     | 18.6  |
| Approach LOS            |       | C     |     |       | C     |     |       | A     |       |       |     | B     |
| 90th %ile Green (s)     | 5.1   | 5.5   |     | 12.5  | 12.9  |     | 6.3   | 48.5  | 48.5  | 6.3   |     | 48.5  |
| 90th %ile Term Code     | Max   | Max   |     | Max   | Hold  |     | Max   | Coord | Coord | Max   |     | Coord |
| 70th %ile Green (s)     | 5.1   | 5.5   |     | 12.5  | 12.9  |     | 6.3   | 48.5  | 48.5  | 6.3   |     | 48.5  |
| 70th %ile Term Code     | Max   | Max   |     | Max   | Hold  |     | Max   | Coord | Coord | Max   |     | Coord |
| 50th %ile Green (s)     | 5.4   | 5.3   |     | 12.8  | 12.7  |     | 6.5   | 48.2  | 48.2  | 6.5   |     | 48.2  |
| 50th %ile Term Code     | Max   | Gap   |     | Max   | Hold  |     | Max   | Coord | Coord | Max   |     | Coord |
| 30th %ile Green (s)     | 0.0   | 5.0   |     | 13.3  | 21.4  |     | 6.1   | 48.6  | 48.6  | 5.9   |     | 48.4  |
| 30th %ile Term Code     | Skip  | Min   |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   |     | 10.3  | 8.7   |     | 4.8   | 62.5  | 62.5  | 4.7   |     | 62.4  |
| 10th %ile Term Code     | Skip  | Skip  |     | Gap   | Hold  |     | Gap   | Coord | Coord | Gap   |     | Coord |
| Stops (vph)             | 41    | 27    |     | 192   | 43    |     | 39    | 241   | 15    | 32    |     | 420   |
| Fuel Used(gal)          | 1     | 1     |     | 4     | 1     |     | 1     | 7     | 1     | 1     |     | 12    |
| CO Emissions (g/hr)     | 41    | 57    |     | 273   | 94    |     | 78    | 485   | 103   | 77    |     | 856   |
| NOx Emissions (g/hr)    | 8     | 11    |     | 53    | 18    |     | 15    | 94    | 20    | 15    |     | 167   |
| VOC Emissions (g/hr)    | 9     | 13    |     | 63    | 22    |     | 18    | 112   | 24    | 18    |     | 198   |
| Dilemma Vehicles (#)    | 0     | 0     |     | 0     | 0     |     | 0     | 46    | 0     | 0     |     | 49    |
| Queue Length 50th (ft)  | 22    | 7     |     | 120   | 17    |     | 7     | 32    | 0     | 15    |     | 154   |
| Queue Length 95th (ft)  | 51    | #55   |     | #208  | 76    |     | m8    | m25   | m0    | m40   |     | #628  |
| Internal Link Dist (ft) |       | 269   |     |       | 466   |     |       | 491   |       |       |     | 320   |
| Turn Bay Length (ft)    |       |       |     |       |       |     | 110   |       | 140   | 250   |     |       |
| Base Capacity (vph)     | 202   | 177   |     | 331   | 377   |     | 310   | 1888  | 1026  | 440   |     | 1007  |

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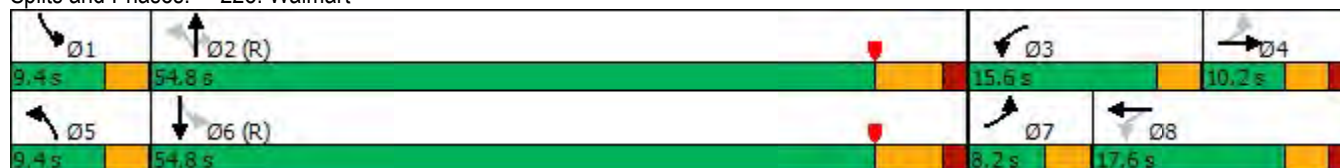


| Lane Group             | EBL  | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Starvation Cap Reductn | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Spillback Cap Reductn  | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Storage Cap Reductn    | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0   |
| Reduced v/c Ratio      | 0.25 | 0.54 |     | 0.73 | 0.45 |     | 0.43 | 0.46 | 0.36 | 0.27 | 0.82 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 45 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 14.5 Intersection LOS: B  
 Intersection Capacity Utilization 80.7% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 228: Walmart



## Appendix 4 – Future Transit Demand Calculations

In order to estimate demand for program and non-program demand response services, a modified version of the methodology presented in the Transit Cooperative Research Program (TCRP) Report 3 was used. The first methodology shown below uses the following inputs and formulas to calculate demand reported on a community-wide basis for program (or limited) demand response services and the second computes the demand for non-program demand on a community-wide basis for those services open to the general public. The output of this demand methodology results in an annual ridership demand estimate.

### Program and Non-Program Demand Methodologies

Program Demand Inputs<sup>6</sup>:

- Age 15 and above ( $a_1$ )
- Total Mobility Limited<sup>7</sup>( $b_t$ )
- Mobility Limited 18 to 64 ( $b_1$ )
- Age 15 to 64 ( $a_2$ )

Age 65 and above ( $a_3$ ) Program Participation Formulas<sup>8</sup>:

- from Developmental Services: Adult:  $P_1 = 2.15 \times (a_1 \div 1000)$
- from Developmental Services: Case Management:  $P_2 = 29.8 \times (b_1 \div 1000)$
- from Group Home (below 2,000 mobility limited in town):  $P_3 = 10.96 \times (b_t \div 1000)$
- from Mental Health Services (below 2,000 mobility limited in town):  
 $P_4 = 27.6 \times (b_t \div 1000)$
- from Mental Health Services: Case Management:  $P_5 = 8.4 \times (a_2 \div 1000)$
- from Senior Nutrition:  $P_6 = 30.1 \times (a_3 \div 1000)$

Program Annual Trip Rates (using Low Observed Rate)<sup>9</sup>:

- Developmental Services: Adult: **138.6**
- Developmental Services: Case Management: **20**
- Group Home (above 2,000 mobility limited in county): **196.2**
- Mental Health Services (above 2,000 mobility limited in county): **30**
- Mental Health Services: Case Management: **2.4**

<sup>6</sup> All numbers from American Community Survey 2015-2018 5 Year Estimates

<sup>7</sup> Mobility limited considered having an independent living difficulty

<sup>8</sup> Formulas are from TCRP 3

<sup>9</sup> Trip rates are from TCRP 3 p 85

- from Senior Nutrition: **117.6**

Program Demand Equation:

$$D = (P_1 \times 138.6) + (P_2 \times 20) + (P_3 \times 196.2) + (P_4 \times 30) + (P_5 \times 2.4) + (P_6 \times 117.6)$$

Program Annual Trip Rates (using Low Observed Rate)<sup>10</sup>:

- Developmental Services: Adult: **138.6**
- Developmental Services: Case Management: **20**
- Group Home (above 2,000 mobility limited in county): **196.2**
- Mental Health Services (above 2,000 mobility limited in county): **30**
- Mental Health Services: Case Management: **2.4**
- from Senior Nutrition: **117.6**

Program Demand Equation:

$$D = (P_1 \times 138.6) + (P_2 \times 20) + (P_3 \times 196.2) + (P_4 \times 30) + (P_5 \times 2.4) + (P_6 \times 117.6)$$

For demand response services open to the general public, two methods<sup>11</sup> can be applied to determine non-program demand in either a rural or small urban setting. One method is to compare the system analyzed to peer systems within the state. In using this method, the parameters/ground rules for each comparison would need to be determined in advance, and this method could only be used to project demand in counties where some level of service already exists. Another method, which can be applied to all areas of the state regardless of current levels of service, uses an equation based on an analysis of the 2009 Rural National Transit Database and workshops conducted by that organization<sup>12</sup>. This equation weights three demographic groups who are most likely to use public transit. The second (demographic based) method will be used to compute non-program demand response estimated ridership because of its universal applicability.

Non-Program Demand Inputs<sup>13</sup>:

- Persons Age 60+ (*a*)
- Mobility Limited 18 to 64 (*b*)
- Persons Residing in Households With No Vehicle Available (*c*)

Formulas:

- Population Age 60+:  $2.20 \times a$

<sup>10</sup> Trip rates are from TCRP 3 p 85

<sup>11</sup> TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation(Non-Program Demand Formula)

<sup>12</sup> <http://www.ntdprogram.gov/ntdprogram/data.htm> (RY2009 Database)

<sup>13</sup> All numbers from American Community Survey 2015-2019 5 Year Estimates

- Mobility Limited Population 18-64<sup>14</sup>:  $5.21 \times b$
- Persons Residing in Households With No Vehicle Available:  $1.52 \times c$

Non-Program Demand Equation:

$$D = (2.20 \times a) + (5.21 \times b) + (1.52 \times c)$$

The result is a future program demand of 13,317 rides and an annual non-program (general public) demand of 9,951 rides for a total of **22,908**.

### Commuter Demand Methodologies

In order to calculate the need for commuter routes, the “On the Map” function on the US Census Website<sup>15</sup> was used to calculate demand for commuter trips. Once this number was determined, it was plugged into the equation below.<sup>16</sup> A metric of estimated commuters riding public transit could then be established, and a flex commuter route was conceptualized, if necessary. Because East Windsor is both an employment center and residential community, both inflow and outflow commuting was used. In order to determine the threshold for establishing a new commuter route, the current demand for trips to and from Hartford is used as a threshold. This would indicate the threshold needed to establish a commuter route at 208 daily estimated trips.

Commuter Route Inputs:

- Workers Commuting to/from East Windsor to Urban Place ( $a$ )
- Distance in Miles to/from East Windsor to Urban Place ( $b$ )<sup>17</sup>
- Number of Commuters ( $c$ )

Equation to Estimate Commuter Transit Trips Per Day:

$$D = [0.024 + (0.0000056 \times a) - (0.00029 \times b)] \times c \times 2$$

The above will multiplied by the projected increase in employment by 2025 (percentage), to get an idea of future demand<sup>18</sup>.

<sup>14</sup> Mobility limited considered having an independent living difficulty

<sup>15</sup> <http://onthemap.ces.census.gov/>

<sup>16</sup> TCRP Report 161: Workbook for Estimating Demand for Rural Passenger Transportation (Commuters to Urban Centers), p 28.

<sup>17</sup> Distance used is from the geographic center of East Windsor to a town or city center

<sup>18</sup> Hartford and Windsor Locks employment gains can be found here at the State of Connecticut’s Labor Market Information Website <https://www.l.ctdol.state.ct.us/lmi/projections.asp> (7% in the North Central WDA); Springfield can be found at the State of Massachusetts Labor Market Information Website (3.38% in the Central MA WDA). Both estimates project out 10 years in the future, but have different baseline years for the beginning of their projections.

## Appendix 5 – Conceptual Plans of Alternatives

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



MATCH MARK - SEE NEWBERRY ALTERNATIVES

MATCH MARK - SEE SHEET 2

FORMER WALMART

FORMER SHOWCASE CINEMA / MMCT CASINO SITE

ROUTE 5 (PROSPECT HILL ROAD)

PROSPECT HILL DRIVE

10' Bituminous Sidepath

Approximate Property Lines

Accessible Pedestrian Signal and Sidewalk Ramp Upgrade

SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
North - Alternative I - Sheet I

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

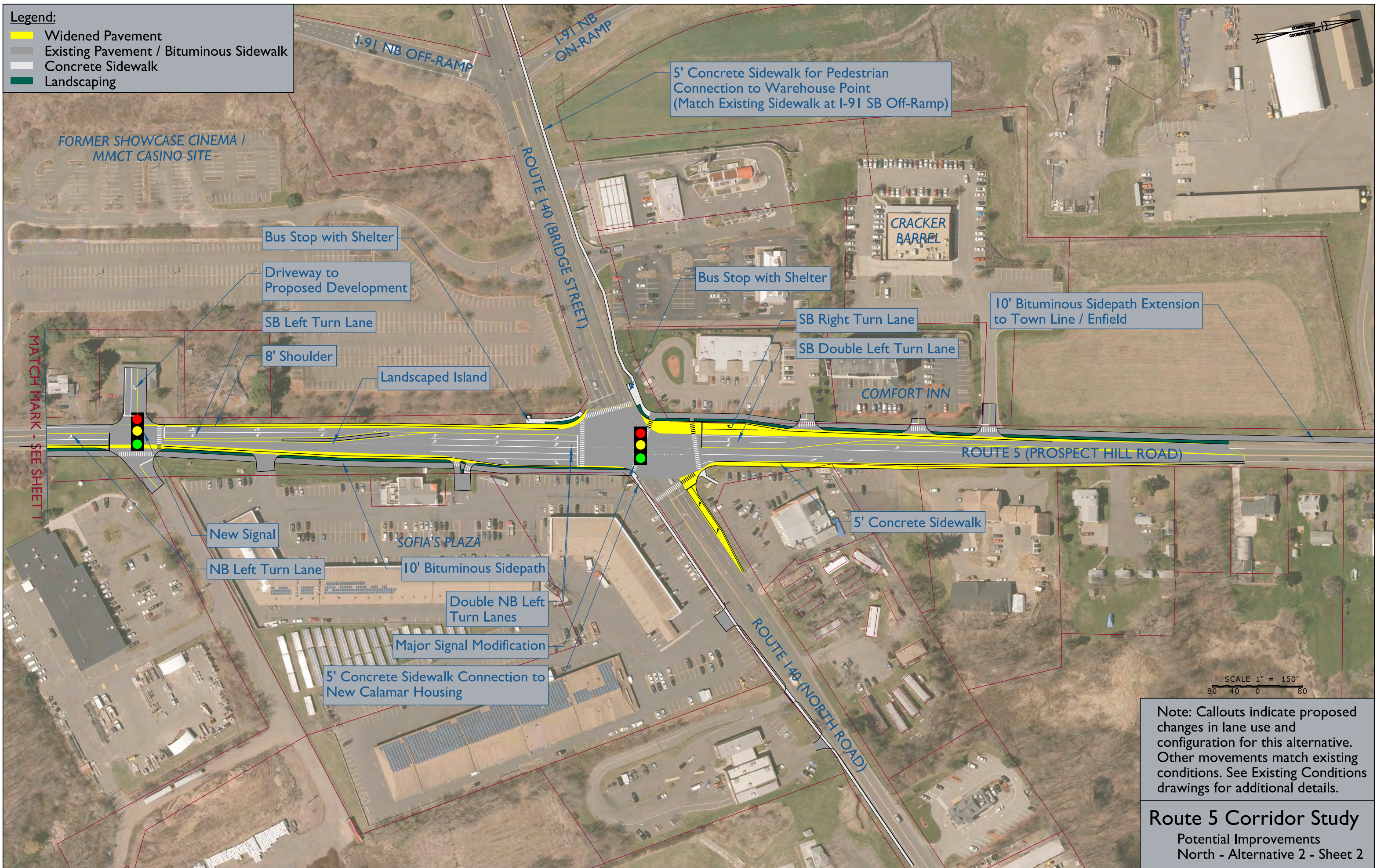
- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 North - Alternative 2 - Sheet 1

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.



- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Reduce Southbound Left Turn Storage (at Main Street)

Add Second Through Lane

BAYMONT INN & SUITES

Reconfigure Driveways

MATCH MARK - SEE MAIN ALTERNATIVES

ROUTE 5 (PROSPECT HILL ROAD)

Major Signal Upgrade Including Crosswalks

UNITED BANK

KFC

WENDY'S

MATCH MARK - SEE ALTERNATIVE 1 SHEET 2

Extend Northbound Left Turn Storage

Major Signal Upgrade Including Crosswalks

5' Concrete Sidewalk

Approximate Property Lines

Widen Approach to Add Second Through Lane

NEWBERRY ROAD

WALMART

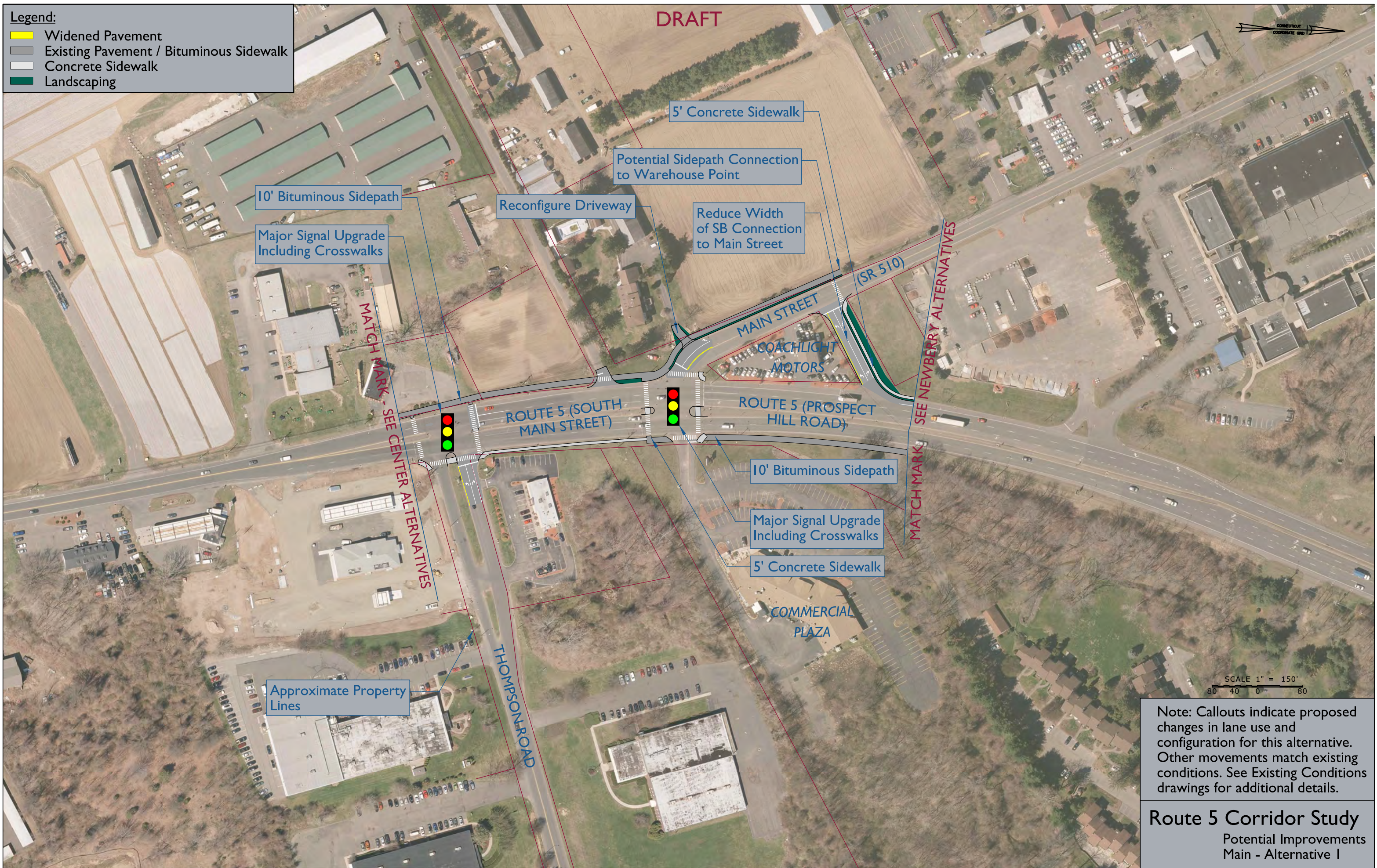
SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
Newberry - Alternative 5

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping

DRAFT

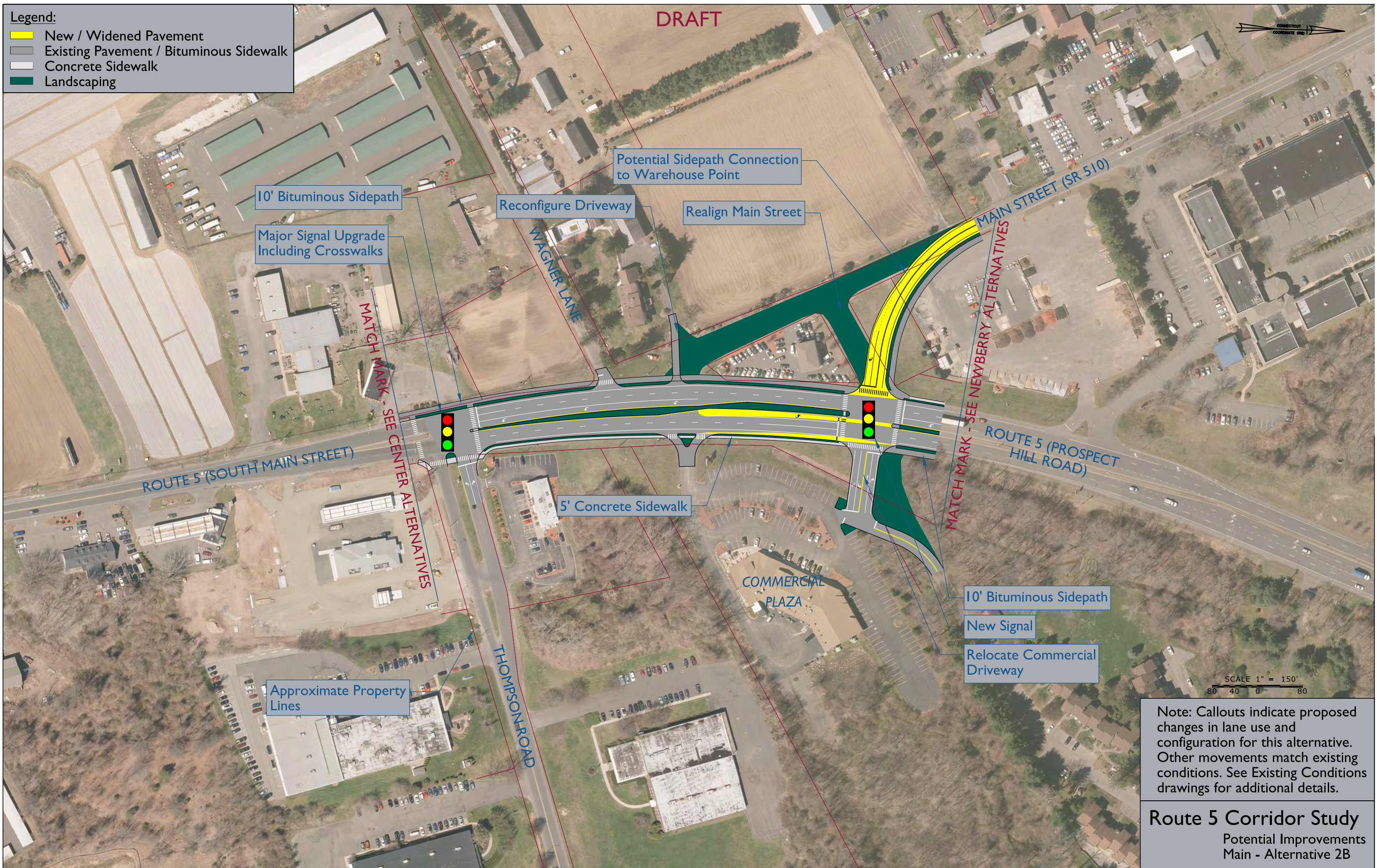


Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 Main - Alternative I

- Legend:**
- New / Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping

DRAFT



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 Main - Alternative 2B

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping

DRAFT



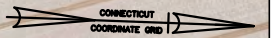
Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 Center - Alternative I - Sheet I

Legend:

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping

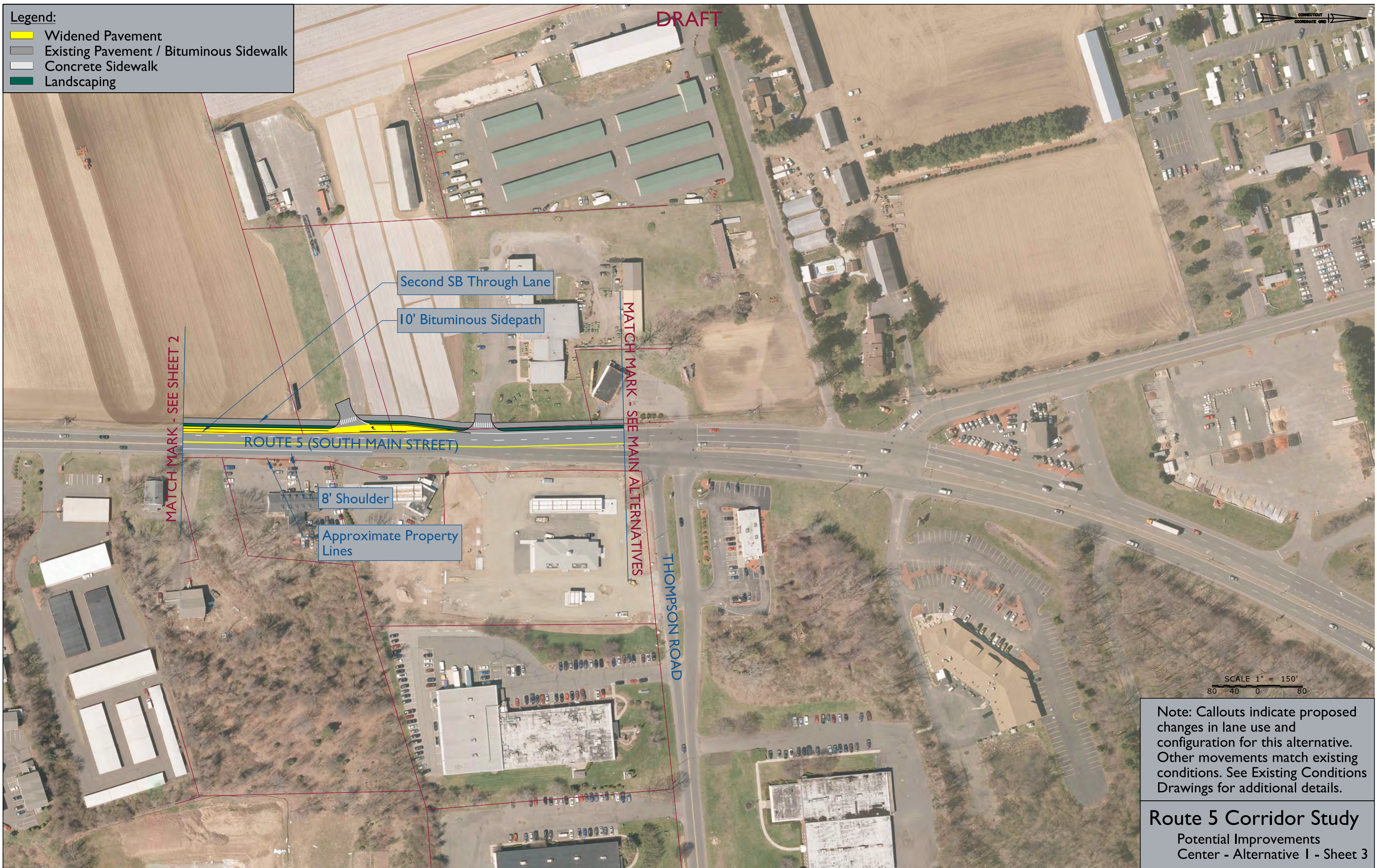
DRAFT



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping

**DRAFT**



SCALE 1" = 150'  
80 40 0 80

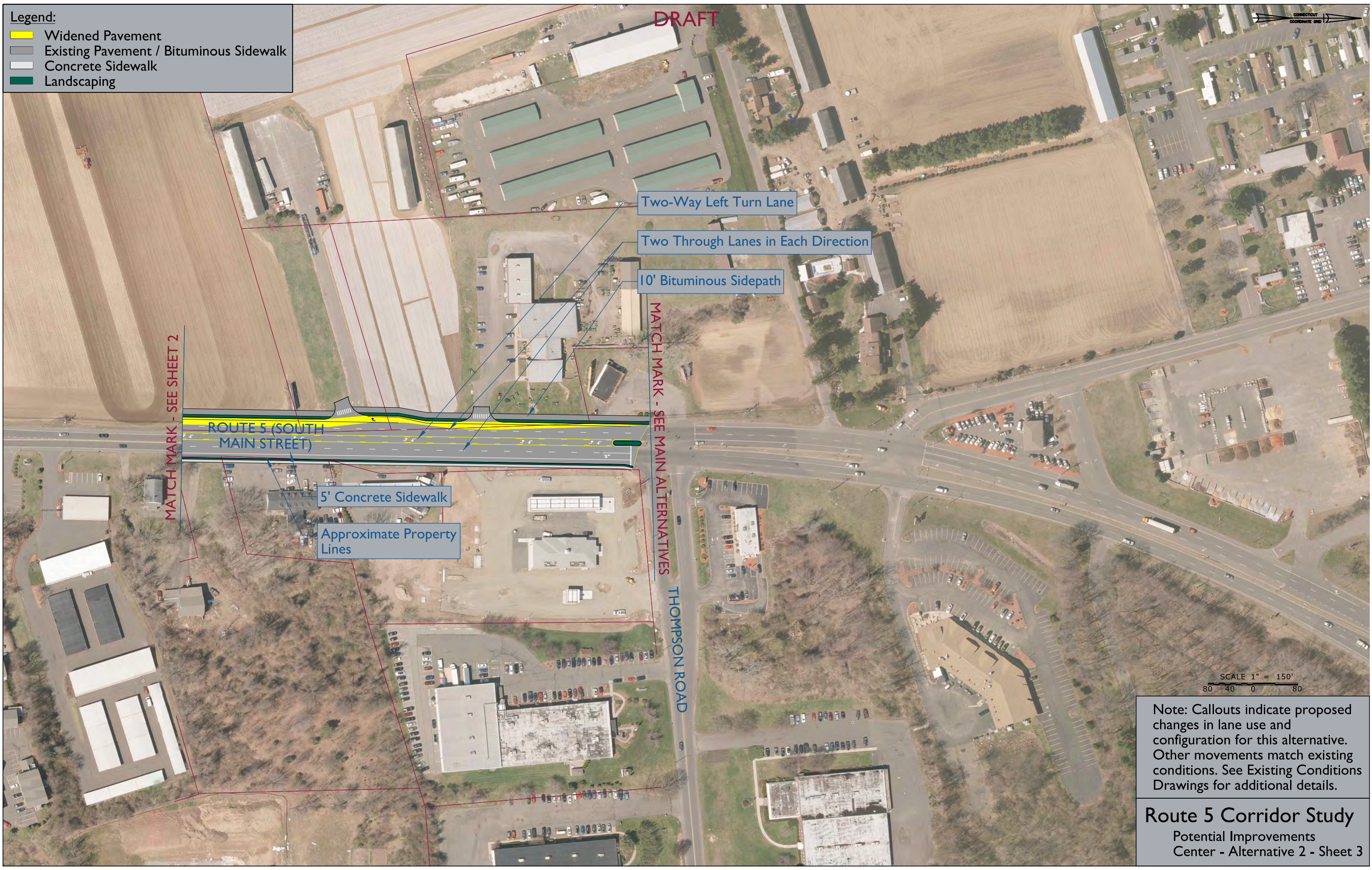
Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
Center - Alternative I - Sheet 3

**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping

DRAFT



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 South - Alternative I - Sheet 1

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 South - Alternative 1 - Sheet 2

**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping

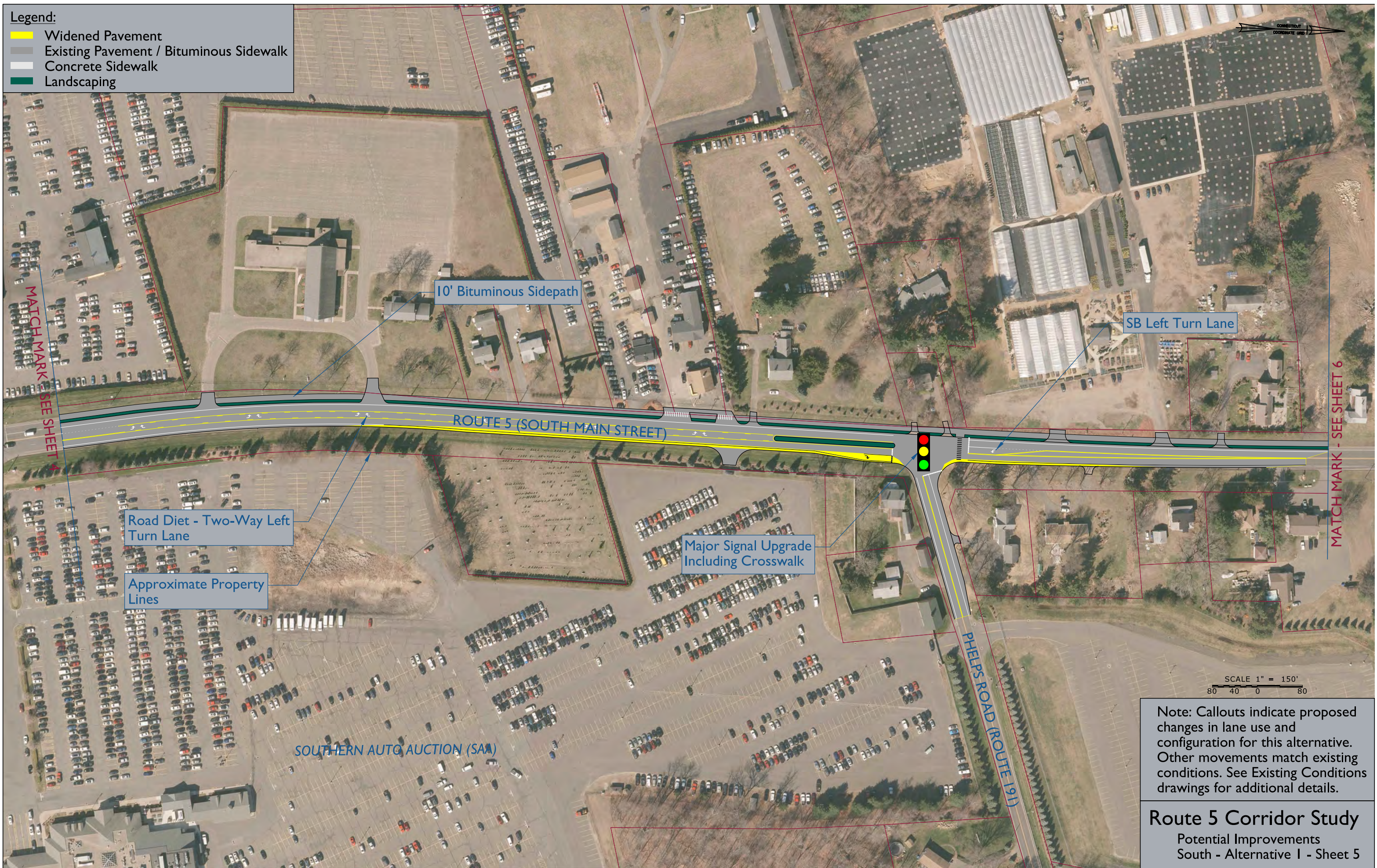


DRAFT

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping



Road Diet - Two-Way Left Turn Lane

Approximate Property Lines

10' Bituminous Sidepath

Major Signal Upgrade Including Crosswalk

SB Left Turn Lane

SOUTHERN AUTO AUCTION (SAA)

ROUTE 5 (SOUTH MAIN STREET)

PHELPS ROAD (ROUTE 191)

MATCH MARK - SEE SHEET 4

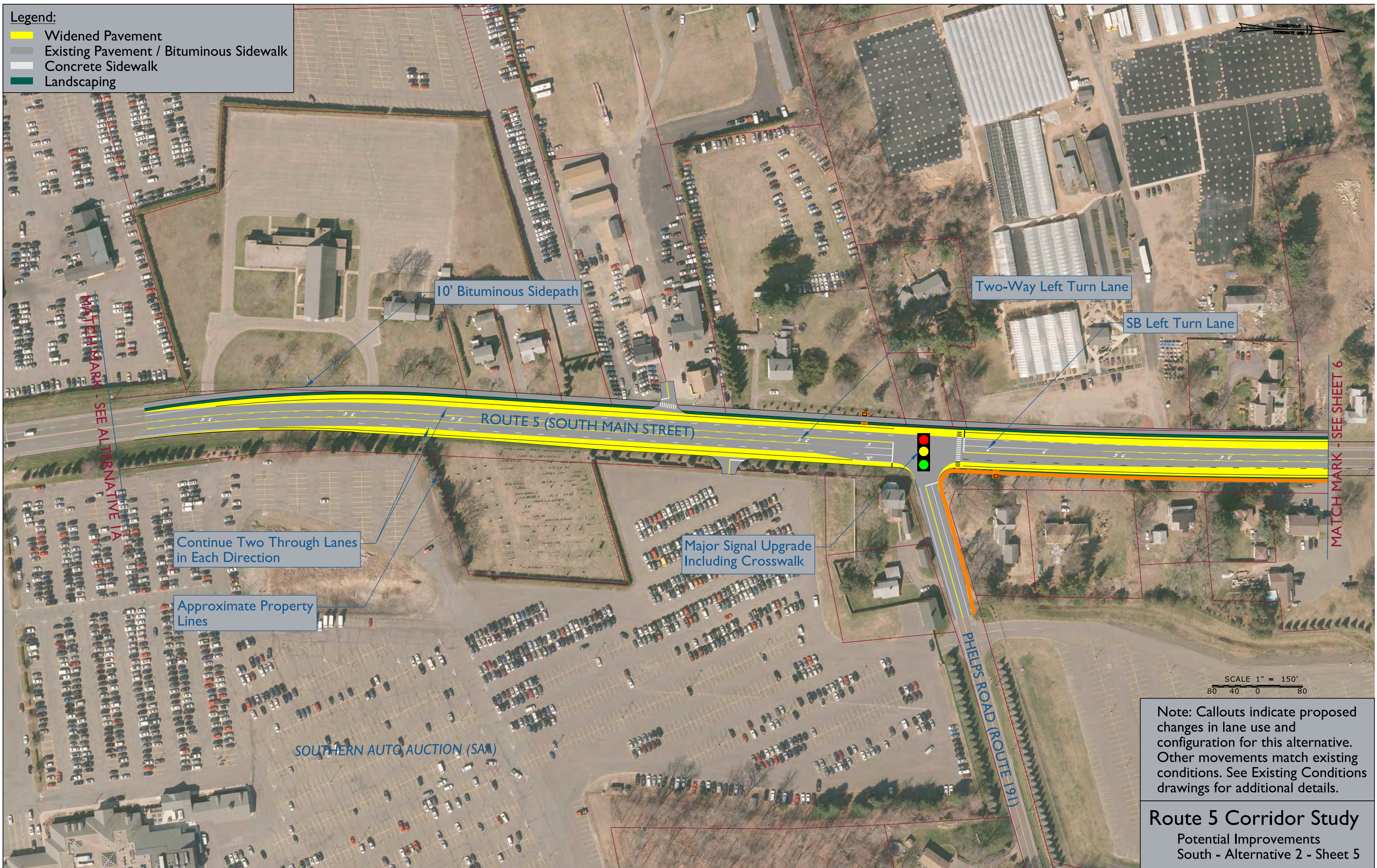
MATCH MARK - SEE SHEET 6

SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
South - Alternative I - Sheet 5

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



MATCH MARK - SEE ALTERNATIVE 1A

MATCH MARK - SEE SHEET 6

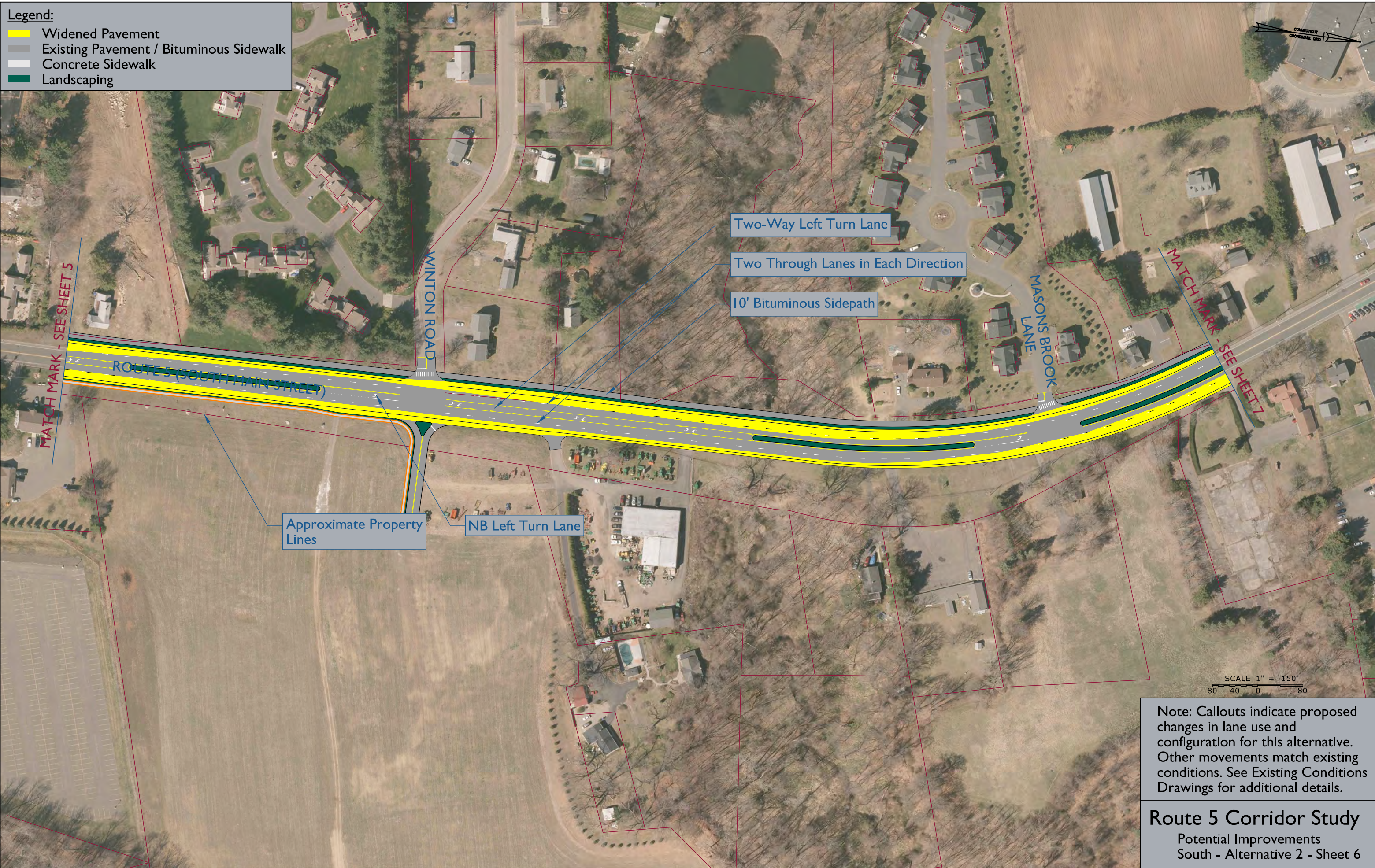
SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
South - Alternative 2 - Sheet 5

**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Approximate Property Lines

Two-Way Left Turn Lane

Two Through Lanes in Each Direction

10' Bituminous Sidepath

EAST WINDSOR HIGH SCHOOL

ROUTE 5 (SOUTH MAIN STREET)

TROMLEY ROAD

MATCH MARK - SEE SHEET 6

MATCH MARK - SEE CENTER ALTERNATIVE 2

SCALE 1" = 150'

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 South - Alternative 2 - Sheet 7

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

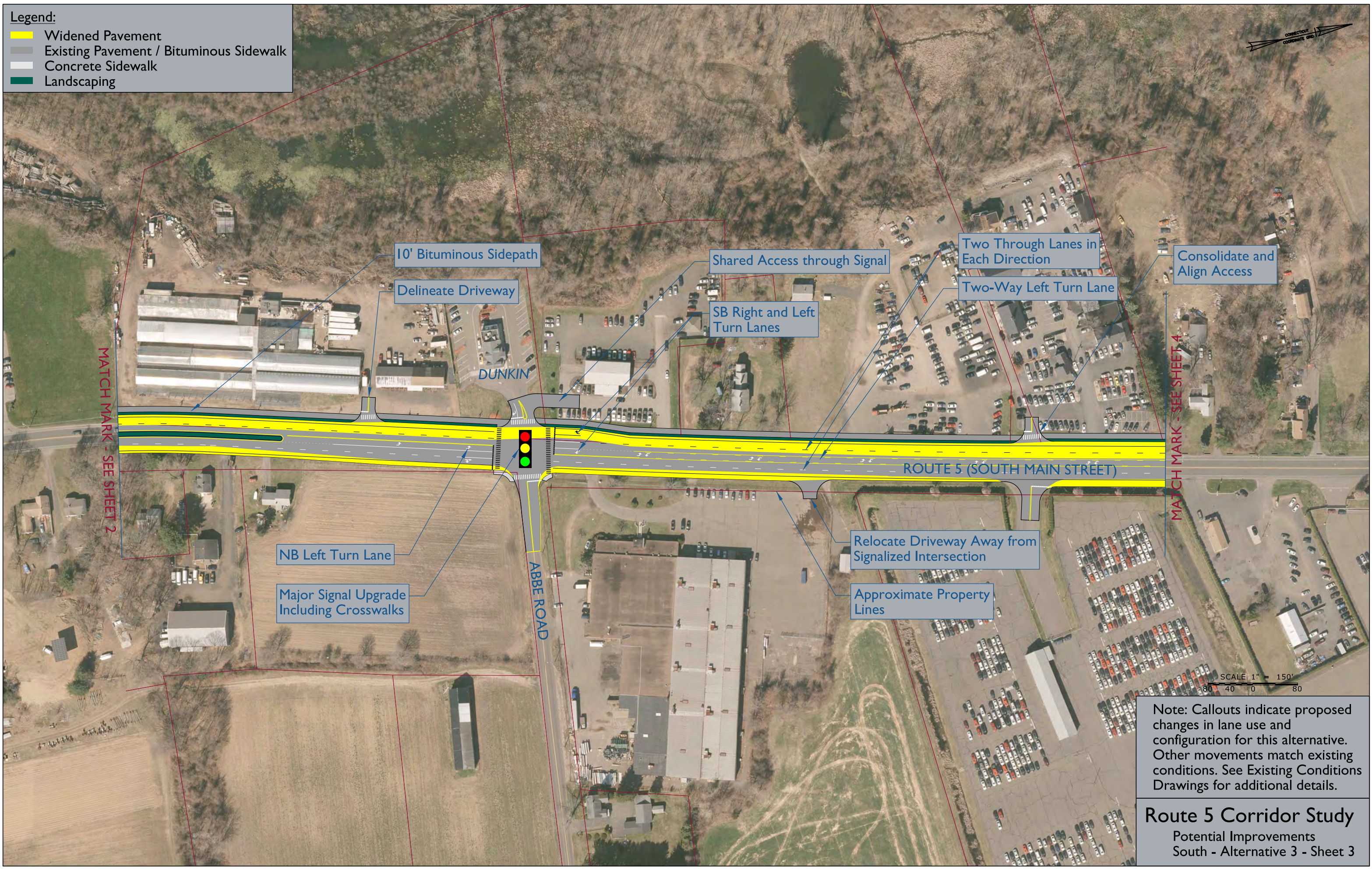
- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
 Potential Improvements  
 South - Alternative 3 - Sheet 2

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



MATCH MARK - SEE SHEET 2

MATCH MARK - SEE SHEET 4

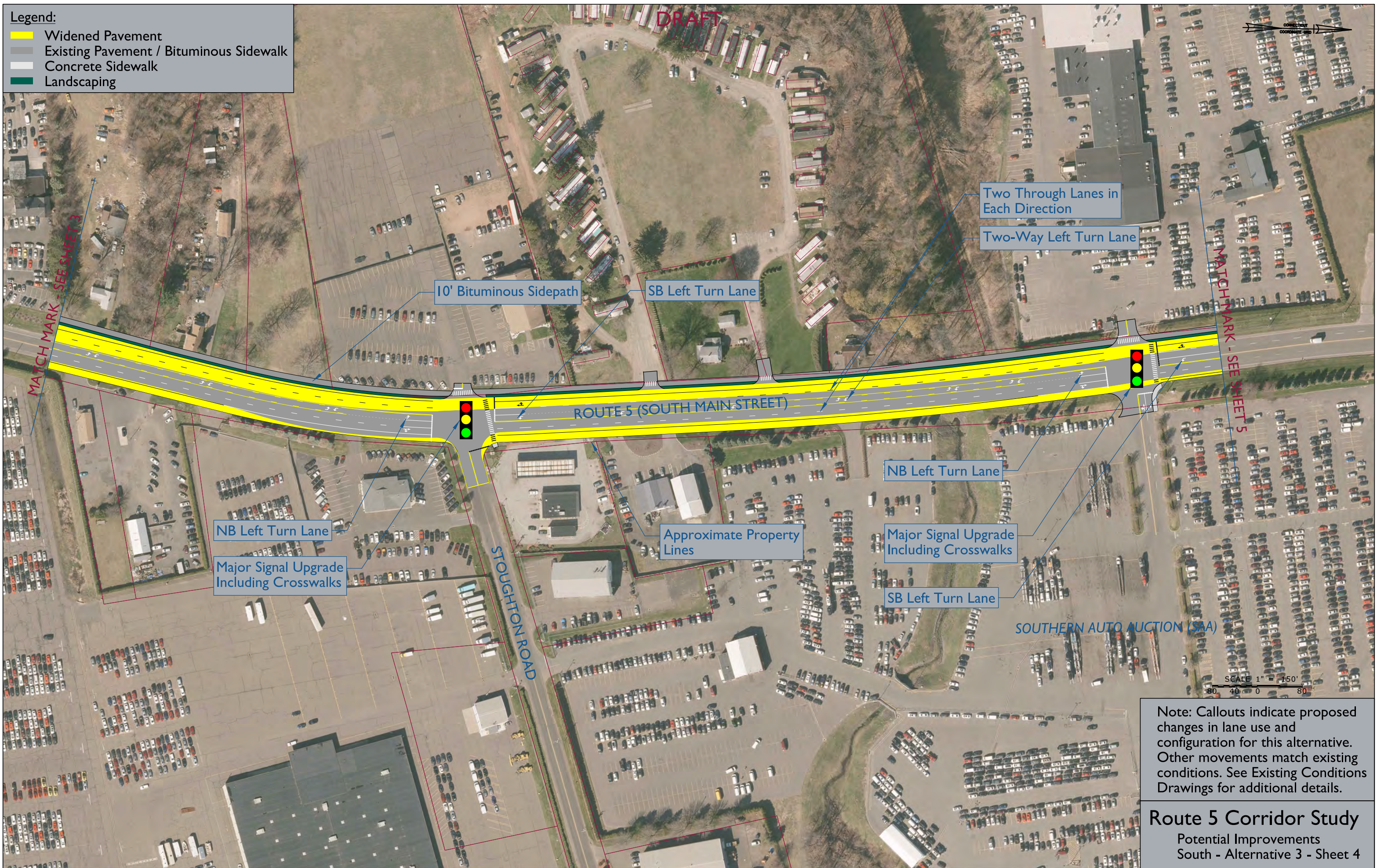
SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
South - Alternative 3 - Sheet 3

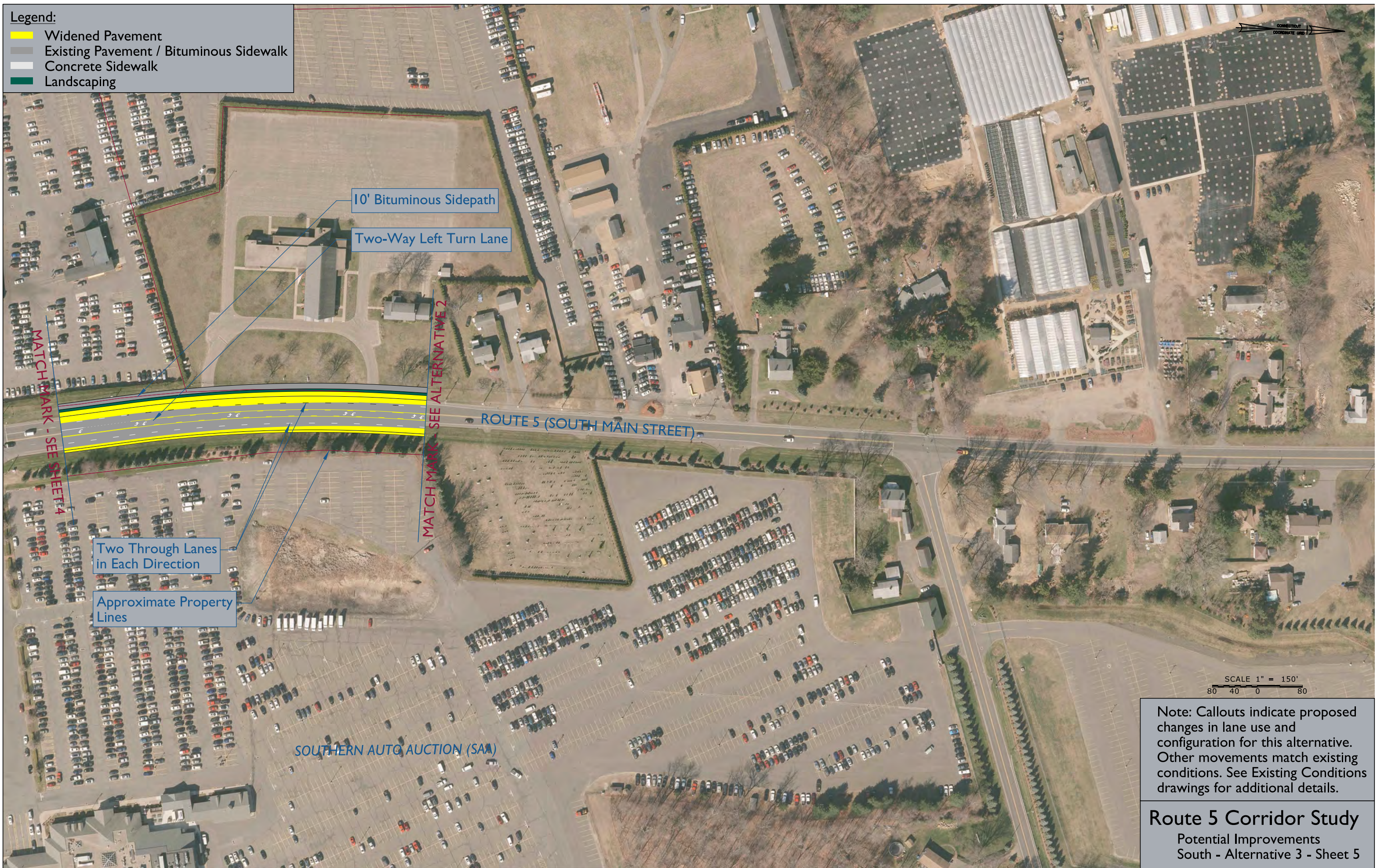
**Legend:**

- Widened Pavement
- Existing Pavement / Bituminous Sidewalk
- Concrete Sidewalk
- Landscaping



Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions Drawings for additional details.

- Legend:**
- Widened Pavement
  - Existing Pavement / Bituminous Sidewalk
  - Concrete Sidewalk
  - Landscaping



SCALE 1" = 150'  
80 40 0 80

Note: Callouts indicate proposed changes in lane use and configuration for this alternative. Other movements match existing conditions. See Existing Conditions drawings for additional details.

**Route 5 Corridor Study**  
Potential Improvements  
South - Alternative 3 - Sheet 5



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